

ANNUAL REPORT

— 2020-21 —

वार्षिक प्रतिवेदन

— 2020-21 —



BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI

बिरला प्रौद्योगिकी संस्थान, मेसरा, राँची

INSTITUTE PRAYER

—॥ प्रार्थना ॥—

यं शैवाः समुपासते शिव इति ब्रह्मेति वेदान्तिनो
बौद्धा बुद्ध इति प्रमाणपटवः कर्तेति नैयायिकाः।
अर्हन् नित्यथ जैन शासनरताः कर्मेति मीमांसकाः
सोऽयं नो विदधातु वाञ्छित फलं त्रैलोक्यनाथो हरिः॥

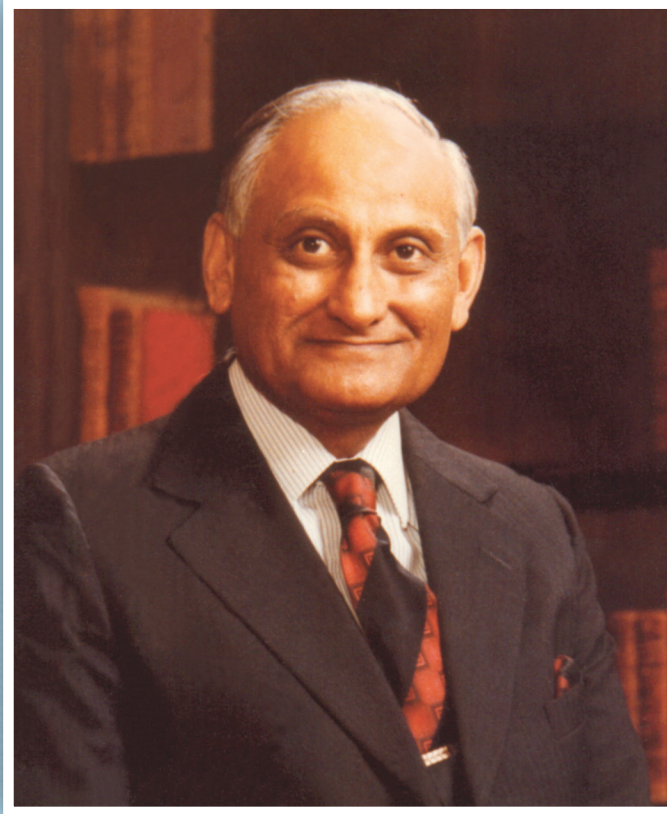
May the Lord of the universe, the remover of evil, whom devotees of Shiva worship as Shiva, the Vedantins as Brahman, the Buddhists as Buddha, the followers of the Nyaya philosophy who are clever in logic as representatives of those devoted to the Jaina doctrines as Arhan, the advocates of the Mimamsa School as Karma-grant us all our hearty desire.

हे जग त्राता, विश्व विधाता, हे सुख शांति निकेतन हे।
प्रेम के सिन्धु दीन के बन्धु, दुःख दारिद्र्य विनाशन हे।
नित्य अखण्ड अनन्त अनादि, पूरण ब्रह्म सनातन हे।
जगआश्रय जगपति जगवन्दन, अनुपम अलख निरंजन हे।
प्राण सखा त्रिभुवन प्रतिपालक, जीवन के अवलंबन हे।

You are the saviour, provider of worldly wisdom & the abode of peace and happiness. You are the ocean of love, the friend of the helpless, the reliever of sorrows and misfortune. You are the eternal, the indivisible and the infinite. You are the complete universe and the prime Being. You are the shelter, the Lord and worshiped by world. You are unparalleled, unseen and blissful. You are friend of the living, the preserver of the universe and the support of our life.



Shri B.M. Birla
Founder of the Institute



Shri G.P. Birla
Former Chairman of the Board of Governors

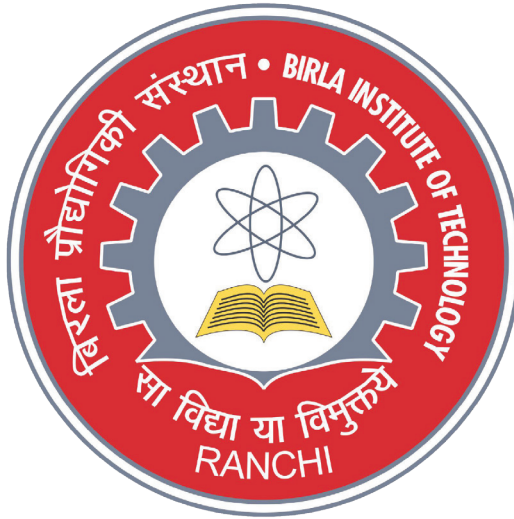


Shri C. K. Birla
Chairman of the Board of Governors

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2020-21



BIRLA INSTITUTE OF TECHNOLOGY

बिरला प्रौद्योगिकी संस्थान

(Deemed to be University)

Mesra, Ranchi - 835 215, Jharkhand

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Vice Chancellor's Report



Vice Chancellor
**Professor Indranil
Manna**

Birla Institute of Technology, Mesra, Ranchi founded by the philanthropist, industrialist Late Shri B.M. Birla in 1955, attained the status of a Deemed to be University in the year 1986. The rich legacy of the founder has been carried forward by his son Padma Bhushan Late Shri G. P. Birla and his grandson, the present Chairman of our Board of Governors, Shri C. K. Birla through continued emphasis on academic excellence and contribution to nation building.

BIT Mesra is not only one of the oldest Institute of Technology in the country but also is a pioneer in initiating disciplines like Space Engineering and Rocketry, Remote Sensing, and setting up of the first Science and Technology Entrepreneurship Park in the country. BIT Mesra has been consistently ranked amongst the leading self-financed Technological Universities of the country. The Institute offers academic programmes in all major disciplines of Engineering and allied Sciences at the tertiary level with over 580 faculty members and over 10,000 students spread across various campuses including the main campus in Mesra, Ranchi. The total number of Degrees awarded from Mesra campus for Academic Year 2020-21 is 1323, whereas the total number of Degrees awarded from Off campuses and University Polytechnic is 1574.

The Institute has taken many initiatives to further the teaching – learning process, promote several activities related to students, build state of art infrastructural facilities, commit to high-end R & D activities through various schemes, etc. It also exercises quality initiatives like academic audits, examination reforms conforming to the rules and regulations of regulatory bodies, pre and post accreditation assessments, collaborative initiatives, ranking and ratings of the Institute.

It is most pertinent to mention that we are still going through possibly the toughest challenge in our lifetime not just in this city or the country, but the world over, all due to an invisible threat called Covid-19 virus that is much smaller than the diameter of our hair and yet capable of causing 4.5 lakh deaths in India and over 45 lakhs worldwide, with over 3.4 crore affected in India and 44 crores worldwide (17% of the world population). There is not a single family or acquaintance around us who has not suffered a loss. Yet, thanks to the vaccination drive, we are slowly but steadily inching toward normal life. But the threat is not yet over and catastrophe can strike us again if precaution or providence is compromised. Let us not forget that BIT Mesra itself suffered several casualties which we deeply mourn and lament. I would now like to take this opportunity to present a brief report of the salient activities of the Institute, undertaken during the academic year 2020-21.

1. Academic Decisions taken by BOG :

Academic excellence always demands a synergy between teaching and research connected to dissemination and creation of knowledge as the principle theme of tertiary level education that necessitates close coordination among curricular teaching in the classroom, training in the laboratories and workshops, conducting research at doctoral or



higher level is absolutely essential. Holistic education must focus on inculcating the spirit and culture of virtuosity, dedication and truthfulness. BIT Mesra is fully committed to adhere to this core value of engineering education.

The BOG in its 68th meeting approved the following important decisions

- ❖ Department of Bioengineering renamed as Department of Bioengineering and Biotechnology.
- ❖ Department of Production Engineering renamed as Department of Production and Industrial Engineering.
- ❖ Creation of a Centre for Quantitative Economics and Data Analytics and starting a five-year integrated Master's degree course is approved.
- ❖ The admission to Integrated M.Sc. Programs should be based on the All-India Rank in JEE-MAIN.
- ❖ To implement 10% Reservation of Supernumerary Seats (over & above) for Economically Weaker Section (EWS) in all Undergraduate and Postgraduate Programs being offered at Mesra and Off Campuses from Academic Year 2021-22.
- ❖ Sukhpal Singh Khetarpal Col (Retd.) has joined as Registrar on 18th January 2021.
- ❖ Prof. S. Konar has been appointed as B. M. BIRLA Institute Chair Professor for one-year w.e.f. 01st February 2021
- ❖ Opening/operation of bank accounts towards public fund management system (pfms) as a requirement of grants from government agencies.
- ❖ Board approved the proposed revised allowances of Wardens and Assistant wardens as Rs 4,000 and Rs 3,000 per month respectively. This supersedes the earlier rates of allowances approved in 45th BoG meeting of 3rd July 2012 to the faculty members with additional responsibilities of Wardens and Assistant Wardens as @Rs. 2500/- and @Rs. 1500/- per month respectively.
- ❖ Board approved the proposal to declare a fixed day in December as Alumni Day to establish direct contact with the alumni of the Institute. The institute shall invite its alumni and celebrate Alumni Day on this specific day every year.

2. Centre for Quantitative Economics and Data Science

We have announced the launch of Centre for Quantitative Economics and Data Science (CQEDS) which will offer a new and innovative 5-year integrated B.Sc + M.Sc course in Quantitative Economics and Data Analytics (QEDA). Admissions to this program will be based on JEE Main score through central Counselling of JoSAA/CSAB 2021.

3. Institute Research Fellowships

In the academic year 2020-21, there has been a significant increase in the number of Institute Research Fellows (IRFs). Around 68 new IRFs were selected for research at the doctoral level, substantially boosting the research environment of the Institute. Funding for existing and the newly inducted IRF has increased to over 5 crores.

IRF: Increase in number $123 + 18 = 141$

Budget: 7.45 Crores

4. Faculty Recruitment and Promotion via Career Advancement Scheme

In order to strengthen the academic and resource activities of BIT Mesra, the Institute advertised for Faculty Recruitment in 15 out of the 17 Departments in December 2020 and received a total of 1951 applications of which 1836 applications technically qualified as per advertisement norms and were evaluated by a committee formed of retired academicians and R&D personnel with emphasis on (a) academic credentials, (b) research record, (c) professional career and (d) recognition and awards.



Based on the above criteria, 378 prospective candidates were shortlisted including fifteen internal candidates qualified under Career Advancement Scheme (CAS) for cross-cadre promotions. The Institute selected 59 new faculty members as Assistant Professors across the departments and campuses. Under CAS promotion, 12 faculty members were promoted from Assistant Professors to Associate Professors in six departments and 02 faculty members were promoted to full Professors from Associate Professors in two Departments.

Faculty recruitment as Adjunct/Visiting Professors

To uplift the quality of teaching to undergraduate students, particularly to those admitted to first year of BTech courses, the institute decided in January 2021 to recruit a few professors who recently retired from IITs and NITs as Adjunct professors on trial basis to teach at least two modules of a course in SP/21 semester. As the feedback of students were excellent as the teaching was highly beneficial to them, the institute decided to increase the numbers of such faculties. A paper-based evaluation was done by a selection committee consisting of ex-Directors of IIT Kharagpur and IIT Delhi as members. The committee recommended a total of 22 professors for the Academic year 2021-2022 (consisting of two semesters MO/21 and SP/22).

5. Research Initiatives

If teaching is one side of the technological education imparted in BIT Mesra, research is the other side that complements the sacred pursuit of knowledge in the science and technology domain. The quality of R&D activities conducted at BIT Mesra has fetched approval and sanction of several R&D projects financed by premier National or International agencies. Few of the quality research initiatives are:

- Two new policies are approved and implemented: (a) Startup Policy, (b) Innovation, Incubation and Entrepreneurship Policy in April 2021.
- Improved Seed Grant scheme of upto Rs. 5 Lakhs/faculty for Newly recruited faculty for promoting high quality research.
- Institute Innovation Council is Setup as per directives of IIC of Ministry of Education, and regular activities for promoting innovation and Entrepreneurship are carried out as per National IIC calendar.
- Training program for 35 faculty and 60 students were conducted in June 2021 towards Changing Mindset through Design Thinking Approach. Innovation and Research Foundation, Ahmedabad conducted this training.
- Special Pre-Incubation Support scheme is approved and a dedicated Budget head is made to conduct Innovation Contest and for funding Innovative Ideas which may lead to startup.
- MoU has been made with CRPF Central training institute of Ranchi for promoting technological collaboration and training activities.
- A dedicated space is identified near University Polytechnic for creating advanced IDEA LAB funded by AICTE & BIT which will be accessible 24x7 to students.
- Faculty are encouraged and given full support with improved administrative support which resulted in enhanced proposal submissions (150+ project proposals submitted aiming for 43+ crore).

6. Infrastructure Initiatives:

With time, science progresses with surprise discoveries, engineering produces new inventions and technology advances with recent innovations. To keep pace with the changing time and scenario, it is absolutely essential that the teaching, research, administrative and residential infrastructure is augmented and modernized to allow the students, scholars and faculty members



to remain relevant and competitive with the rest of the world. BIT Mesra is committed to invest over Rs 300 crore in the next 3-5 years to build the state of the art infrastructural facilities to support academic and research within the curriculum and outside. The major steps undertaken now are:

- **The New Academic Tower:** The New Building will create spaces for standard, latest and advanced educational facilities with a total floor area of approximately 1.5 lakh Sft. The new building will provide outstanding accommodation for research activities within the faculty and research scholars. The new building is expected to demonstrate an outstanding level of quality in relation to functional spaces of all of the disciplines and also will fulfil the aesthetics in all respect. It should demonstrate the best practices of Architecture, Engineering, Services, and Construction and finally will cover Green Building Concept.
- **The New Residential Towers :** The proposed project is planned within the faculty and staff residential complex, on a total plot area of approximately 13.11 acres in the outer campus of the Institute, to accommodate more than 100 faculty & staff qtrs. This residential complex finally will be developed with 3/4 no of additional residential towers for faculty and staff housing with some basic facilities and amenities.
- **Hostel expansion & renovation:** These projects are necessitated due to continuous expansion of various domains of Engineering and Allied Branches, as mandated in Institute's mission and accordingly increasing intake of students in each stream. A few existing hostels are being renovated with better finish and modern facilities. A few other hostels will be expanded both vertically and horizontally to accommodate more number of students.

- **Other Small scale Projects:**

The Institute has taken up the following expansion & renovation projects:

- ❖ Vertical Expansion of one additional floor on existing Music Room Building for student's activities.
- ❖ Renovation and restructuring of existing Open Air Theatre for student's activities.
- ❖ Vertical expansion of one additional floor on existing Student's Canteen to provide a separate Canteen for faculty & staff members.
- ❖ This Infrastructural upgradation is not only being implemented in our Main Campus but at Institute's other Campuses also.

- **Digital Infrastructure**

In the spirit of the Institute's vision of "Target 25", we have undertaken lot of initiatives to upgrade the digital infrastructure of the Institute. These initiatives will make the Institute future-ready and provide a much more comprehensive set of services to the user base.

- ❖ As part of the upgradation of digital infrastructure in the Institute, an Expression of Interest was sought from various vendors to install a new Telephone Exchange in the Institute. The new exchange shall have a broad spectrum of features, including support for IVRS, DID/DOD ad hoc conferencing, etc. The enhanced capacity of the proposed exchange will allow all faculty members to have access to an intercom connection at their desks. The exchange shall also seamlessly integrate with the internet facilities of the Institute and thus support IP telephony and VoIP.
- ❖ The Institute had also sought expression of Interest from various vendors regarding the establishment of an FTTH infrastructure. As a part of the proposed FTTH, all faculty quarters shall be provided internet access in the first phase. This shall allow faculty members to access the Institute's entire digital resource base from their places of residence.
- ❖ We have also installed a high-end UTM system from SOPHOS technologies. The device is an extremely powerful addition to the Institute's network capabilities. It shall provide



robust protection against a wide range of security attacks that have become very prevalent of late. The UTM will also allow for a smoother deployment of the Institute's internet bandwidth to the various sections of users and make the resource more manageable.

- ❖ As part of the augmentation of the digital infrastructure of the Institute, the network facilities in Hostels 1-4 are also being revamped. This shall provide residents with better access to the Internet in their rooms
- ❖ Institute is engaging with some of the top academic ERP providers in the country to scour for a new ERP system. The ERP system shall be deployed to cover all aspects of the Institute's operational verticals. A final choice of vendor is expected within this financial year itself. The new ERP shall substantially reduce the manual paperwork in the Institute and further the drive towards a "single window" mode of operation in the Institute.

7. 1st Foundation Day Celebration and Distinguished Alumni Award

An Institute is not just a brick and mortar establishment offering degrees at the end of a tunnel, it is a living entity thriving on its constituents like the students and scholars, the faculty and staff members, the administrative staff and its evolving academic and research programme. Therefore, it is only apt that an Institute of higher learning as reputed and important as BIT Mesra should celebrate its own 'birthday' every year to affirm that the Institute is alive and kicking. Accordingly, BIT Mesra decided to host the maiden and a grand online event of "Foundation Day" on 15th July 2021 celebration to the past, present and the future and pledged to hold a similar function every year. Birla Institute of Technology, Mesra hosted a grand online event "Foundation Day" on 15th July '2021, 11.00 am onwards.

As the Institute decided to celebrate its Foundation Day (or birthday!) each year, it is also resolved, as advised by the Chairman, Board of Governors, that BIT Mesra, through the BIT Mesra Alumni Association (BITMAA) will henceforth honor and award the most illustrious alumni each year not only to celebrate their eminent achievements but also to inspire the present and future generations to emulate them and make the BIT family more proud.

Categories of Award:

BIT Mesra proposes to offer Distinguished Alumnus and Alumna awards to its most illustrious alumni for commendable contributions in any one of the following categories:

- Category 1: Contributions to Engineering, Technology and Entrepreneurship – one award annually (alumnus or alumna)
- Category 2: Leadership in Corporate World, Industry, Academia and Research Institutions - one award annually (alumnus or alumna)
- Category 3: Excellence in Teaching and Research in Engineering and Technology – one – one award annually (alumnus or alumna)
- Category 4: Service to Society in India and abroad including support to the alma mater – one award annually (alumnus or alumna)
- Category 5: Distinguished service in any of the above categories by an illustrious alumna (Distinguished Alumna Award)
- Category 6: Distinguished service in any of the above categories by an illustrious alumnus or alumna, below 40 years of age (Young Alumnus or Alumna Award)

8. Birla Institute of Technology Mesra Alumni Association (BITMAA)

The Institute appointed a consulting firm to advise on restructuring the alumni association and streamlining its activities. A reputed consultant, M/s Ernst & Young was engaged to suggest a robust structure of an institute owned Alumni Cell, located at our Mesra campus, in line with



leading institutes in India and abroad. The Chairman BOG accepted the recommendation made by this consultant and decided to register a new entity BITMAA (Birla Institute of Technology Mesra Alumni Association) which will act through EBA (Executive Board of Alumni) and SCA (Steering Committee of Alumni) with representations from alumni chapters in India and abroad including BITOSA Global.

The Institute is also working toward creating its own database of the entire pool of alumni since inception and establishing direct contact with them through the office of DAIR. The Institute has launched an alumni portal www.alumni.bitmesra.ac.in which acts as a platform for interactions with alumni members. At present, we have about 40000 registered alumni in our portal.

Alumni Interactions

- Prof Aatmesh Shrivastava, (BITM Alumnus ECE, 2002 – 2006) from Northeastern University College of Engineering, Boston, USA delivered talks on Power Systems during 27th July 2020 to 17th August 2020.
- Prof. Nikhil Verma, (BITM Alumnus Comp. Sc. 1995 – 1999) from Anisfield School of Business, Ramapo College of New Jersey, USA delivered talks on Blockchain Technology on 12th and 15th October 2020.
- Mr Rohit Prasad, (BITM Alumnus, ECE 1993 – 1997) Vice President, Amazon Alexa, Massachusetts, USA delivered talk on Artificial Intelligence on 19th Dec 2020.
- Prof. Anamitra Pal, (BITM Alumnus, EEE 2004 – 2008) from the School of Electrical, Computer and Energy Engineering, Arizona State University, USA spoke on Coordinated Wide Area Control Design for Damping Low Frequency Oscillations on 13th Feb, 2021.
- Prof. Shree K Nayar, (BITM Alumnus, EEE 1980 – 1984) from Columbia University, USA deliberated on "Future Cameras" on 24.04.21.
- Sohini Roychowdhary, (EEE 2K6 batch) deliberated on machine learning engineering solutions for end-to-end product creation on 12th June 2021. Miss Sohini Roychowdhury, who has been the director of one of the best ML bootcamps and is also a faculty of one of the top universities in the world.
- Mr. Shivam, (M.E Space Engineering and Rocketry, 2K10 Batch) spoke on How Emotions Drive Innovation on 27th of June'21.
- Foundation Day celebrated on 15th July 2021. Distinguished Alumni Awards distributed in 6 different categories + one special Jury Award given

9. Student Placement Summary

Placement is an important chapter in the annual calendar of the Institute. Talented students from each graduating batch are picked up by the prospective employers looking to reinforce their human capital with fresh talents and future leaders.

In the Campus Recruitment Programme of 2020-21, around 120 recruiters from different sectors visited for full time recruitment and internship, achieving an overall target of 539 job offers.

The Mesra campus boasts of an average package of INR 10.34 lakhs per annum and the highest national salary of INR 51.76 lakhs per annum for BE Programme

10. Student Activities and Awards

Due to Covid Pandemic the numbers of events were significantly reduced. A total of 66 cultural events and 67 technical events were organised.

Team Srijan has continued its legacy and brought accolades for BIT Mesra by winning the Innovative Concept Award at the Formula Bharat 2021 EV Virtuals and the team came 4th in the



Business Plan Category, leaving behind many IITs and NITs.

Team Srijan were among the two teams representing India at the Formula Student UK 2021 where it bagged the 2nd place in Asia. The other team that could qualify for the event and represent India was from IIT Bombay.

11. GP Birla Scholarships (GPBS)

Scholarship worth Rs.323.53 Lac was provided during 2020-2021 with 724 beneficiaries.

- MO - 2020: Rs. 141.41 Lac (including Extension Centres)

Categories	Number of students benefited by GPBS
Based on Merit 100%	25
Based on Merit 50%	51
Based on JEE(Main) 50%	1
Based on GATE 20%	21
Based on Merit cum Means 50%	99
Compassion Grounds 50%	16
Staff Ward 80%	22
Staff Ward 60%	27
Staff Ward 40%	23
Staff Ward 20%	8

- SP - 2021: Rs. 182.12 Lac (including Extension Centres)

Categories	Number of students benefited by GPBS
Based on Merit 100%	--
Based on Merit 50%	105
Based on JEE (Main) 50%	1
Based on GATE 20%	19
Based on Merit cum Means 50%	105
Compassion Grounds 50%	41
Staff Ward 80%	19
Staff Ward 60%	25
Staff Ward 40%	19
Staff Ward 20%	8
Financial distress(due to Covid Pandemic and Medical Exigencies) 40%	23
Financial distress(due to Covid Pandemic and Medical Exigencies) 20%	56
Chicago Internship	10



12. MOUs and Collaborations:

- 29-07-2020 National Highways Authorities of India (NHAI) - 05 Years
- 20-10-2020 Indian Institute of Agricultural Biotechnology (ICAR), Ranchi-05 Years
- 15-01-2021 Northeastern University, Boston, Massachusetts- 06 Months
- 19-03-2021 Jharkhand State Pollution Control Board (JSPC) and Ranchi Municipal Corporation (RMC), Jharkhand- 01 Year
- 19-03-2021 Jharkhand State Pollution Control Board (JSPC) and Jamshedpur Notified Area Committee (JNAC), Jamshedpur - 01 Year
- 23-04-2021 Jharkhand Small Industries Association (JSIA), Ranchi, Jharkhand-02 Years
- 07-06-2021 Biocon Academy Bangalore- 02 Years
- 16-06-2021 Central Reserve Police Force (CRPF), Ranchi- Jharkhand- 03 Years
- 29-06-2021 Advance Tech India Pvt. Ltd. – 03 Years

13. Exchange Programmes:

Due to COVID Pandemic, students were offered online internship only. During 1st July 2020 – 15th September 2020: two students took online internship from Illinois Institute of Technology, Chicago and 10 students are pursued internship with the Illinois Institute of Technology, Chicago.

14. Awards and Distinctions Received

Faculties from various Departments were nominated as Keynote speakers and Session chairs and have received best paper awards in National and International conferences and seminars, the details of which are provided in their individual Department reports.

BIT faculties have won accolades by receiving the INSA Teachers Award from INSA, New Delhi and Best Researcher Awards from New Science Inventions by Science Fathers.

BIT faculties have marked their presence in State level Environmental Appraisal Committees (MoEFCC) and State Legal Services Authorities.

15. Publication summary

- Total Journal publication for all Campuses: 531
- Total Journal publication (Mesra Campus): 371
- Total publication as proceedings, books chapters for all campuses: 281
- Total publication as proceeding, book chapter (Mesra Campus) : 211

16. Funded Projects summary

- Total number of ongoing project (all campuses): 65
- Total number of ongoing project (Mesra campus) : 59
- Total number of completed project (Mesra campus): 21
- Total worth of ongoing project (All campuses): INR 1854.32 lacs
- Total worth of ongoing projects (Mesra campus): INR 1752.09 lacs
- Total worth of completed projects (Mesra campus): INR 396.08lacs.



17. Patents

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Department
1.	Dr. A. Sharon Dr. C. Bal Mr. P. K. Kushwaha Ms. Neha Kumari	3-(Isoxazolylmethyl)-1,2,4-Oxadiazole Derivatives And Method Of Preparing The Same	202031034370 of 11.08.2020	Chemistry
2	Dr S P Singh	Single Cavity Scoop Mould With Stripper Plate Ejection	344773-001	Computer Science and Engg.
3	Dr S P Singh	Utility Pen with USB Pen Drive and Led Light	346115-001	Computer Science and Engg.
4	Cohen, Jacob., Das, Sudip., Jsac, LLC	Method and Cavity for Suppression of Cavity Flow Oscillations and Acoustic Loads using Curved Rear Face	US Patent: US 10,823207 B2 Date of Patent: 03/11/2020	Space Engg. and Rocketry
5	Rajiv Kumar and PA Ramakrishna At IIT Madras	Method for Improving the Mechanical Properties of Paraffin Wax	Patent No.: 343739 Date of Grant: 10/08/2020	Space Engg. and Rocketry
6	Rajiv Kumar and PA Ramakrishna At IIT Madras	Hybrid Rocket Engine Having High Regression Rate	Patent No.: 343577 Date of Grant: 07/08/2020	Space Engg. and Rocketry

18. Initiatives for Covid Care and Support

- Fees reduction/concession/waiver

We have adopted partial payment mode for the fees to accommodate several requests arising from the difficulties faced during Covid pandemic. In order to alleviate the financial hardship, we offered scholarships/assistance worth a total of Rs 3.5 crore to about 350 students in the last one year.

- Vaccination and RT-PCR Drives

Vaccination Drive : BIT Mesra's health center is functioning as Covid 19 vaccination center with successful vaccination to 600 beneficiaries including staffs and their family members, local villages and any other person approaching the center for vaccination.

RT-PCR Test : Multiple times testing drives were organized at BIT Mesra campus on demand basis. Door to door samples collection facility was provided. Mass testing was organized twice in the campus free of cost by the State Government on request.



Message by Registrar



The Registrar
**Col (Retd.) Sukhpal Singh
Khetarpal**

It is my sincere hope and wish that my message, through this Annual Report 2020-21, reaches at safe and healthy times for the readers. Our Institution takes pride in having ranked among reputed Higher Educational Institutions in the Nation. We have built an enviable presence in the globe as we have glory of over six decades since 1955 with our highly qualified, experienced, and learned Faculty; robust academic modal, and well-equipped Laboratories. Indeed BIT is a true helping hand that shapes the dreams of students and academia.

The Academic Session of the year 2020-21 has been an unprecedented experience. Never in the past ever did we think we would have a campus where there were no students on-campus. Quite honestly, it just does not feel right. These were difficult times for all of us as none of us has ever experienced anything like COVID-19 in our lifetime. However together, we have got past the coronavirus, but not without few setbacks and loses. It is my hope that we will come out stronger and wiser as a result of the present challenges of "stay-at-home"/"work-from-home" order which is a new-normal.

I feel proud to put on record that our Institute, even in this period of Lockdown (over 12 months; as it continues), has ensured continuity of academic and administrative operations in the campus. We have undertaken many infrastructural augmentations, worth many crores of rupees, to make our hostels and campuses more modern and vibrant. We continue to fly stronger and higher than ever before, both during these pandemic times, after, and beyond.

As hard as it has been for students to make this transition to study-online, it has also been equally challenging for our learned faculty to shift their mindset to imparting online academic instructions. Our faculty value the interactions in the classroom, and I am sure they miss the face-to-face conversations with the students. They must be missing coming of students into a classroom laughing and leaving knowing they learned something new that day. Like the students, faculty have had to navigate unfamiliar territory to continue to provide high levels of academic engagement in online mode.

Birla Institute of Technology has strong, industry-focused teaching programs and state-of-the-art research, and every faculty member at our Institution is committed to making it an enriching experience for the inquest students.

The endorsement of the quality of education imparted at Birla Institute of Technology is the trust of reputed companies who visits the campus, year after year to recruit our corporate-ready students. Birla Institute of Technology with its depth of culture, tradition, strong alumni base, and commitment to value-based quality education, ensures that our students at the end of their study period with BIT, are well prepared for their finest moments, i.e., stepping into chosen careers. Wishing everyone the very best for a great academic journey at Birla Institute of Technology

Dean's Message



Dr. Anand Kumar Sinha
Dean of Students Affairs

In view of the outbreak of Covid-19 pandemic, students were asked to leave the campus in March 2020. The teaching learning process was held in online mode during the remaining part of SP 2020. The new academic session for 2020-2021 started in the absence of students in the campus. This was an unusual situation. During the entire academic year 2020-2021, the teaching learning process and assessments including the end semester examination were conducted in online mode using the MS Team platform.

However, when the situation improved in January 2021, the Ph.D. students were allowed to stay in the campus. Later, in March 2021, the final year students of UG and PG programmes were also allowed to stay in the campus. Around 600 students were staying in the main campus during SP 2021.

Out of these students, 14 students residing in different hostels were tested positive for Covid-19. One student was admitted in RIMS for treatment. The remaining 13 students stayed in their respective hostels and recovered. In MO 2021 also, most of our students are staying at their respective homes and participating in online teaching and learning process. However, the Institute is willing to allow UG and PG students who are registered for MO 2021 to return to the campus in a phased manner. We all pray that very soon this disease will be controlled, and all our students will be back to the campus.

We are trying hard to improve the quality of hostel life of our students. Hostel – 1, 2, 3, and 4 are being renovated. In Hostel – 9, the expansion work is in progress. There is plan for vertical and horizontal expansion of Hostel – 5, 6, 7, and 8. The BITWS will make necessary changes in hostel mess operation so that the food served to the students is of good quality. Maintaining cleanliness and hygiene in the hostels will be the top priority. Most of the student activities are being performed by various clubs/ societies in online mode. The student activities being performed by different student bodies provide an opportunity to the students to learn beyond the classroom. Our effort will be to guide the student bodies so that these student activities enhance their employability skills, and promote interdisciplinary research, innovation, and entrepreneurship.



Dean's Message



Prof. Manjari Chakravarty
Dean of Infrastructure
and Planning

The financial year 2020-2021 has seen an unprecedented surge in the execution and planning of the Institute's infrastructural maintenance, addition and upgradation activities as a part of the actions aimed at the achievement of the ambitious academic expansion plan in line with the "Vision 2025".

Lots of upgradation work has been achieved in this year, including comprehensive renovation and modernisation of Institute Building, water harvesting work, campus renovation, smart class rooms, space rearrangement and renovations, universal access provisions, landscaping and many other items of pending miscellaneous work. One important aspect has been to achieve much of the planning and action plans which are speedily under way for boosting up all the main and satellite campuses with the inputs of new construction, addition or upgradation of existing spaces and facilities.

Even under the spell of the pandemic, a substantial amount of planning progress and also significant physical progress have been achieved through "safe working" mode in planning, designing and streamlining of the projects. The future projects envisioned in this year include new academic towers, new employee housing on a large scale, hostel expansions, renovation, staff canteen and many more.

It is expected that with the blessings of the Management and co-operation of all involved, and hopefully with no further wave of the pandemic, all the upcoming projects at the main campus and all other campuses will meet timely and satisfactory completion to further expand the academic horizon of our great Institute.

Dean's Message



**Prof. Kunal
Mukhopadhyay**
Dean of Faculty Affairs

The office of the Dean of Faculty Affairs is endowed with responsibilities that include aspects of faculty hiring, supervision, retention, discipline and separations, including retirement and resignations. These duties include procedures governed by law and by institutional policies. The Dean is supported by an Associate Dean, an Assistant Registrar and other Human Resource Personnel. The Dean's office with the help of various departments and financial assistance from Technical Education Quality Improvement Programme (TEQIP) and AICTE had organized six Faculty Development Programmes (FDPs) designed in emerging segments to bridge the gap in quality research and teaching to faculties of Science, Engineering, Pharmacy, Management and Architecture.

Though initially the FDPs were designed participant-centric, but due to ongoing pandemic, all FDPs were conducted through online platforms. Numerous virtual webinars were also conducted during this period.

The Dean's office is instrumental in the design, collection and analysis of faculty self-assessment reports annually. Through analysis of this report, the Dean's office helps the faculty members to identify the shortcomings in their career development. To address the deficiencies and to help the faculty members enhance knowledge and skills in their area of research and interest, the faculty members are supported for attending conference, seminar, orientation programs, refresher courses and FDPs. In order to impart superior quality of education, twelve superannuated professors from IITs and NITs were appointed as Adjunct Professors in various disciplines of Science, Engineering and Management. The Dean Faculty Affairs office also facilitate promotion of faculties to higher rank and pay scale as appropriate through either Career Advancement Scheme (CAS) or open/ regular advertisement. Fourteen internal faculty members were promoted in this academic year: 13 through CAS and one through regular advertisement.

A new recruitment cycle had been initiated in December 2020 to recruit ~60 new faculty members in 16 departments of the Institute. A total of 1951 applications were received across all disciplines. 378 prospective candidates were short listed based on academic credentials, research record, professional career, recognition and awards. They presented seminars during May 11-24, 2021 and the interviews were held in June 2021. The Institute has also introduced a new Centre of Quantitative Economics and Data Sciences (CQEDS) that will operate a-5-Year Integrated Master of Science (IMSc) program on Quantitative Economics and Data Science. Thirty students every year will be admitted through Joint Entrance Examination – Main (JEE-Main). Process for recruitment of faculties at different Academic Levels with PhD in Economics, Statistics, Mathematics and Data Science had been commenced.



Dean's Message



Prof. Nisha Gupta
Dean of Post Graduate
Studies

This academic year had been very challenging that none of us had experienced it before. The response to the pandemic compelled everyone to reconfigure even the most basic elements of our academic work and study in quickest possible time. Many of our typical measures of progress were disrupted — from the education we impart through classroom teaching, performing laboratory classes and the research we conduct. However, our faculty and students could successfully adapt to online instructions in very short time. Our faculty have also pivoted many laboratory courses to the digital platforms by adapting modern VPN technologies.

Despite these challenges, the institute has proven strong, and the academic session was concluded on time by completing all the requirements for the award of the degrees in 2020-2021. The output in terms of research papers could also manage to keep the pace with the earlier statistics.

I take this opportunity to thank everyone who has contributed towards the progress of this institute even during this tough times namely, the faculty, staff, students, alumni etc.

Please join us in celebrating the bright future of the institute.

Dean's Message



Prof. Utpal Baul
Dean of Alumni and
International Relations

Last year the world saw a tough time in combatting with the effects of the Pandemic. It did not spare any sector including education and employment as well. The resurgence still looms large on our heads. Despite all the odds, we have been able to stride ahead with renewed grit and determination to protect and preserve the interest of all the stakeholders of the institute. With online classes and examinations, the semesters kept moving forward to fiercely safeguard the interest of the students. The slump in the demand with the employers, particularly in the core sector was a tough challenge to handle and placements, though a little low in numbers, managed to sustain itself reasonably at par with our peer institutes.

Due to international travel restrictions, we were unable to send across our students to reputed US universities under the ISRE (Immersive Summer Research Experience) wherein our students are exposed to world class research during the summer vacations. However, with the support of the US institutes and our alumni in the US, we were able to organize and conduct the program online to the benefit of our students.

In matters of alumni engagement and outreach, we are able to initiate formation of our very own Alumni Association at our Mesra campus - BITMAA in order to have a common platform for interaction amongst the alumni, students and the Alma Mater. This association having an EBA (Executive Board of Alumni) and SCA (Steering Committee of Alumni) is proposed to be a registered society with representations from all alumni chapters / associations in India and abroad. This is a positive step forward in strengthening and reinforcing the relationships.

The Institute decided to celebrate its Foundation Day on 15th of July every year, the day our Institute started its glorious journey in the year 1955. A celebration to uphold our pride and legacy as being one of the oldest engineering college in the country. Due to the ongoing Pandemic, to start with, this year it was celebrated online.

The Institute has also constituted Distinguished Alumni Awards, in various domains of professional expertise, to be awarded on the 'Foundation Day' every year. This year seven of our luminary Alumni were conferred the honour.

The institute has also recently launched its own alumni portal with about 40000 registered members www.alumni.bitmesra.ac.in. This serves as an interactive platform for the benefit of all concerned. Our quest for excellence continues as we do not believe to rest on past laurels.

Best Wishes



Dean's Message



Prof. Vibha Rani Gupta
Dean of Under Graduate
Studies

Established in 1955 by the industrialist Mr B. M. Birla, BIT Mesra has basked in 66 glorious years of excellence in technical education. Since its inception, BIT Mesra has aimed at nurturing young minds with imagination and innovation to serve the society and nation. It strives continuously for outstanding and exemplary education, research, and technological services.

Today BIT, Mesra offers an array of 16 Undergraduate programmes, including B Tech, B Pharm, B Arch and BHMCT, BBA, BCA, BAM and four integrated M. Sc. Programmes. It also offers a B. Sc in Medical Lab Technology (BMLT) and Diploma programs for the resident of Jharkhand.

In the academic session 2020-2021, a total of 2050, including BMLT students, were enrolled in undergraduate and Integrated M. Sc. Programme. Wherein, a total of 2220 students completed undergraduate studies in the academic session 2020-2021. Also, 118 were enrolled in Diploma programs for the resident of Jharkhand, and 168 students successfully completed the course.

Academic year 2020-2021 was a challenging year as it brought along an unprecedented situation of pandemic, disrupting the normal format of classroom teaching. Coping up with the dire situation, the institute adapted to online teaching and ensured that students did not lose an academic year while at the same time they received the qualitative education they were entitled to.

The new aspirants must take cognizance that the institute's faculty and staff members are committed to promptly guiding students to expand their knowledge and meet their career goals. Please feel free to provide valuable feedback to help us assist you and to improve our services proactively.

Wishing you success during your stay with us as well as in your future aspirations.

Dean's Message



Prof. C. Jegannathan
Dean of Research,
Innovation, Entrepreneurship

Greetings to BIT Fraternity.

It has been a roller-coaster year, indeed. 2020-21 will never be forgotten in the human history for two reasons: first for COVID19's impact – a first ever global epidemic which the humans have never seen, and second for the human's technological innovation and survivable ability. BIT too have had a share of COVID's impact but has survived this period positively, adapting new technologies, creating new innovations and new initiatives. With the arrival of our New Vice Chancellor Prof. Indranil Manna, an Eminent Academician & Distinguished Researcher, many new initiatives and achievements have been made. Seed Money for new faculty has been enhanced from Rs. 2 Lakhs to Rs. 5 Lakhs by our Honourable Vice Chancellor.

BIT is identified as Institute of Repute under the National Knowledge Network for National Clean Air Programme (NCAP). 18 New MOUs have been signed with various institutions in India and abroad, and private companies. Many more MOUs are being processed with reputed organisations. Innovation contest was organized by Institute's Innovation Council (IIC) in December 2020 and 3 student ideas out of 9 POC were recommended for their participation in the MoE's Innovation Contest. 8 new startups have been created by students during this period. Under IIC, 13 faculty are identified as Innovation ambassadors with a specialized training by MoE's Innovation Cell. Under IIC, 37 faculty mentors were given 6 sessions of orientation workshop as FDP on "Design Thinking", and 60 students were given training on "Design Driven Startup Creation" during June 2021.

In order to promote the innovation and start-up ecosystem amongst the students and faculty, two new policies: (a) Innovation, Incubation and Entrepreneurship Policy and (b) Startup Policy have been framed and being implemented since April 2021. These policies encourages faculty and student to engage in startup and innovation activities, and faculty can become owner of a startup, mentor or consultant to students startup or board member of existing startup without compromising their academic commitments. BIT was selected by AICTE for establishing IDEA Lab where students will have 24x7 access for carrying out various hands-on activities of Innovation & Entrepreneurship.



Dean's Message



Prof. Sudip Das
Dean of Admission,
Accreditation and
Coordination (DAAC)

The entire nation has faced a very difficult time during the pandemic and the admissions process is no exception to it. Admission year 2020-21 which was planned by almost all processes of admission in the nation got affected and we all know the entire process was then delayed by almost a semester. With the efforts and perseverance of all the stake holders we could again come back to regular tracks. However, the Covid again struck hard during the end of the academic year.

The office of DAAC is responsible to coordinate the approval and accreditation process of all programs. In the current year, physical verifications were restricted, and all the processes were carried out using the online verification mode. However, there were no applications for fresh program accreditation process from us, but few pending program compliances and extensions were cleared by the accrediting body using online mode only.

The NAAC University application for next cycle was also applied during this pandemic and the entire process of clarifications were carried out also through an online mode.

The newly admitted students who have not seen the campus and are not conversant with the academic process and who faced difficulty in any form, were all attended either through emails or phone calls for any assistance. However, it was also ensured that adequate form of instructions was floated to make the process clear. It was also understood at this time that the process of a chat bot (helpdesk) working with a concept of artificial intelligence and linked to our website page would help students and stake holders for any questions they might want us to address. This concept was proposed, approved, and will be adopted from the next academic year. The adoption of provisions to opt for partial fee payment was also made in this year assessing the difficulties of several students based on their request. This option was plugged as a page into the website for ease of handing such requests.

This difficult time has taught us many things which we could never have learned before. So, the situation driven year had been a learning and adaptation year for us as well.

INTRODUCTION



The Main Building at BIT, Mesra, Ranchi

Birla Institute of Technology, Mesra was established by the renowned philanthropist and visionary industrialist, Late Sri B. M. Birla in July 1955. Initially it was started as an affiliated college of the erstwhile Bihar University and later in 1960 upon creation of the new university in the state; its affiliation was transferred to Ranchi University. In pursuance of the recommendation of the Education Commission Government of India (1964 -1966) and on the basis of the report of a joint selection committee of the UGC and AUDIT, in March 1972, the Institute was granted the status of an 'Autonomous' college by making special provision in Bihar State University Act. The chancellor of the University of Bihar made the rules for its governance.

The achievement of the Institute in terms of research and excellent academic program led to its attaining the status of a deemed university under section 3 of the UGC act in August 1986.

The Institute has constantly improved on its technical facilities as well as in academics in order to keep pace with the fast changing technology scenario, thereby acquiring a pride of place amongst the institutions offering technical education in the country. This Institute celebrated the golden jubilee of its establishment in the year 2005 reaffirming its commitment to the cause of higher education.

Administration

B.I.T. Mesra is a "Deemed to be University" under sec. 3 of the of the U.G.C act 1986. It functions under the overall supervision, direction and control of a high-powered Board of Governors, comprising representatives of all the Ministry of Education, Government of India, the UGC, the state government, the Chancellor, the A.I.C.T.E, the Hindustan Charity Trust and the Institute faculty. The Governor of the state of Jharkhand is the Chancellor of the Institute. Shri C.K. Birla is the chairman of the Board of Governors, the composition of the board of governors is given in Annexure - II.

The Academic Council decides the academic policy of the Institute. It controls the approves the curriculum the courses and the examination results. It appoints committee like regulation committee for Undergraduate and Post-Graduate Courses, Semester Program Coordination Committee, Admission



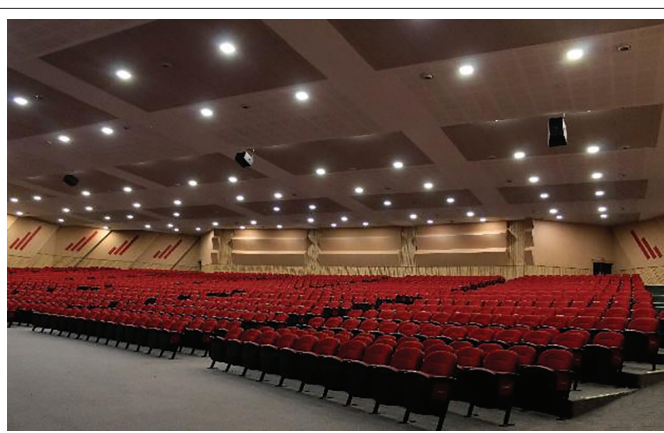
Committee, Scholarship Committee, Student Welfare Committee etc. and Departmental Board of Studies to look into the specific academic matters arising from time to time. The teaching training and research activities of various Departments at the Institute are constantly under review for both facilities and Standards. The Vice Chancellor of the Institute is the chairman of the academic Council. The members of the Academic Council have been enlisted in Annexure - III.

The Finance Committee gives financial advice to the Institute in matters relating to building work as well. The composition of these committees have been given in Annexure-IV and V.

The Main Campus, Mesra, Ranchi

The main campus of the Institute is fully residential and is spread over 780 acres. The main building of the Institute itself covers an area of 30,000 square meters and accommodates the various research and training laboratory, administrative offices and classrooms

The workshop Annex has built up area of 4,000 square meters. The laboratory and the office of Department of space engineering and rocketry are situated for security reason in a sub campus, about half a kilometer away from the main building the. The campuses is self contained amidst well laid lawn with its own protected water supply, marketing centre, dispensary, Bank and schools the first off campus was established in Ranchi City at Lalpur in 1976 with the experience to support with the spirit is it to support the continuing education program for the working engineers and professionals.

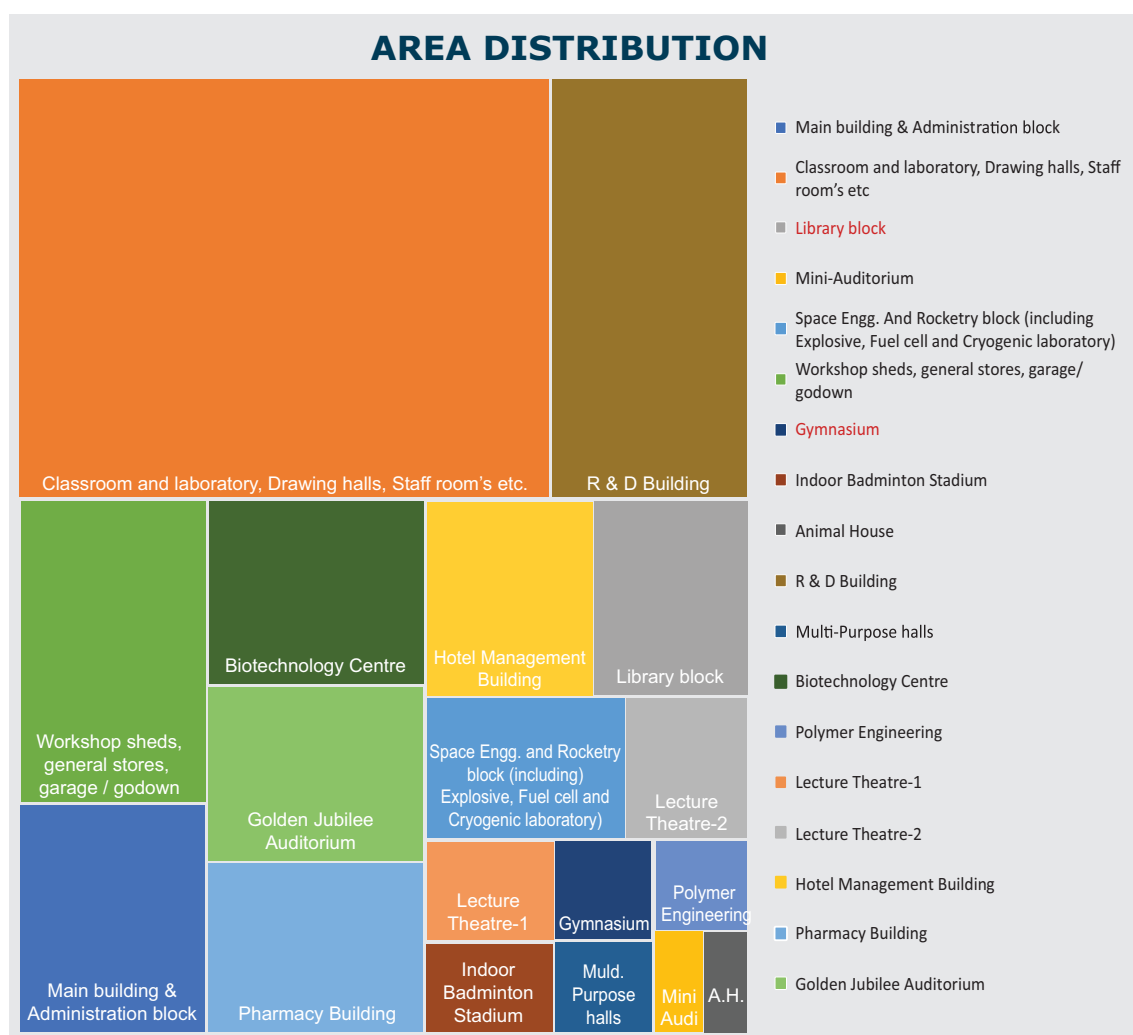


The G.P. Birla Auditorium

Institute Building	(Sq Mtrs.)
➤ Main building & Administration block	3700
➤ Classroom and laboratory, Drawing halls, Staff room's etc	19300
➤ Library block	2600
➤ Mini-Auditorium	450
➤ Space Engg. And Rocketry block (including Explosive, Fuel cell and Cryogenic laboratory)	2490
➤ Workshop sheds, general stores, garage/godown	4880
➤ Gymnasium	850
➤ Indoor Badminton Stadium	1000
➤ Animal House	400
➤ R & D Building	7200

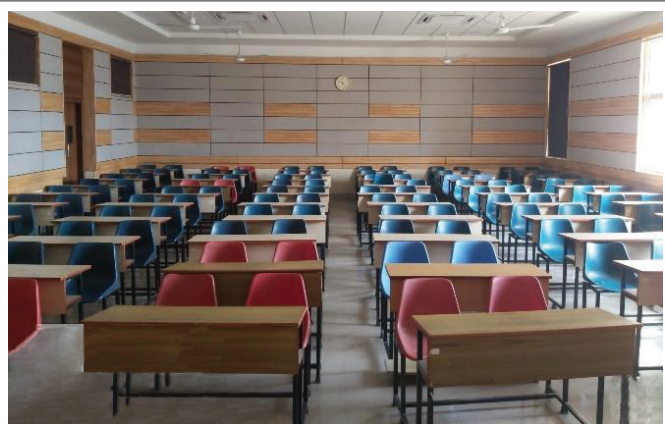
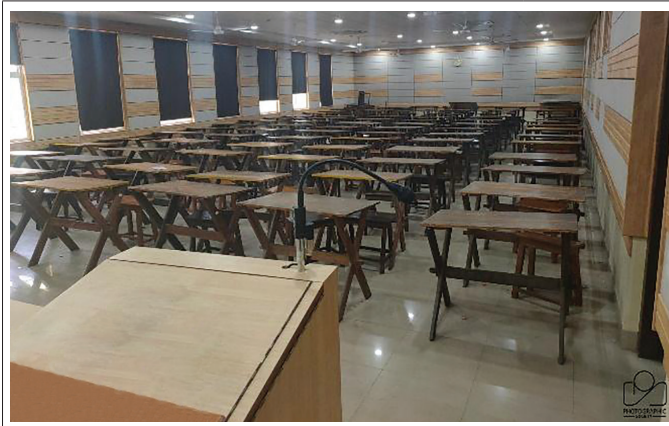
Institute Building	(Sq Mtrs.)
Multi-Purpose halls	785
Biotechnology Centre	3477
Polymer Engineering	744
Lecture Theatre-1	1143
Lecture Theatre-2	1535
Hotel Management Building	2835
Pharmacy Building	3220
Golden Jubilee Auditorium	3280
Residential Complex	
Staff quarter in different categories	422
Residential complex for supporting services Guards, Dairy Shopkeepers, Washer man etc.	116

The campus area distribution is shown in the following treemap visualization.





Lecture Halls



Design Studio and Lecture Hall



Staff Quarters and Club House



Student Hostels



SBI and UCO Banking Facilities



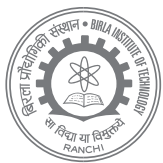
Transport Section



NCC Office

Others

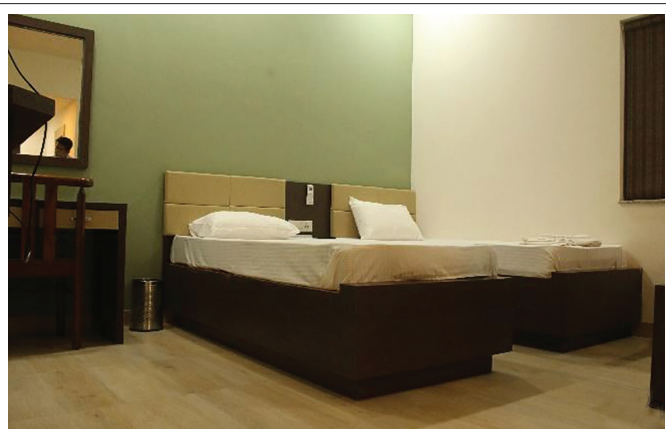
- Consumer's co-operative stores
- NCC Block
- Rifle Firing Range
- NCC Parade ground
- Club House



IC Arena and Cafeteria

Guest Houses

The Institute maintains two Guest houses with a total numbers of 38 furnished rooms and one VIP Guest-House with 3 deluxe bedrooms to accommodate the Institute's Guests.



Auditorium

The Institute building houses an auditorium having capacity of 350 persons. Larger scale events organized at Golden Jubilee Auditorium having capacity of about 3000 persons.



Mini Auditorium

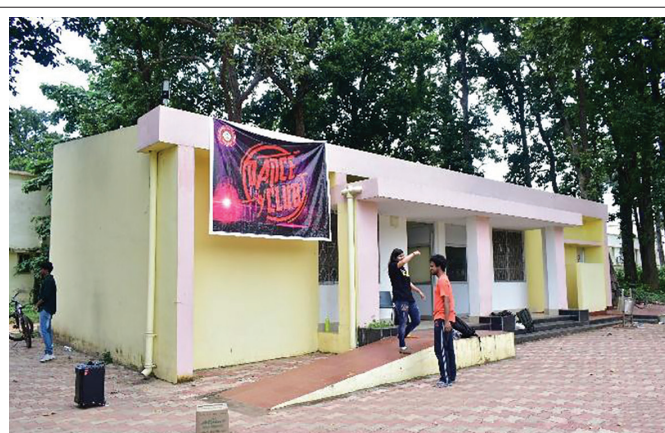
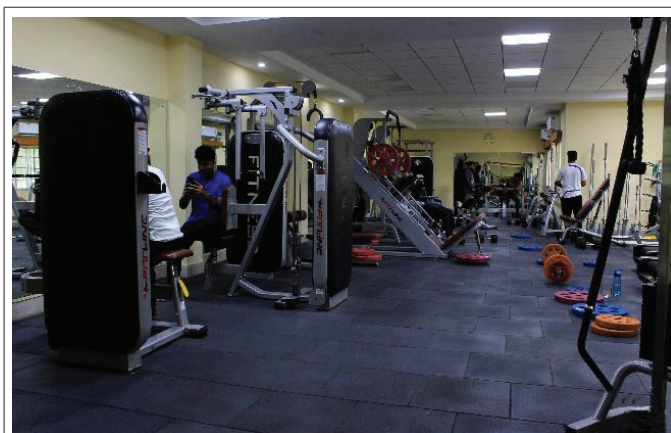


Sports Complex

Games and Sports complex

The Institute has Highway structure sports facilities for Indoor as well as outdoor games. These are as follows:

Gymnasium including Multi Gym	1
Stadium for track and field for sports/athletics	1
Cricket ground including net	2
Football ground	2
Hockey ground	2
Basketball courts	4
Volleyball courts	6
Tennis courts	6
Badminton courts	8
Kho-Kho ground	1
Kabaddi Ground	1



Gymnasium and Student Activity Room



The Indoor Stadium



The Volley Ball Court



Seminar Hall



Dispensary



Administrative Offices

Dispensary Cum Health Centre

Facilities available

- | | |
|------------------------|---|
| ➤ OPD services | 8 A.M to 12.00 Noon, 4.00 P.M to 8.00 P.M |
| ➤ Emergency services | Round the Clock |
| ➤ Total number of Beds | 12 (Male-9, Female-4) |

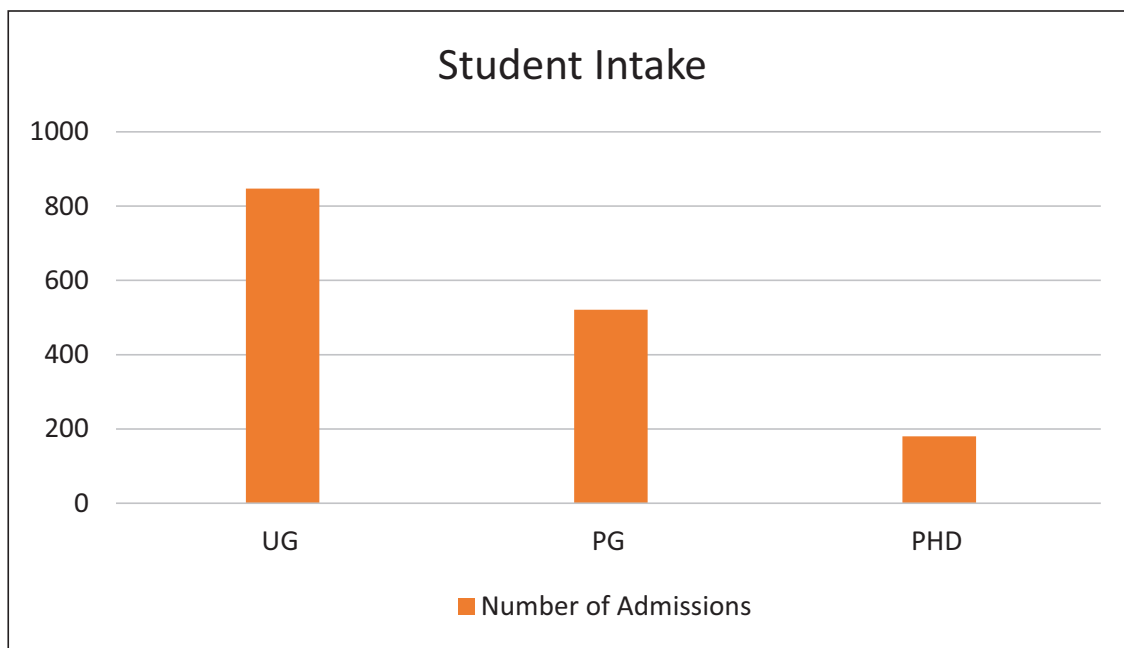
Shopping Centre

A well - maintained Cooperative Store provides the daily requirements of the campus residents. Over past few years, additional Shopping Complexes have been developed to meet the day today Sundry needs.

Hostel Facilities for Students

Since the Institute is completely residential, it has 12 boys and 2 girls hostel for their accommodation. All rooms of the hostel are having internet facility. Borders participate in inter - hostel tournaments, indoor and outdoor games, various competitions and adventure trips. Each hostel is having its own well maintained dining hall and a mess committee being managed by the students under the supervision of Hostel Wardens.

Student Intake and Admissions



Admission in UG Programmes 2020-21 (Mesra Campus)

Sl.No.	Course		No of Seats	Received Application Form	Numbers of Admissions
1.	B.Tech*	JOSAA	780 + NRI	*	745
		NRI			
		EBC/OBC			
		GOI (J&K)			
2.	B.Arch*	JOSAA	40 + NRI	*	34
		NRI			
		EBC/OBC			
3.	B. Pharm.		60	184	54
4.	BHMCT		40	88	14
Total:			920	272	847

*Data Not Available since admission to these programmes is through JoSAA/CSAB.



Details of UG Admission at Mesra Campus:

Sl.No.	Branch	Numbers of Admissions
1	Bachelor of Architecture	34
2	B.Tech Biotechnology	40
3	B.Tech Chemical Engineering	54
4	B.Tech Chemical Engineering(P&P)	44
5	B.Tech Civil Engineering	50
6	B.Tech Computer Sc. & Engineering	138
7	B.Tech Electronics & Communication Engg.	123
8	B.Tech Electrical & Electronics Engg.	57
9	B.Tech Mechanical Engineering	121
10	B.Tech Information Technology	68
11	B.Tech Production Engineering	50
12	Bachelor of Pharmacy	54
13	Bachelor of Hotel Management & Catering Technology	14
Total:		847

Admission in PG Programmes 2020-21 (Mesra Campus)

Course		No of Seats	Numbers of Admissions
MBA		120	110
MCA		60	49
M. Tech Automated Manufacturing Systems		25	00
M. Tech Chemical Engineering		18	00
M. Tech Civil Engineering	a). Soil Mech. & Found	12	21
	b). Structural Engg.	12	
M. Tech CAAD		18	02
M. Tech - EEE	a). Power Elect.	18	39
	b). Control System	12	
	c). Power System	12	
M. Tech - ECE	a). Wireless Comm.	18	23
	b). Microwave	12	
	c). Instrumentation & Control	12	



Course		No of Seats	Numbers of Admissions
M. Tech Mechanical Engineering	a). Heat Power	12	13
	b). Design of Mechanical Equipment	12	
M. Tech - SER	a). Aerodynamics	12	23
	b). Rocket Propulsion	12	
M.Tech Bio- Technology		18	07
M.Tech Computer Science & Engineering		16	14
M.Tech Information Security		18	08
M.Tech Information Technology		18	12
M.Tech Energy Technology		18	03
M.Tech Env. Science & Engg.		18	11
M.Tech Remote Sensing		18	07
M.Sc. Chemistry		15	05
M.Sc. Mathematics		15	01
M.Sc. Physics		15	07
M.Sc. Biotechnology		30	22
M.Sc. Geo – Informatics		20	11
M. Pharm		75	46
MUP		20	16
Integrated M.Sc. Chemistry		30	05
Integrated M.Sc. Physics		30	11
Integrated M.Sc. Mathematics		60	50
Integrated M.Sc. Food Tech.		30	05
		861	521

Admission in Ph.D Programme - 2020 (Session MO-2020)

Sl.No.	Departments	Numbers
1	Architecture	07
2	Bio - Engineering	09
3	Computer Science.& Engineering	14
4	Chemistry	09
5	Chemical Engineering	03
6	Civil & Environmental Engineering	08



Sl.No.	Departments	Numbers
7	Electrical and Electronics Engineering	06
8	Electronics and Communication Engineering	08
9	Mechanical Engineering	10
10	Mathematics	03
11	Management	00
12	Production Engineering	03
13	Physics	06
14	Pharmaceutical Science & Technology	13
15	Remote Sensing	12
16	Space Engineering and Rocketry	02
Total:		113

Admission in Ph.D. Programme - 2021 (Session SP-2021)

Sl. No.	Department	Admitted Candidates
1	Architecture	01
2	Bio Engineering	11
3	Computer Science & Engineering	09
4	Chemistry	03
5	Chemical Engineering & Tech.	01
6	Civil & Env. Engineering	05
7	EEE	05
8	ECE	06
9	Mechanical Engineering	06
10	Mathematics	01
11	Management	04
12	Production Engineering	05
13	Physics	02
14	Pharmaceutical Sc. & Tech.	06
15	Remote Sensing	02
16	SER	00
Total:		67



Convocations, Results and Gold Medalist

List of Eligible Candidates for the Award of Gold Medal

SL.NO.	ROLL NO.	NAME	CGPA	CENTER
Bachelor of Architecture				
1	BARCH/10012/14	APARNA BAGARIA	8.72	Mesra
Bachelor of Engineering (Biotechnology)				
2	BE/10633/15	VIJAYA SHEKHAR	8.50	Mesra
Bachelor of Engineering (Chemical)				
3	BE/10608/15	KOUSUMI MUKHERJEE	8.81	Mesra
Bachelor of Engineering (Chemical-Plastics and Polymer)				
4	BE/10598/15	SAYANTIKA CHAKRABORTY	8.50	Mesra
Bachelor of Engineering (Civil)				
5	BE/10295/15	SREEJA	8.75	Mesra
Bachelor of Engineering (Computer Science)				
6	BE/10077/15	SNEHA ANAND	9.31	Mesra
Bachelor of Engineering (Electrical and Electronics)				
7	BE/10061/15	RISHAV KUMAR	8.87	Mesra
Bachelor of Engineering (Electronics and Communication)				
8	BE/10164/15	SOURAV NAVAL	9.13	Mesra
Bachelor of Engineering (Information Technology)				
9	BE/10053/15	ANKIT KUMAR SUREKA	9.11	Mesra
Bachelor of Engineering (Mechanical)				
10	BE/10379/15	HARISH RAMACHANDRAN	9.57	Mesra
Bachelor of Engineering (Production)				
11	BE/10142/15	SUNNY KUMAR	8.63	Mesra
Bachelor of Hotel Management and Catering Technology				
12	BHMCT/10001/15	ARK RAJ	8.39	Mesra
Bachelor of Pharmacy				
13	BPH/10045/15	PRITHA MURARKA	8.90	Mesra
Bachelor of Business Administration				
14	BBA/40005/16	AAKRITI	9.03	Lalpur
Bachelor of Computer Applications				
15	BCA/40004/16	DEEPTI PRIYA	9.21	Lalpur
Bachelor of Science (Animation and Multimedia)				
16	BAM/25003/16	PRERNA MITTAL	9.25	Jaipur
Bachelor of Science (Medical Lab Technology)				
17	BMLT/13/16	KUMARI DIKSHA	9.52	Univ. Poly.



Degree Awarded

Birla Institute of Technology, Mesra-835215, Ranchi 30th Convocation (Mesra)					
1	Doctor of Philosophy				Total
	Doctor of Philosophy (Architecture)				5
	Doctor of Philosophy (Engineering)				23
	Doctor of Philosophy (Management)				4
	Doctor of Philosophy (Pharmacy)				11
	Doctor of Philosophy (Science)				12
	Doctor of Philosophy (Technology)				7
			Total		62
2	Master of Philosophy				Total
	Master of Philosophy (Engineering)				1
			Total		1
3	Post-Graduate Degrees	ID	I	II	Total
	Integrated Master of Science (Chemistry)	3	5	4	12
	Integrated Master of Science (Food Technology)	3	8	0	11
	Integrated Master of Science (Mathematics and Computing)	8	8	2	18
	Integrated Master of Science (Physics)	8	2	4	14
	Master of Business Administration	29	59	5	93
	Master of Computer Applications	20	23	1	44
	Master of Engineering (Automated Manufacturing Systems)	2	4	0	6
	Master of Engineering (Computer Aided Analysis and Design)	3	1	0	4
	Master of Engineering (Chemical)	1	1	0	2
	Master of Engineering (Civil)	16	5	0	21
	Master of Engineering (Electrical)	21	7	2	30
	Master of Engineering (Electronics and Communication)	16	10	0	26
	Master of Engineering (Mechanical)	17	3	0	20
	Master of Engineering (Space Engineering and Rocketry)	7	4	0	11
	Master of Pharmacy	51	3	0	54
	Master of Science (Applied Mathematics)	1	0	0	1
	Master of Science (Biotechnology)	8	10	1	19
	Master of Science (Chemistry)	2	3	0	5
	Master of Science (Geo-Informatics)	7	3	0	10
	Master of Science (Mathematics)	3	2	0	5
	Master of Science (Physics)	6	4	1	11
	Master of Technology (Biotechnology)	3	2	0	5
	Master of Technology (Computer Science)	9	4	0	13
	Master of Technology (Energy Technology)	9	0	0	9
	Master of Technology (Environmental Science and Engineering)	4	4	0	8
	Master of Technology (Information Security)	3	2	0	5
	Master of Technology (Information Technology)	6	3	1	10



	Master of Technology (Remote Sensing)	5	5	0	10
	Master of Urban Planning	1	4	2	7
		Total			484
4	Under-Graduate Degrees	ID	I	II	Total
	Bachelor of Architecture	21	13	0	34
	Bachelor of Engineering (Biotechnology)	28	3	2	33
	Bachelor of Engineering (Chemical)	31	11	0	42
	Bachelor of Engineering (Chemical-Plastics and Polymer)	20	10	1	31
	Bachelor of Engineering (Chemical and Polymer)	0	1	1	2
	Bachelor of Engineering (Civil)	36	11	5	52
	Bachelor of Engineering (Computer Science)	112	19	3	134
	Bachelor of Engineering (Electrical and Electronics)	37	13	2	52
	Bachelor of Engineering (Electronics and Communication)	78	31	11	120
	Bachelor of Engineering (Information Technology)	46	8	3	57
	Bachelor of Engineering (Mechanical)	79	14	1	94
	Bachelor of Engineering (Production)	38	6	3	47
	Bachelor of Hotel Management and Catering Technology	7	5	0	12
	Bachelor of Pharmacy	27	12	5	44
	Bachelor of Science (Major in Chemistry)	2	0	0	2
	Bachelor of Science (Major in Mathematics and Computing)	4	6	0	10
	Bachelor of Science (Mathematics and Computing)	0	1	0	1
	Bachelor of Science (Major in Physics)	6	3	0	9
		Total			776
		Grand Total			1323

30th CONVOCATION (PATNA)					
1	Doctor of Philosophy				
	Doctor of Philosophy (Engineering)				2
		Total			2
2	Post-Graduate Degrees	ID	I	II	Total
	Master of Business Administration	0	0	1	1
	Master of Engineering (Electronics and Communication)	7	2	0	9
	Master of Technology (Computer Science)	4	5	0	9
		Total			19
3	Under-Graduate Degrees	ID	I	II	Total
	Bachelor of Architecture	15	15	0	30
	Bachelor of Business Administration	36	19	4	59
	Bachelor of Computer Applications	30	16	0	46
	Bachelor of Engineering (Civil)	9	11	2	22



वार्षिक प्रतिवेदन 2020-2021

Bachelor of Engineering (Computer Science)	38	12	2	52
Bachelor of Engineering (Electronics and Communication)	30	18	2	50
Bachelor of Engineering (Electrical and Electronics)	22	22	8	52
Bachelor of Engineering (Information Technology)	12	8	1	21
Bachelor of Engineering (Mechanical)	21	13	1	35
Bachelor of Engineering (Production)	5	6	0	11
Total				378
Grand Total				399

30th CONVOCATION (DEOGHAR)					
1	Doctor of Philosophy				
	Doctor of Philosophy (Engineering)				2
	Doctor of Philosophy (Science)				1
	Total				3
2	Under-Graduate Degrees	ID	I	II	Total
	Bachelor of Engineering (Computer Science)	36	5	0	41
	Bachelor of Engineering (Electronics and Communication)	8	12	0	20
	Bachelor of Engineering (Electrical and Electronics)	7	9	2	18
	Bachelor of Engineering (Mechanical)	12	15	2	29
	Total				108
	Grand Total				111

30th CONVOCATION (ALLAHABAD)					
1	Doctor of Philosophy				
	Doctor of Philosophy (Management)				1
	Total				1
2	Under-Graduate Degrees	ID	I	II	Total
	Bachelor of Business Administration	0	0	1	1
	Bachelor of Computer Applications	0	0	1	1
	Bachelor of Engineering (Computer Science)	13	3	0	16
	Total				18
	Grand Total				19

30th CONVOCATION (LALPUR)				
1	Doctor of Philosophy			Total
	Doctor of Philosophy (Engineering)			1
	Total			1



2	Post-Graduate Degrees	ID	I	II	Total
	Integrated Master of Business Administration	0	0	2	2
	Integrated Master of Computer Applications	0	0	1	1
	Master of Business Administration	13	58	17	88
	Master of Computer Applications	4	36	1	41
		Total			132
3	Under-Graduate Degrees	ID	I	II	Total
	Bachelor of Business Administration	108	58	11	177
	Bachelor of Computer Applications	105	48	15	168
		Total			345
		Grand Total			478

30th CONVOCATION (KOLKATA)					
1	Post-Graduate Degrees	ID	I	II	Total
	Master of Technology (Computer Science)	0	1	0	1
		Total			1
2	Under-Graduate Degrees	ID	I	II	Total
	Bachelor of Business Administration	0	3	0	3
		Total			3
		Grand Total			4

30th CONVOCATION (NOIDA)					
1	Doctor of Philosophy				Total
	Doctor of Philosophy (Management)				4
		Total			4
2	Post Graduate Degrees	ID	I	II	Total
	Master of Business Administration	6	15	6	27
	Master of Computer Applications	5	9	0	14
	Master of Technology (Computer Science)	0	0	1	1
		Total			42
3	Under-Graduate Degrees	ID	I	II	Total
	Bachelor of Business Administration	29	39	11	79
	Bachelor of Business Economics	0	0	1	1
	Bachelor of Computer Applications	12	19	8	39



वार्षिक प्रतिवेदन 2020-2021

	Bachelor of Science (Animation and Multimedia)	24	8	1	33
	Bachelor of Science (Honours)	1	3	0	4
	Total				156
	Grand Total				202

30th CONVOCATION (JAIPUR)					
1	Post Graduate Degrees	ID	I	II	Total
	Integrated Master of Computer Applications	0	0	1	1
	Master of Animation Design	2	0	1	3
	Master of Computer Applications	4	4	1	9
	Total				13
2	Under-Graduate Degrees	ID	I	II	Total
	Bachelor of Business Administration	7	11	0	18
	Bachelor of Computer Applications	11	20	0	31
	Bachelor of Engineering (Computer Science)	39	5	0	44
	Bachelor of Engineering (Electrical and Electronics)	10	6	3	19
	Bachelor of Engineering (Electronics and Communication)	12	16	0	28
	Bachelor of Science (Animation and Multimedia)	8	0	0	8
	Total				148
	Grand Total				161

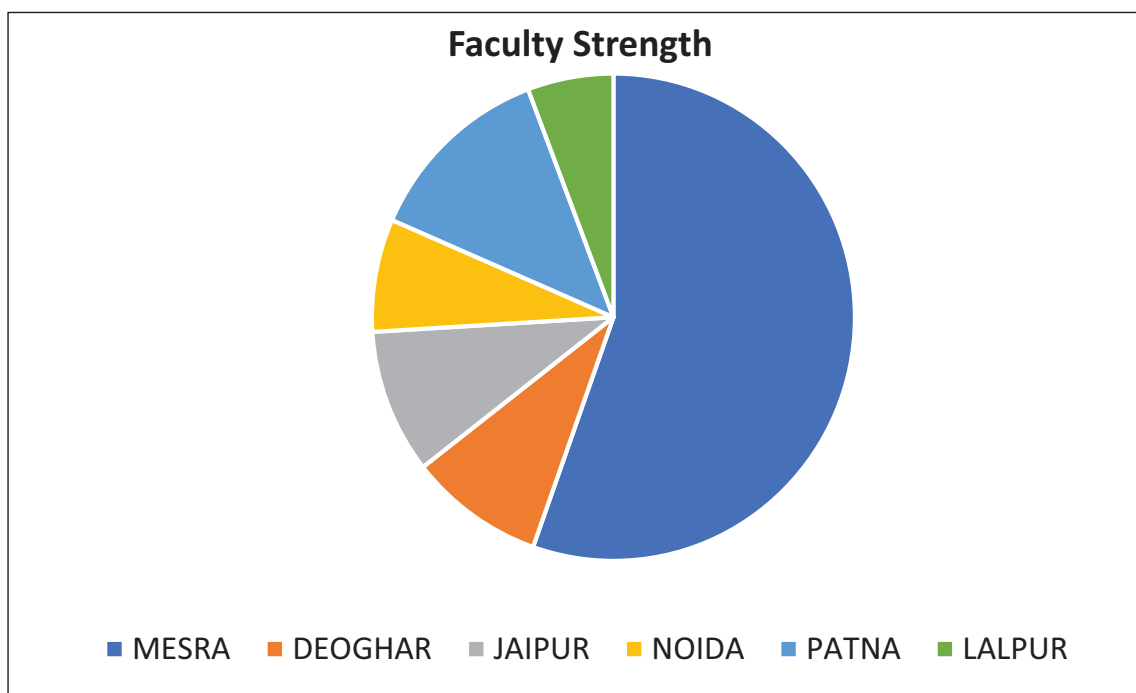
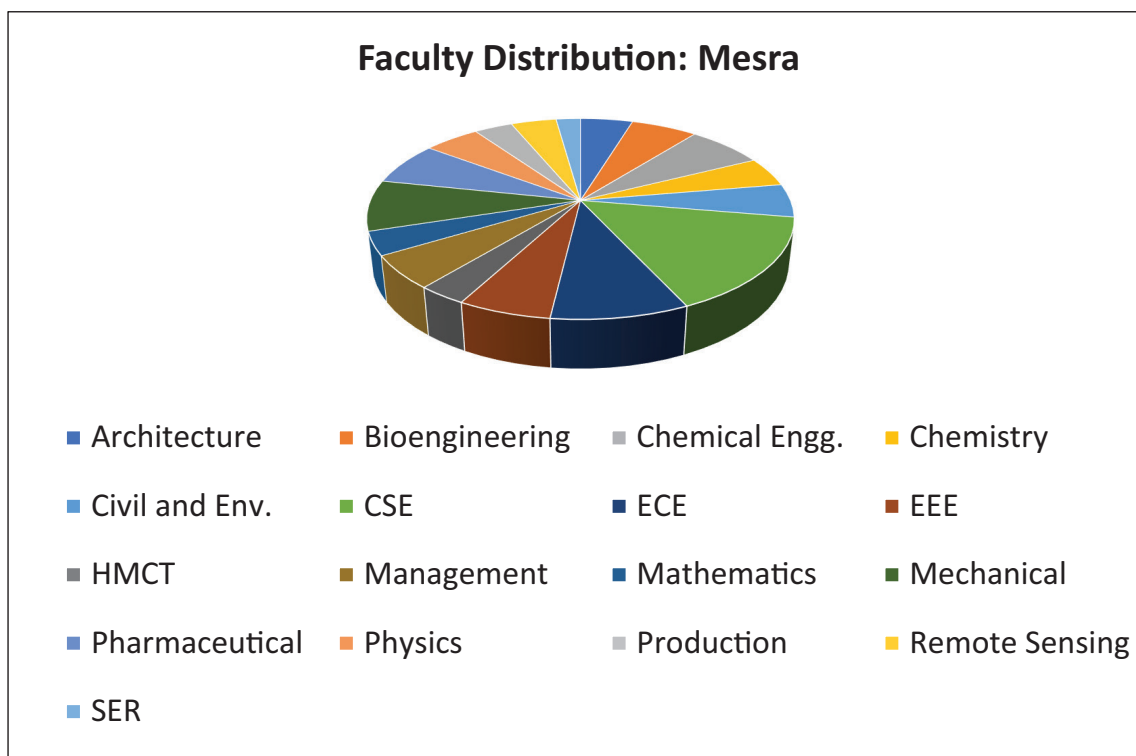
30th CONVOCATION (UNIVERSITY POLYTECHNIC)					
1	Under-Graduate Degrees	ID	I	II	Total
	Bachelor of Science (Medical Lab Technology)	26	18	0	43
	Total				43
2	Diploma	ID	I	II	Total
	Diploma in Automobile Engineering	16	20	2	38
	Diploma in Computer Engineering	9	12	2	23
	Diploma in Electrical and Electronics Engineering	16	14	1	31
	Diploma in Electronics Engineering	10	13	2	25
	Diploma in Manufacturing Engineering	6	8	0	14
	Diploma in Mechanical Engineering	12	13	1	26
	Total				157
	Grand Total				200



*ID : First Class with Distinction
 I : First Class
 II : Second Class

Faculty Strength:

A total of 307 faculties are present in Mesra (as on 20.06.2021)





DEPARTMENTS



Department of Architecture

SECTION 1

DEPARTMENTAL PROFILE



FIRST YEAR DESIGN STUDIO

About the Department:

The Department of Architecture was established at BIT Mesra in the year 1993, in keeping with the multifarious scope of Architecture as the art and science of designing spaces and adding value to a meaningful, built environment. It is a subject which is a combination of faculties of engineering, science as well as arts. The programme is a balanced combination of all these streams, yet follows a unique pedagogical methodology that is its hallmark.

Department of Architecture, BIT Mesra, a leading center for research and teaching in architecture, urban design, and sustainable design, is one of the top ranking Architecture Department in the country. The department is noted for its meticulous teaching leading to fundamental, applied research and collaboration with leading experts from practice and industry. Since its inception in 1993 with start of B.Arch and 2007 with start of Masters in Urban Planning and PhD, the Department has made substantial contribution in national and international arena by rendering academic and professional services.

The course structure in undergraduate and postgraduate is poised between theoretical knowledge and its practical application with ample application-based lab subjects evenly distributed throughout the syllabus. The practical orientation of working in an actual office is also taken care of in the Practical Training subject in the final year of the course.

The Architecture Department has ranked 13 among all Architecture colleges in India as per NIRF 2012.



BUILDING SCIENCE LAB

The Department ranked 6th among all colleges of Architecture in India as per India Today 2020 survey. The Department ranked 1st among all colleges of Architecture in India as per the survey of GHRDC in 2020.

The Department is a seat of learning powered by state of art laboratories. Architecture students spend time in laboratories and design studios working on a wide variety of projects. The department houses within its laboratories various softwares including:

- AUTOCAD
- Rhinoceros
- NVMET 4.0
- ARCGIS 10.4.1
- Bentley -BIM
- IBM SPSS Statistics 24
- Sketchup
- Indiastat.com

The department also houses a Building Science Laboratory which accommodates within it state of art instruments namely

- Total weather station
- Surface temperature measuring gun
- Data logger
- Light meter
- Indoor Air Quality Handled meter

The Model making workshop accommodates updated instrument like Zodiac Cut Curve 442. The department is also facilitated by A0 printing and scanning facility.



SECTION 2

RESEARCH PROJECTS

1. Sponsored Projects (Research and Consultancy)

a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Developing a toolkit for assessing housing needs for scheduled tribes in urban areas	Dr. Smriti Mishra (PI) Ms. Anila S. Surin (Co-PI)	BIT, Mesra	July 2019	INR 2,00,000/-	2Yrs.
2.	Role of water bodies on settlement pattern: a case study of Ranchi district	Shama Parween	BIT, Mesra	24/12/2020	1,91,000	2 years
3.	Implications of Plot level redevelopment, A case of Ranchi	Ar. Rizwan Kazmi	BIT, Mesra	24/12/2020	1,95,000	02 years
4.	People –place connection: Local People's preoaration of foagship ganga river front case of Patna	Ar. Anjali Pathak	BIT, Mesra	24/12/2020	1,30,0000	02yrs
5.	Understanding Impact of colonial urbanism and sanitary polices on the contemporary urban geography and challenges to urban sewage management in Allahabad	Ar. Tiwari Pavan Kumar	BIT, Mesra	24/12/2020	1,90,000	02yrs

b) Projects Completed

Sr. No.	Project Title	PI / Co PI /	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Preparation of Gram Panchayat Spatial Development Plan / Master Plan for Neuri (Ranchi District)	PI: Dr. Satyaki Sarkar Co PI : 1.Ms. Ritu Agrawal 2.Dr. Smriti Mishra 3. Dr. Bimal C. Roy 4. Dr. Rajan C. Sinha 5. Mr. Anuj Toppo	Govt. of India, Ministry of Panchayat Raj	23.06.2020	5,00,000	July to November 2020
2.	Preparation of Gram Panchayat Spatial Development Plan / Master Plan for Kanrra (Bokaro District)	6. Mr. Mrinal Pathak 7. Mr. Apurv Ashish 8. Ms. Anila S. Surin 9. Mr. Tiwari Pavan Kumar 10. Ms. Anjali Pathak 11. Mr. Rizwan Kazmi 12. MS Shama Parween				July to November 2020



SECTION 3

SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	International Womens Day - Innovations & opportunities post architectural education	Dr. Satyaki Sarkar	NA	8th March, 2021
2	Innovations & opportunities post architectural education	Dr. Samriti Mishra	NA	30th January 2021

3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Ritu Agrawal	Personal Effectiveness	Free	ATAL training at BIT Mesra, Ranchi	FDP - Online	5th Jan, 2021- 9th Jan 2021
2.	Ritu Agrawal	City-wide Sanitation Planning	Myself	School of Water and Waste, Centre of Science and Environment, India	Online Course	7th Sept, 2020 - 5th Oct, 2020
3.	Ritu Agrawal	Cyber Security and Investigation Tools	TEQIP - III	Department of Computer Science and Engineering, BIT Mesra, Ranchi	FDP -Online	11th- 15thSept, 2020
4.	Dr. Bimal Chandra Roy	Waste Technology	ATAL Academy	Z. H. College of Engineering and Technology, AMU, Aligarh	Online	24.02.2021- 28.02.2021
5.	Dr. Bimal Chandra Roy	Personal Effectiveness	ATAL Academy	Department of Architecture, B.I.T Mesra, Ranchi, Jharkhand	Online	05.01.2021- 09.01.2021
6.	Mr. Mrinal Pathk	Ek Bharat Shrestha Bharat webinar	Govt. of India	Nehru Yuva Kendra Sangathan	Morabadi, Ranchi	16.12.2020
7.	Apurv Ashish	Two week online Faculty development programme on Delivering online course using Canvas LMS	Birla Institute of Technology, Mesra, Ranchi, Jharkhand	BIT Mesra, Ranchi, Jharkhand.	Online mode (BIT Mesra)	27/07/2021- 05/08/2020
8.	Apurv Ashish	AICTE ATAL Academy FDP on Personal Effectiveness	AICTE ATAL	AICTE ATAL & BIT Mesra, Ranchi	Online mode (BIT Mesra)	5/01/2021- 09/01/2021

**SECTION 4****RESEARCH PUBLICATIONS****4.1 Publications in Journals**

1. Dash M. and Chakraborty, M., Outdoor Ventilation and Ground Coverage: Exploring a Climate Centric Approach to Building Byelaws for Multi Storied Apartment in Bhubaneswar; Journal of Sustainable Architecture and Civil Engineering; Vol 2, No 27; pp : 78-95; Print ISSN 2029-9990, Online ISSN 2335-2000; Nov 2020. (Scopus Indexed).
2. Gupta J., Chakraborty M., Sharon Mathew, Alankar Jharia (Oct 2020), Mud as a construction material in Rural Dwellings: Study of Thermal Performance in Composite Climate, International Journal of Advanced Science and Technology, Vol.29, No 3, ISSN No : 0776-3808; pp 1710-1734.(Scopus-indexed)
3. Gupta J., Chakraborty M., Hema Sree Rallapalli

and Nivedhitha.R (August 2020), Climate-Responsive Architecture in Rural Vernacular Dwellings: A Study in Composite Climate in Ranchi, Jharkhand, India., AEGAEUM Journal, Vol.8, Issue 7, ISSN No: 0776-3808; pp. 1710-1734. (Scopus-indexed)

4. Kapadia Mustafa, Sarkar Satyaki, Roy Bimal C, Sinha Rajan C., Critical appraisal of parameters for successful implementation of BRTS in India, Periodica Polytechnica Transportation Engineering (SCOPUS) October 2020 ISSN No. -1587-3811

4.2 Book:

1. Janmejy Gupta, Manjari Chakraborty (2020). Energy Efficiency in Buildings in Sustainable Fuel Technology Handbook.457-480

SECTION 5**AWARD / PATENT / COLLABORATIONS****5.1 Award / Recognition Bestowed on Faculties**

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Mr. Rizwan Kazmi	GATE Scholar	IIT/ IISC Bangalore	National	2019-2022

SECTION 6**ACTIVITIES/ FACULTY MEMBERS / BOS / DAS****6.1 Departmental Students' Activities**

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
1.	NASA WRITING ARCHITECTURE – 1/ out of 3 entries shortlisted under top20 (Team- Rachana Yadavalli + Ishita Singh)	Mr. Lakhsman Praneet	Dr. Smriti Mishra	2020
2.	LIXIL mentorship program - - Deeptam Das (k18)under Ar. Hiren) Patel Naritya Choudhary & Sri Sahithi (k18) under Ar. Vivek Singh Rathore	NIL	NIL	2020
3	Community participation Scoping Project by University of Edinburgh	Ms. Archirava Raha	NIL	29.06.2021



6.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. Satyaki Sarkar	Associate Prof. & Head	No
2.	Dr. M. Chakraborty	Professor & DoIP	No
3.	Mrs. Ritu Agrawal	Assist. Prof.	No
4.	Dr. Smriti Mishra	Assist. Prof.	No
5.	Dr. Bimal Chandra Roy	Assist. Prof.	No
6.	Dr. Rajan Chandra Sinha	Assist. Prof.	No
7.	Mr. Anuj Kr. Toppo	Assist. Prof.	No
8.	Mr. Mrinal Pathak	Assist. Prof.	No
9.	Mr. Apurv Ashish	Assist. Prof.	No
10.	Ms. Anila S. Surin	Assist. Prof.	No
11.	Mr. Tiwari Pavan Kumar	Assist. Prof.	No
12.	Ms. Anjali Pathak	Assist. Prof.	No
13.	Mr. Rizwan Kazmi	Assist. Prof.	No
14.	Ms. Shama Parveen	Assist. Prof.	No

6.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. Niraj Verma	Professor	Adjunct Professor Department of Architecture, BIT Mesra, Ranchi Professor, L. Douglas Wilder School of Government & Public Affairs at Virginia Commonwealth University, USA Dean and Director, Wilder School of Government & Public Affairs Company Name: Virginia Commonwealth University Dates Employed: Aug 2010 – Jun 2016 Employment Duration: 5 yrs 11 months Location Richmond, VA
2.	Dr. Sudipto Roy	Lecturer	Landscape Architecture Department, School of Design, Creative Industries Faculty, Queensland University of Technology, Brisbane, Australia.

6.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Satyaki Sarkaar	Assot. Prof. & Head	Chairman & Ex- Officio
2.	Dr. Manjari Chakraborty	Professor	Internal
3.	Dr. Smriti Mishra	Assist. Professor	Internal
4.	Dr. Sudeshna Chakraborty	Professor, Department of CEE	External
5.	Dr. A.P. Krishna	Professor, Department of RS	External

Sr. No.	Name of the Member	Designation	Role
6.	Dr. Anamika Nandan	In-charge, Dept. of Architecture, Patna Campus	External
7.	Prof. Swati Jha	Prof., IIST Shibpur	External
8.	Ar. Sandeep Jha	Chief Architect, AXIS, Ranchi	External

SECTION 7

OTHER INFORMATION

7.1 Distinguished Visitors from Industry/Academia/Research organizations (online)

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	1. Ar. Avneet Kaur Wait Disney Animation Studios, Los Angeles, USA 2. Ar. Tanay Kumar Fractal Design Studio Pvt. Ltd., Mumbai 3. Ar. Priyanka Agrawal Fractal Design Studio Pvt. Ltd., Mumbai	30.01.2021	 
2.	1. Ar. Susmita Sinha Founder of local feedback org. India 2. Ar. Amrita Maitra Ar. & Urbnist Osbaproa, Paris France 3. Ar. Vasudha Varma Intersection Designer, google San Francisco, USA 3. Dr. Devottama Banerjee Founder & managing Director, Greeninfra Creation Pvt. Ltd.	08.01.2021	



7.2 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Gaurav Gupta/93 batch	ARCHLINE Design Pvt. Ltd –Noida, India Managing Director & Principal Architect
2.	Mamta Uppal/93 Batch	Works at Dimensions Design Build Inc
3.	Sandeep Kumar/93 batch	Sr General Manager at Salarpuria Sattva, Bengaluru
4.	Roop Chanda/94 batch	Associate Director at RSP Design Consultant's INDIA Pvt Ltd Bengaluru
5.	Shaon Sikta Sengupta/ 94batch	Consultant - Edifice Consultants Pvt. Ltd
6.	Biplob Nandy/94 batch	Principal Architect, Biplob Nandy & Associates, Siliguri
7.	Trisha Debdas/96 batch	Head of Business Planning and Operations for Strategic Accounts at Refinitiv Greater New York City
8.	Apurb Minz/96 batch	Principal Architect, Apurb & Associates, Ranchi
9.	Framarz Mistry/97 batch	Director, Design Technology Mohawk Industries, Greater Atlanta
10.	Dogra Gurjeet Singh/ 98 batch	PROVECTUS TECH CONSULTANTS – Business Director, Jamshedpur

Department of Bioengineering and Biotechnology

SECTION 1

DEPARTMENTAL PROFILE



About the Department:

The Department of Biotechnology was established in 2002 with financial support from the Department of Agriculture, Government of Jharkhand, with objectives like providing education and training facilities, carrying out application oriented research, developing in-house technologies and promoting consultancy services in

various areas of Biotechnology. The Department of Bioengineering has a vision to impart international standard quality education in the field of Bioscience, Biotechnology and Bioengineering. The Department name was changed to Bio-Engineering in May, 2013. (Note: Recently in July 2021 the Department is renamed as Department of Bioengineering and Biotechnology).

SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects

a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Identification of the most active cocoonase of sericigenous insects through molecular characterization	PI-Dr D. M. Pandey	DBT GOI	21/02/2018 (BT/PR17835/ TDS/121/26/2016 dates 21-02-2018)	Rs. 22.93 Lakhs only (CTR&TI, Ranchi; IISER, Pune; BIT Mesra, Total 71.23	3 years
2.	Development of multi-functional nano-HAP bone substitute for effective bone regeneration in critical defects	PI- Dr. Sneha Singh (PI BIT Mesra) & Dr. Ashok Kumar (PI IIT Kanpur,)	DST-Nanomission	10/07/2019	1,13,25,480/- (joint IIT K+ BIT M) 51,15,240/- (BIT component)	3 years



Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
3.	Analysis and identification of features from neural dynamics and their correlations with autonomic nervous system for development of hybrid brain-computer interface	Dr. Rakesh Kumar Sinha	AICTE	14.08.2020	17.64706 lakhs	3 Years
4.	In-silico design and validation of boronic acid-based molecules for the treatment of colorectal cancer: Computer aided hit to lead discovery	Dr. Alok Jain (PI)	DBT, India	02/07/2019	1,13,60,000/- INR	5 years

b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Anti-viral drug repurposing to inhibit the CoV-2 entry: A molecular modeling approach targeting ACE-2 and TMPRSS2	Dr. Alok Jain (PI)	IIT Delhi	April 2020	Computing time equivalent to 7,60,320/- INR	September 2020

SECTION 3

SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	Webinar on Impact of Covid-19 on Mental Health and Well Being	Convenor: Dr S. Ghosh Sachan Co-Convenor: Dr M. Kumar	TEQIP III	08.08.2020
2.	Faculty Development Program on 'Artificial Intelligence '		AICTE ATAL	25-29th January 2021.
3.	Faculty Development Program on 'Application of AI and ML in healthcare'		Teqip III	27-31July, 2020.



3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. D. M. Pandey	International Webinar on "Recent Advances in Science and Technology during the Coronavirus Pandemic"	TEQIPIII	Dept. of Chemistry, BIT, Mesra	Online	18-20 July, 2020
2.	Dr. D. M. Pandey	Environmental Genomics and Genome Editing	TEQIPIII	Centre for Environment, IIT Guwahati	Online	23-27 February, 2021
3.	Dr. D. M. Pandey	Basics to advanced genome annotation at Ensembl and REST Application Programming Interfaces (APIs)	-	Nextgenhelper in association with EMBL-EBI, Cambridge, UK	Online	17-20 November, 2020
4.	Dr. D. M. Pandey	Synfig Studio Beginner	-	Teaching Learning Centre (ICT) PMMMNMTT, IIT Bombay	Online	07 November, 2020
5.	Dr. D. M. Pandey	Internet of Things (IOT) Using Amazon AWS	-	Finland Labs	Online	29 June-10 July, 2020
6.	Dr. Alok Jain	Bioengineering 2020 Meeting (Invited Talk)	-	NIT Rourkela	NIT Rourkela	10-11 December, 2020
7.	Dr. Alok Jain	International Online Conference on Nano Materials (Invited Talk)	-	Mahatma Gandhi University, Kottayam, Kerala, India	Mahatma Gandhi University, Kottayam, Kerala, India	9-11 April, 2021
8.	V. K. Nigam	Deep Learning	AICTE-ISTE, Govt of India	BIT Mesra Ranchi	BIT (online)	24-29 May, 2021
9.	V. K. Nigam	Delivering online course using Canvas LMS	TEQIP III Sponsored	BIT Mesra Ranchi	BIT (online)	27 July-05 August, 2020
10.	V. K. Nigam	Online patent course by Turnip Innovations	---	Turnip Innovations Mumbai	Online	18 Nov.-02 December, 2020



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Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
11.	Dinesh Prasad	FDP on Orientation workshop on design thinking	BIT Mesra	BIT Mesra	Online	18 June, 2021
12.	Dr. Sheela Chandra	National Workshop on "Environmental Genomics & Gene Editing"	TEQIP III	Centre of Educational Technology, IIT Guwahati	IIT Guwahati	23-27 February, 2021
13.	Dr. Sheela Chandra	One day webinar on Battle against Covid19: Challenges & interventions.	TEQIP III	Deptt. of Bioengineering & Biotechnology	BIT Mesra	27 June, 2020
14.	Dr. Sheela Chandra	One day Webinar on Impact of Covid-19 on Mental Health and Well Being held on 8.8.2020	TEQIP III	Deptt. of Bioengineering & Biotechnology	Convener Dr S. Ghosh Sachan; Co-Convenor: Dr M. Kumar BIT MESRA	08 August, 2020
15.	Dr. Anjana Dwivedi	One day webinar on Battle against Covid19: Challenges & interventions.	TEQIP III	Deptt. of Bioengineering & Biotechnology	BIT Mesra	27 June, 2020
16.	Dr. Anjana Dwivedi	One day Webinar on Impact of Covid-19 on Mental Health and Well Being held on 8.8.2020	TEQIP III	Deptt. of Bioengineering & Biotechnology	Convener Dr S. Ghosh Sachan; Co-Convenor: Dr M. Kumar BIT MESRA	08 August, 2020
17.	Dr. Muthu Kumar Sampath	CAPE FORUM 2020 Computer aided process engineering	Virtual mode	Department of Chemical Engineering, Technical University of Denmark, Kgs. Lyngby, Denmark	DTU Denmark	07-09 October, 2020
18.	Dr. Muthu Kumar Sampath	ICRM 2020	Virtual mode	Mahatma Gandhi university Kottaya Kerala	Kerala	11-13 December, 2020
19.	Dr. Muthu Kumar Sampath	Recent Advances in Environmental Biotechnology	Virtual mode	Department of Civil Engineering School of Environmental Science and Engineering	IIT Kharagpur	05-09 October, 2020
20.	Dr. Shashwati Ghosh Sachan	A Two Weeks Online Faculty Development Program on Delivering Online Course Using Canvas LMS	TEQIP III	Coordinators: Dr. Joyjeet Ghose Dr. Priyank Kumar, BIT Mesra	Online	27July-5 August, 2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
21.	Dr. Shashwati Ghosh Sachan	Short term course on 'Recent Advances in Environmental Biotechnology'	TEQIP III	Coordinator: Dr Sudha Goel; Co-coordinator: Dr Shamik Chowdhury Organized by: Department of Civil Engineering and School of Environmental Science & Engineering, IIT Kharagpur	Online	5-9 October, 2020
22.	Dr. Sneha Singh	Faculty Induction Program (FIP)	MHRD	NITTTR, Bhopal	Online	14 September-09 October, 2020

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

- Aggarwal, Y., Das, J., Mazumder, P. M., Kumar, R. and Sinha, R. K. (2021) Heart rate variability time domain features in automated prediction of diabetes in rat, Physical and Engineering Sciences in Medicine, 44: 45-52.
- Gupta, G. S., Dave, G. B., Tripathi, P. R., Mohanta, D. K., Ghosh, S. and Sinha, R. K. (2021) Brain Computer Interface controlled automatic electric drive for neuro-aid system, Biomedical Signal Processing and Control, 63: 102175.
- Basani, M., Malothu, R., Sinha, R. K. and Murthy, S. V. (2021) Electroencephalogram correlates the role of ashwagandha in sleep and memory promoting effect, Indian Journal of Pharmaceutical Education and Research, 55:184-189.
- Aggarwal, Y., Das, J., Mazumder, P. M., Kumar, R. and Sinha, R. K. (2020) Heart rate variability features from nonlinear cardiac dynamics in identification of diabetes using artificial neural network and support vector machine, Biocybernetics and Biomedical Engineering, 40: 1002-1009.
- Santosh Behera, Vhora, Nazmina, Darshan Contractor, Amit Shard, Dinesh Kumar, Kiran Kalia, Alok Jain (2021) Computational Drug Repurposing Study Elucidating Simultaneous Inhibition of Entry and Replication of Novel Corona Virus by Grazoprevir", Nature Sci. Rep., 11, 7307.
- Tanay Dalvi, Bhaskar Dewangan, Gopal Agarwal, Suchita Dattatray Shinde, Alok Jain, Akshay Srivastava and Bichismita Sahu Design (2021) Synthesis and in-vitro evaluation of fluorinated triazoles as multi-target directed ligands for Alzheimer disease, Bioorg. Med. Chem. Lett., 6, 127999.
- Arjun Patra, Pankaj Dagur, Gourav Rakshit, Shreya Sharma, Swaha Satpathy, Alok Jain, Manik Ghosh (2021) Flavonoids as potential therapeutics against novel coronavirus disease-2019 (nCOVID-19), J. Biomol. Struct. Dyn., 1-13.
- Debarghya Mitra, Janmejey Pandey, Alok Jain and Shiv Swaroop (2021) In silico design of Multi-epitope-based peptide vaccine against SARS-CoV-2 using its spike protein, J. Biomol. Struct. Dyn., 6, 1-14.
- Gargi Nikhil Vaidya, Pooja Rana, Ashwini V., Deep Rohan Chatterjee, Darshan Contractor, Dinesh Parshuram Satpute, MithileshNagpure, Alok Jain, Dinesh Kumar (2021), Paradigm Shift of "Classical" HDAC Inhibitors to "Hybrid" HDAC inhibitors in Therapeutic Interventions, Eur. J. Med. Chem., 209, 112844.
- NazminaVhora, Ujjal Naskar, Aishwarya Hiray, Abhijeet S Kate and Alok Jain (2020), Recent



- Advances in in-vitro Assay for Type – 2 Diabetes Mellitus: An Overview, Rev. Diabet. Stud., 16, 13-23.
11. Manan Bhargavi, Nazmina Vhora, Goverdhan Lanka, Gururaj Somadi, Sivan SreeKanth, Alok Jain, Sarita Rajender (2020) Potlapally, Homology Modeling and Virtual Screening to Explore Potent Inhibitors for MAP2K3 protein, Struct. Chem., 32, 1039–1051.
 12. Rudradip Das, Bhavin Kumar Gayakvad, Suchita Dattatray Shinde, Jyoti Rani, Alok Jain, Bichismita Sahu (2020), Ultrashort peptides - A glimpse into the structural modifications and their applications as biomaterial, ACS Appl. Bio Mater, 3, 5474–5499.
 13. Gidhi A, Kumar M, Mukhopadhyay K (2020) The Auxin Response Factor gene family in wheat (*Triticum aestivum* L.): Genome-wide identification, characterization and expression analyses in response to leaf rust. South African Journal of Botany. DOI:10.1016/j.sajb.2020.06.017
 14. Chandra S, Satapathy L, Basu S, Jha SK, Kumar M, Mukhopadhyay K (2020) Characterization of the leaf rust responsive ARF genes in wheat (*Triticum aestivum* L.). Plant Cell Reports, 39(12):1639-1654. DOI: 10.1007/s00299-020-02591-3.
 15. Singh P, Mukhopadhyay K (2021) Comprehensive molecular dissection of TIFY Transcription factors reveal their dynamic responses to biotic and abiotic stress in wheat (*Triticum aestivum* L.). Scientific Reports 11:9739 <https://doi.org/10.1038/s41598-021-87722-w>
 16. Adhikari M, Mukhopadhyay K, Sarkar B (2021) Flavonoid-rich wheatgrass (*Triticum aestivum* L.) diet attenuates diabetes by modulating antioxidant genes in streptozotocin-induced diabetic rats. Journal of Food Biochemistry 45(4):e13643 DOI: 10.1111/jfbc.13643
 17. Prabha, R. and Nigam, V. K. (2020) Biotransformation of acrylamide to acrylic acid carried through acrylamidase enzyme synthesized from whole cells of *Bacillus tequilensis* (BITNR004). Biocatalysis and Biotransformation, 38 (6), 445-456.
 18. Arfi, T and Nigam, V. K. (2020) Studies on a thermostable nitrilase from *Staphylococcus* Sp and its In-silico characterization. Biologia, 75, 2421-2432
 19. Kumari, P., Mohan M., Nigam, V. K. and Poddar R. (2020) Efficacy of spectroscopic optical coherence tomography (sOCT) for instantaneous study of nitrilase enzyme kinetics. Optik, DOI: 10.1016/j.ijleo.2019.163832.
 20. Soy, S., Prabha R. and Nigam, V. K. (2020) Potential of Biocatalysis in Pharmaceuticals, Molecular Biotechnology, DOI: 10.5772/itechopen.90459.
 21. Bala, S. Nigam, V. K. and Vidyarthi, A. (2020) Evaluation of Health Promoting Minerals of *A. squamosa* L. Based Products, 16 (5), 802-807
 22. Sinha Smally and Nigam V. K. (2021) Biocatalysis of different nitriles to valuable acids. International Journal of Pharmaceutical Sciences and Research, 12(5): 2662-2669
 23. Puja Kumari, Santosh Kumar Bishnoi and Sheela Chandra (2021) Assessment of antibiosis potential of *Bacillus* sp. against the soil-borne fungal pathogen *Sclerotium rolfsii* Sacc. (*Athelia rolfsii* (Curzi) Tu & Kimbrough). Egyptian Journal of Biological Pest Control. 31:17
 24. Annie Jessica Toppo, Sheela Chandra (2021) Antioxidant and Anti-Acetylcholinesterase Studies of In vitro Regenerated and Transformed Hairy Roots of *Ocimum sanctum* (L.). Accepted in June 2021. Manuscript number: 'pm_539_20'.
 25. Naha, A., Jha, S. K., Singh, H. R., & Sampath, M. K. (2021) Kinetic modeling and statistical optimization of submerged production of anti-Parkinson's prodrug L-DOPA by *Pseudomonas fluorescens*. Preparative Biochemistry & Biotechnology, 1-13.
 26. Pandian, S. R. K., Panneerselvam, T., Pavadai, P., Govindaraj, S., Ravishankar, V., Palanisamy, P., Sampath, M.K & Kunjiappan, S. (2021) Nano based approach for the treatment of Neglected tropical diseases. Frontiers in Nanotechnology, 3, 49.
 27. R. Sharma, S. Ghosh Sachan, S. R. Sharma (2020) In vitro analysis of gallstone formation in the presence of bacteria Indian Journal of Gastroenterology 39, 473-480
 28. Jana, P., Shyam, M., Singh, S., Jayaprakash, V., & Dev, A. (2020) Biodegradable Polymers in Drug Delivery and Oral Vaccination. European Polymer Journal, 142, 110155.
 29. Singh, P., Gupta, A., Qayoom, I., Singh, S., & Kumar, A. (2020) Orthobiologics with



phytobioactive cues: A paradigm in bone regeneration. *Biomedicine & Pharmacotherapy*, 130, 110754.

30. Gupta, A., Padmanabhan, P., & Singh, S. (2020) Resveratrol isomeric switching during bio-reduction of gold nanoparticles: a gateway for cis-resveratrol. *Nanotechnology*, 31(46), 465603.
31. Qayoom, I., Teotia, A. K., Meena, M., Singh, P., Mishra, A., Singh, S., & Kumar, A. (2020) Enhanced bone mineralization using Withaniasomnifera incorporated hydroxyapatite based ceramic bone substitutes. *Biomedical Materials*, 15, 055015.
32. Ekta, Singh A.K., Pandey D.M. (2021) Co-expression network analysis of acidic-responsive genes in *Arabidopsis thaliana* signifies hub genes expression and their key role assessment for acidity tolerance in *Oryza sativa* L. *Biologia* (BIOL-D-21-00207R1, <https://doi.org/10.1007/s11756-021-00837-3>).
33. Ekta, Singh A.K., Pandey D.M. (2021) Microstructural changes in rice (*Oryza sativa* L.) leaves under varying low pH levels: a swept-source optical coherence tomography approach. *Laser Physics* 31(8): 5601. <https://doi.org/10.1088/1555-6611/ac0832>.
34. Anand P., Pandey J.P., Pandey D.M. (2021) Study on cocoonase, sericin and degumming of silk cocoon: Computational and experimental. *Journal of Genetic Engineering and Biotechnology* 19: 32. <https://doi.org/10.1186/s43141-021-00125-2>.

4.2 Publications in Proceedings:

1. Sampath, M. K., Sowbarnika R. Techno-economic analysis of bioethanol production from wastepaper- A simulation study. Vol 1 No 3 (2021).

4.3 Chapter(s) in Edited Book

1. Kumari G., Wany A., Pandey D.M. (2020) Plant tissue culture and secondary metabolite enrichment: A holistic approach. In: Jain P, & Ahuja V. (Eds.). *PLANT PHYSIOLOGY Structure, Development and Metabolism*. Pp. 404-426. Jaya Publishing House, Delhi - 110095 (India).
2. Targeted genome engineering for insects control (2021) S Saurabh, D Prasad - CRISPR and RNAi Systems, Nanobiotechnology approaches to

plant breeding and protection. Elsevier

3. Role of CRISPR/Cas system in altering phenolic and carotenoid biosynthesis in plants defense activation (2021) S Saurabh, D Prasad - CRISPR and RNAi Systems, Nanobiotechnology approaches to plant breeding and protection. Elsevier
4. M. Misra, A. Sachanand S. Ghosh Sachan (2021) Role of fungal endophytes in the green synthesis of nanoparticles and the mechanism In: *Fungi Bio-Prospects in Sustainable Agriculture, Environment and Nano-technology Volume 3: Fungal Metabolites and Nano-technology*. V. K. Sharma et al. (eds.), Academic Press, 489-504 ISBN: 978-0-12-821734-4
5. M. Misra, S. Ghosh Sachan and S. Chattopadhyay (2021) Remediation of heavy metals from wastewater treatment plants using bacteria and algae In: *New Trends in Removal of Heavy Metals from Industrial Wastewater*. M. Shah et al. (eds.), Elsevier, 525-550 ISBN: 978-0-12-822965-1
6. A. Hussain, R. Kumari, S. Ghosh Sachan and A. Sachan (2021) Biological wastewater treatment technology: Advancement and drawbacks In: *Microbial Ecology of Wastewater Treatment Plants*. M. Shah and S. Rodriguez-Couto (eds.), Elsevier, 175-190 ISBN: 978-0-12-822503-5
7. P. Kumar and S. Ghosh Sachan (2021) Exploring microbes as bioremediation tools for the degradation of pesticides In: *Advanced Oxidation Processes for Effluent Treatment plants*. M. Shah (ed.), Elsevier, 51-67 ISBN: 978-0-12-821011-6
8. P. Kumar, A. Singh, A. Sachan and S. Ghosh Sachan (2021) Molecular Tools for Microbial Diversity Analysis In: *Wastewater Treatment Cutting-Edge Molecular Tools, Techniques and Applied Aspects*. M. Shah et al. (eds.), Elsevier, 55-64 ISBN: 978-0-12-821881-5
9. K. Akansha, S. Majumder, M. Misra and S. Ghosh Sachan (2021) Role of Microorganisms in Performance Optimization of Wastewater Treatment Plants In: *Wastewater Treatment Cutting-Edge Molecular Tools, Techniques and Applied Aspects*. M. Shah et al. (eds.), Elsevier, 67-87 ISBN: 978-0-12-821881-5
10. Rathore, A. S., & Muthukumar, S. (2021). High-Throughput Process Development: II—Membrane Chromatography. In *Protein*



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Downstream Processing (pp. 21-26). Humana, New York, NY.

11. Muthukumar, S., V.K. Nigam. (2021). Microbial-

based eco friendly processes for the recovery of metals from E-waste. Bioprospecting of Microbial Diversity. Elsevier, Accepted.

SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Dr. Dev Mani Pandey	Guest editor of special issue	Frontiers in plant science	International	2021
2.	Dr. Dev Mani Pandey	Member of Institutional Biosafety Committee,	Indian Institute of Agricultural Biotechnology, Namkum, Ranchi, Jharkhand, India	National	2020
3.	Dr. Dev Mani Pandey	Member of Institutional Biosafety Committee	Indian Institute Natural Resins and Gums, Namkum, Ranchi, Jharkhand, India	National	2020

5.2 MoUs / Collaborations :

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1	IIT Gandhinagar	Research Collaboration	2020-Ongoing
2	Central University Gujarat	Research Collaboration	2020-Ongoing
3	Central University Rajasthan	Research Collaboration	2020-Ongoing
4	Guru Nanak Dev University, Amritsar	Research Collaboration	2020-Ongoing
5	Biocon Academy Bangalore	Provide internship opportunities for the students with Biocon Limited, Bangalore.	2021/ 2years
6	CTR&TI, Ranchi, Jharkhand & IISER, Pune	Research Collaboration	2018-Ongoing

SECTION 6

ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
1.	AICTE-Chhatra Vishwakarma Awards for the year 2020 -Shortlisted	Vibhu Bhatia Tanay Goel Arpit Akshat Dubey	Muthu Kumar Sampath	Feb 2021



6.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. Rakesh Kumar Sinha	Professor and Head	No
2.	Dr. Kunal Mukhopadhyay	Professor and Dean	No
3.	Dr. Padmini Padmanabhan	Professor	No
4.	Dr. Ramesh Chandra	Professor	No
5.	Dr. Dev Mani Pandey	Associate Professor	No
6.	Dr. Vinod Kumar Nigam	Associate Professor	No
7.	Dr. Manish Kumar	Associate Professor	No
8.	Dr. Raju Poddar	Associate Professor	No
9.	Dr. Shashwati Ghosh Sachan	Assistant Professor	No
10.	Dr. Alok Jain	Assistant Professor (Ramalinga Fellow)	No
11.	Dr. Sheela Chandra	Assistant Professor	No
12.	Dr. Santosh Kumar Jha	Assistant Professor	No
13.	Dr. Koel Mukherjee	Assistant Professor	No
14.	Dr. Shubha Rani Sharma	Assistant Professor	No
15.	Dr. Dinesh Prasad	Assistant Professor	No
16.	Dr. Yogender Aggarwal	Assistant Professor	No
17.	Dr. Anjana Dwivedi	Assistant Professor	No
18.	Dr. Soham Chattopadhyay	Assistant Professor	No
19.	Dr. S. Muthu Kumar	Assistant Professor	No
20.	Dr. Sneha Singh	Assistant Professor	No

6.5 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Rakesh Kumar Sinha	Chairman (Ex-officio)	Chairman
2.	Dr. Sudipta Goswami	Member	External
3.	Dr. S. Samanta	Member	External
4.	Dr. Padmini Padmanabhan	Member	Internal
5.	Dr. K. Mukhopadhyay	Member	Internal
6.	Dr. Ramesh Chandra	Member	Internal
7.	Dr. Vinod Kumar Nigam	Member	Internal
8.	Dr. Raju Poddar	Member	Internal
9.	Dr. Manish Kumar	Invitee Member	Internal
10.	Dr. Soham Chattopadhyay	Invitee Member	Internal



SECTION 7

OTHER INFORMATION

7.1 Publication by students, if any

Publications in Journals :

1. Singh, P., Gupta, A., Qayoom, I., Singh, S., & Kumar, A. (2020). Orthobiologics with phytoactive cues: A paradigm in bone regeneration. *Biomedicine & Pharmacotherapy*, 130, 110754.
2. Gupta, A., Padmanabhan, P., & Singh, S. (2020). Resveratrol isomeric switching during bioreduction of gold nanoparticles: a gateway for cis-resveratrol. *Nanotechnology*, 31(46), 465603.
3. Ekta, Singh A.K., Pandey D.M. (2021) Co-expression network analysis of acidic-responsive genes in *Arabidopsis thaliana* signifies hub genes expression and their key role assessment for acidity tolerance in *Oryza sativa* L. *Biologia* (BIOL-D-21-00207R1, <https://doi.org/10.1007/s11756-021-00837-3>).
4. Ekta, Singh A.K., Pandey D.M. (2021) Microstructural changes in rice (*Oryza sativa* L.) leaves under varying low pH levels: a swept-source optical coherence tomography approach. *Laser Physics* 31(8): 5601. <https://doi.org/10.1088/1555-6611/ac0832>.
5. Anand P., Pandey J.P., Pandey D.M. (2021) Study on cocoonase, sericin and degumming of silk cocoon: Computational and experimental. *Journal of Genetic Engineering and Biotechnology* 19: 32. <https://doi.org/10.1186/s43141-021-00125-2>.

7.2 Achievements of Students :

Sr. No	Name of Student	Achievement/ Position/ Award etc	Organised by	Date and Venue
1.	Tulika Sinha (M. Tech. student)	Received best oral presentation award in the International e-conference-2021	Institute of Pharmacy, Nirma University, Ahmadabad, Gujarat and Indrashil University Gujarat, India.	18th – 19th March 2021, Ahmadabad, Gujarat
2.	Tulika Sinha (M. Tech. student)	Secured a rank among the top 6 winners in a scientific communication competition	7th Annual Symposium, BSSE, IISc Bangalore.	19th – 20th February 2021, IISc Bangalore.
3.	Eshika Jaiswal (MSc. student)	Received consolidated oral presentation award in the International e-conference-2021	Institute of Pharmacy, Nirma University, Ahmadabad, Gujarat and Indrashil University Gujarat, India.	18th – 19th March 2021, Ahmadabad, Gujarat

7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Mr. Vaibhav Patil Sartorius stedim, Bangalore	06/04/2021 to 07/04/2021	NA

8. Any other relevant information

Infrastructure / Equipment added during the year:

1. MODDE DOE/ MVDA software from Sartorius

Department of Chemical Engineering

SECTION 1

DEPARTMENTAL PROFILE



1. About the Department :

The Department of “Chemical Engineering” with well-qualified faculty, provides a high standard of education in the diversified fields of Chemical Engineering. The Department of Chemical Engineering offers Undergraduate four-year Programmes and Doctoral Programmes. The Department also runs one five-year Integrated M.Sc. Food Technology Programme.

UG Programmes:

- B.Tech. (Chemical Engineering)
- B.Tech. (Chemical Engineering (Plastics and Polymer))

PG Programme:

- Integrated M.Sc. Food Technology (10 Semesters)

Doctoral Programmes:

Doctoral Programme in Chemical Engineering, Polymer Science and Engineering, Food Processing Technology, etc.

The Department has well-qualified faculties. Faculty members are working on several sponsored projects and also have collaborative research projects with various organizations. The Department is also recognized under DST-FIST. Several projects are sponsored by DRDL, DST, Ministry of New and Renewable Energy, Coir Board etc., to the credit of the Department. Major research areas are Nanotechnology, Catalysis and reaction Engineering, Alternative Energy, Advanced Polymer Composites, Bioresources Utilization, Computational Fluid Dynamics, Multiphase flow, Pollution Control, Water Treatment Technologies, Polymer Blends and Interpenetrating Polymer Networks, Nanofiltration Membrane, Recycling of Polymer Waste, Specialty Polymer, Colloids and Interfacial Science, Tissue Engineering, Sensors, Fuel Cell Membrane.

The Department has modern and sophisticated laboratories and workshop facilities such as Chemical Engineering Unit Operation laboratory, Chemical Reaction Engineering Laboratory, Process Control Laboratory, Synthesis Laboratory, Energy Engineering Laboratory, Polymer Characterization Laboratory, etc. The Department has excellent instrumental facilities such as Universal Testing Machine, Electro Spinning, Atomic Absorption Spectrometry, High-Performance Liquid Chromatography, Chemisorption, Ultraviolet Spectrometry. The students are trained in the field of process design and product design with the help of different software such as ASPEN PLUS, COMSOL Multiphysics, DWSIM, ANSYS, FLUENT, POLYFLOW, and MOLDFLOW.



SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects (Research and Consultancy)

a) Ongoing Projects:

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Development of Electronic Nose for detection of biomarker vapor blends using conductive polymer nanocomposite sensors	PI - Dr. G. T. Mohanraj	DST-SERB	30.06.2017	Rs. 39.64 Lakhs	Four Years (Initially) + One Year (Extended)
2.	Development of Process technology for enhanced resistant starch content in rice and rice based snack (Puffed rice)	PI - Dr. Anupam Roy	DST-SERB	06.06.2019	Rs. 53.06 Lakhs	Three Years
3.	Biopolymer based nano-layer fortification of self-assembled micronutrients over pre-conditioned rice: Retention of fortified nutrients and scale up studies	PI - Dr. Anupam Roy	ICMR	26.11.2019	Rs. 39.57 Lakhs	18 months
4.	Development of non-destructive process technology for simultaneous micronutrient fortification and bioavailability enhancement in Dal through selective binding of phytic acid	PI - Dr. Anupam Roy	DBT	18.03.2021	Rs. 58 Lakhs	Three Years

b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Transition metal(s) containing perovskite/ CNFs composite for low temperature CO ₂ reduction	PI- Y. N. Prajapati Co-PI Dr. A. K. Sen	NPIU, TEQIP 3	18.06.2019	16.58 lakhs	15.03.2021
2.	Development of nanofiller reinforced ionomer-based polymer nano-composite for radio frequency absorber	PI - Dr. Nirupama Co-PI - Dr. Gautam Sarkhel	NPIU, TEQIP 3	18.06.2019	Rs. 14.60 Lakhs	30.06.2021



Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
3.	Synthesis and characterization of biomaterial and nanomaterial and its application in heavy metal removal	PI- Dr. Dhanbahadur Pal Co-PI Dr. Dharmendra Pandey	NPIU, TEQIP 3	18.06.2019	Rs. 16.24 Lakhs	30.06.2021
4.	Deep Eutectic Solvents as Electrolytes for Nanomaterials-based high-performance Supercapacitors	PI- Dr. Anand Bharti Co-PI Dr. G.T. Mohanraj	NPIU, TEQIP 3	18.06.2019	Rs. 15.45 Lakhs	30.06.2021

SECTION 3**SEMINAR / CONFERENCE****3.1 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:**

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. A. K. Sen	Short Term Course on "Recent Advances in Environmental Biotechnology"		IIT Kharagpur	Online	5th Oct - 9th Oct 2020
2.	Dr. G. T. Mohanraj	STTP on "Sustainable Energy Technologies: Synthesis of Alternative fuels, Characterization, and Molecular Simulations"	TEQIP, MHRD, Govt. of India	IIT Roorkee	Online	07th Dec - 11th Dec 2020
3.	Dr. B. C. Ruidas	Online Training Programme in Modular Mode equivalent to one-week duration "E-Content Development and Learning Management Systems"		NITTTR Chennai	Online	14th June - 30th June 2021
4.	Dr. A. K. Tiwari	5 days Faculty Development Programme on UHV (Hindi)		AICTE	Online	07th June - 11th June 2021
5.	Dr. A. K. Tiwari	Two weeks Faculty Development Programme on delivering online course using canvas LMS		TEQIP-III, BIT Mesra Ranchi Jharkhand	Online	27th July - 5th August, 2020
6.	Dr. A. K. Tiwari	Attended a web-seminar on the topic 'Knowing the Word through 101 Tips'		Organized by Narakas Kharagpur, Hindi & Techniques Group, on 29 May, 2021.	Online	29th May 2021
7.	Dr. Y. N. Prajapati	Completed two months pedagogical training on Student Assessment and Evaluation (Module -6)		NITTT, Chennai.	Online	10.09.2020 - 11.11.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
8.	Dr. Y. N. Prajapati	Two weeks Faculty Development Programme on delivering online course using canvas LMS		TEQIP-III, BIT Mesra Ranchi Jharkhand	Online	27th July - 5th August, 2020
9.	Dr. A. K. Baranwal	5-day online FDP on "Inculcating Universal Human Values in Technical Education"		AICTE	Online	14th June - 18th June 2021
10.	Dr. A. K. Baranwal	Webinar on "Why A Manuscript is Rejected"		NIT Jalandhar	Online	27th August 2020
11.	Dr. A. K. Baranwal	Webinar on "IT not only enabler, but critical element of engineering and business operation"		NIT Jalandhar	Online	5th September 2020
12.	Dr. A. K. Baranwal	Virtual international conference on "soft computing, optimization theory and applications"		BIT Mesra	Online	26-27 March 2021
13.	Dr. A. K. Baranwal	Short term course on "Mathematical modelling of complex fluids"		NIT Jalandhar	Online	24-28 September 2020
14.	Dr. A. K. Baranwal	8th International and 47th national conference on fluid mechanics and fluid power (FMFP)		IIT Guwahati	Online	9-11 December 2020
15.	Dr. A. K. Baranwal	Recent trends in fluid dynamics research (RTFDR-21) a national e-conference		NIT Rourkela		2 - 4 April 2021
16.	Dr. A. K. Baranwal	5-6th Thermal and Fluids Engineering Conference (TFEC)		New Orleans, USA		26-28 May 2021
17.	Dr. Anand Bharti	5-days AICTE Training And Learning (ATAL) Academy Online Elementary Faculty Development Programme on "Plastics Recycling and Waste Management"		Central Institute of Petrochemicals Engineering and Technology (CIPET)	Online	14.06.2021 to 18.06.2021
18.	Dr. Anand Bharti	5-weeks course on Energy Transition - Innovation Towards A Low-Carbon Future		IFP School - French Institute of Petroleum	Online	April 2021
19.	Dr. Anand Bharti	Completed two months pedagogical training on Student Assessment and Evaluation (Module -6)		NITTT, Chennai.	Online	10.09.2020 - 11.11.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
20.	Dr. Anand Bharti	Three-Day Online Workshop on "Future of Chemical Engineering"		IIT (ISM) Dhanbad, Jharkhand.	Online	March 19th – 21st 2021
21.	Dr. Anand Bharti	A Short Term Course Titled "Ionic Liquids and Deep Eutectic Solvents with Nature"	Scheme for Promotion of Academic and Research Collaboration (SPARC)	Indian Institute of Technology Guwahati, Assam	Online	10th – 13th March 2021
22.	Dr. Anand Bharti	A Workshop Titled "Deep Eutectic Solvents for Environmental Remediation and Energy Storage"	Scheme for Promotion of Academic and Research Collaboration (SPARC)	Indian Institute of Technology Guwahati, Assam	Online	29th – 30th July 2020
23	Dr. Anupam Roy	Orientation Towards Technical Education and Curriculum Aspects	AICTE	National Institute of Technical Teachers Training and Research, Chennai	Online	July-December, 2020
24	Dr. Anupam Roy	Orientation workshop on Design Thinking		BIT Mesra	Online	5th June to 26th June 2021

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

1. Baban Dey, Md Wasi Ahmad, Anood ALMezeni, Gautam Sarkhel, Dibyendu Sekhar Bag, Arup Choudhury (2020). Enhancing electrical, mechanical, and thermal properties of polybenzimidazole by 3D carbon nanotube@graphene oxide hybrid. Composite Communications, 17, 87-96.
2. Baban Dey, Md Wasi Ahmad, Anood ALMezeni, Gautam Sarkhel, Dibyendu Sekhar Bag, Arup Choudhury (2020). Enhanced electrical, mechanical, and thermal properties of chemically modified graphene-reinforced polybenzimidazole nanocomposites. Bulletin of Materials Science, 43, 207.
3. Neha Jha; Gautam Sarkhel; S.P. Mahapatra (2020). Morphology, barrier and electrical properties of oil-extended EPDM/nanographite nanocomposites. Materials Today: Proceedings, 45, 3850-3856.
4. Jagesh Kumar Ranjan, Sudipta Goswami (2021). Mechanical and thermomechanical properties of vinyl ester/polyurethane IPN based nanocomposites. Polymers and Polymer Composites. <https://doi.org/10.1177/0967391120987349>.
5. Suman Shekhar, M Mukherjee, Akhil Kumar Sen (2020). Effect of surfactant on the swelling and mechanical behavior of NIPAM-based terpolymer. Polymer Bulletin, 77(8), 4355-4379.
6. S Basu, Vibha Shree, A K Sen (2021). Role of cerium as a promoter and process optimization studies for dehydration of glycerol to acetol over copper chromite catalyst. Journal of Rare Earths. <https://doi.org/10.1016/j.jre.2021.01.013>.
7. Md Wasi Ahmad, Baban Dey, Abdullah Khamis Ali Al Saidi, Arup Choudhury (2020). Functionalized-graphene reinforced polyethersulfone nanocomposites with improved physical and mechanical properties. Polymer Composites, 41 (10), 4104-4116.



8. Wasi Ahmad, Baban Dey, Alia Abdulshafi Sammar, Arup Choudhury (2020). In situ synthesis of graphene oxide in multi-walled carbon nanotube hybrid-reinforced polyetherimide nanocomposites with improved electrical, mechanical and thermal properties. *Advanced Composite Materials*, 29 (6), 529-546.
9. Md Wasi Ahmad, Sushil Verma, Duck-Joo Yang, Mazhar Ul Islam, Arup Choudhury (2021). Synthesis of silver nanoparticles-decorated poly(m-aminophenol) nanofibers and their application in a non-enzymatic glucose biosensor. *Journal of Macromolecular Science, Part A*, <https://doi.org/10.1080/10601325.2021.1886585>.
10. Md Wasi Ahmad, Surbhi Anand, Atiya Fatima, Duck-Joo Yang, Arup Choudhury (2021). Facile synthesis of copper oxide nanoparticles-decorated polyaniline nanofibers with enhanced electrochemical performance as supercapacitor electrode. *Polymers for Advanced Technologies*, <https://doi.org/10.1002/pat.5414>.
11. Subhash Magar, Govindraj T Mohanraj, Sumit Kumar Jana, Chandrashekhar V Rode (2020). Synthesis and characterization of supported heteropoly acid: Efficient solid acid catalyst for glycerol esterification to produce biofuel additives. *Inorganic and Nano-Metal Chemistry*, 50 (11), 1157-1165.
12. Debasree Ghosh, Prasoon Kumar, Siddha Sharma, Chandan Guha, Joyjeet Ghose (2021). Numerical investigation on latent heat thermal energy storage in a phase change material using a heat exchanger. *Heat Transfer*, 50, 4289-4308.
13. Abhijit Jadhav, Govindaraj Mohanraj, Suseeladevi Mayadevi, Ashok Gokarn (2020). Adsorption of heavy metal on active carbon derived from coconut leaves agro-waste. *Chemistry and Chemical Technology*, 14 (4), 553-562.
14. Sreyajit Saha, Anupam Roy (2020). Whole grain rice fortification as a solution to micronutrient deficiency: Technologies and need for more viable alternatives. *Food Chemistry*, 326, 127049.
15. Anupam Roy, Suneel Kumar Srivastava, Shanker Lal Shrivastava, Amit Kumar Mandal (2020). Hierarchical Assembly of Nanodimensional Silver-Silver Oxide Physical Gels Controlling Nosocomial Infections. *ACS omega*, 5 (50), 2617-32631.
16. Sreyajit Saha, Shipra Jha, Amit Tiwari, Sudeepan Jayapalan, Anupam Roy (2021). Considerations for improvising fortified extruded rice products. *Journal of Food Science*, 86 (4), 1180 – 1200.
17. Amit Kumar Tiwari, Deen Dayal giri and Dan Bahadur Pal (2020). Nutritional Analysis of Mango, Jackfruit, Jamun and Amaltash Seeds Waste Biomass. *Fourrages*, 244 (11), 42-53.
18. Deen Dayal Giri, Jay Mant Jha, Amit Kumar Tiwari, Neha Srivastava, Abeer Hashem, Abdulaziz A. Alqarawi, Elsayed Fathi Abd_Allah and Dan Bahadur Pal (2021). Java plum and amaltash seed biomass based bio-adsorbents for synthetic wastewater treatment. *Environmental Pollution*, 280, 116890.
19. Dan Bahadur Pal, Amit Kumar Tiwari, Neha Srivastava, Abeer Hashem & Elsayed Fathi Abd Allah (2021). Thermal studies of biomass obtained from the seeds of *Syzygium cumini* and *Cassia fistula* L. and peel of *Cassia fistula* L. fruit. *Biomass Conv. Bioref.*, 1-12. <https://doi.org/10.1007/s13399-021-01492-z>.
20. **A. K. Baranwal**, S. A Patel and R. P Chhabra (2021). Laminar natural convection from differentially heated horizontal cylinders in a viscoplastic fluid filled square enclosure. 835-844. DOI: 10.1615/TFEC2021.fnc.032097 ISBN: 978-1-56700-517-2.
21. Sreyajit Saha & Anupam Roy, A. Puffed rice: A materialistic understanding of rice puffing and its associated changes in physicochemical and nutritional characteristics. *J. Food Process Eng.* 43, e13479 (2020).
22. **Anupam Roy** et al. Can concomitant use of zinc and curcumin with other immunity-boosting nutraceuticals be the arsenal against COVID-19? *Phyther. Res.* 34, 2425-2428 (2020).

**SECTION 5****ACTIVITIES/ FACULTY MEMBERS / BOS / DAS****5.1 Departmental Students' Activities**

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
1.	Invited Guest Lecture on "Being an Energy Warrior @ ONGC" Pradip Kumar (Chief Engineer – ONGC)	President, IICHe BIT Mesra	Prof. In-Charge IICHE	20.02.2021
2.	Invited Guest Lecture on "Fundamentals of Heat Exchangers" by Jaya Kulshreshth (Senior Manager - Process Design & Development) Engineers India Limited	President, IICHe BIT Mesra	Prof. In-Charge IICHE	06.02.2021
3.	Invited Guest Lecture on "How to crack GATE" by Mr. Atul Kumar (BIT Mesra K14, GATE 2019 AIR 49) Management Trainee (PDIL)	President, IICHe BIT Mesra	Prof. In-Charge IICHE	01.12.2020
4.	Invited Guest Lecture on "Newton's Laws of Entrepreneurship" by Dr. Sunil Dhole (Director and Co-Founder: Technorbital Advanced Materials Pvt. Ltd.)	President, IICHe BIT Mesra	Prof. In-Charge IICHE	27.10.2020
5.	MENTORAT	President, IICHe BIT Mesra	Prof. In-Charge IICHE	23.08.2020 - 18.09.2020
6.	TECHNOZION	President, IICHe BIT Mesra	Prof. In-Charge IICHE	06.07.2020 - 28.07.2020

5.2 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. Gautam Sarkhel	Professor & Head	No
2.	Dr. (Mrs.) Sudipta Goswami (Sharma)	Professor	No
3.	Dr. Akhil Kumar Sen	Associate Professor	No
4.	Dr. Arup Chaudhury	Associate Professor	No
5.	Dr. G.T. Mohanraj	Assistant Professor	No
6.	Dr. Pulak Datta	Assistant Professor	No
7.	Dr. Sumit Kumar Jana	Assistant Professor	No
8.	Dr. Sudeepan J.	Assistant Professor	No
9.	Dr. Debasree Ghosh	Assistant Professor	No
10.	Dr. Amar Nath Mishra	Assistant Professor	No
11.	Dr. Arnab Karmakar	Assistant Professor	No
12.	Dr. Bidhan Chandra Ruidas	Assistant Professor	No
13.	Dr. Anupam Roy	Assistant Professor	No



Sr. No.	Name	Designation	TEQIP Sponsored
14.	Dr. Amit Kumar Tiwari	Assistant Professor	No
15.	Dr. Ashok Kumar Baranwal	Assistant Professor	No
16.	Dr. Yogendra Nath Prajapati	Assistant Professor	No
17.	Dr. Anand Bharti	Assistant Professor	No
18.	Dr. Nirupama	Assistant Professor	Yes
19.	Dr. Dan Bahadur	Assistant Professor	Yes
20.	Mr. G Ravi Kumar	Assistant Professor	Yes

5.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. Subhabrata Ray	Professor	Retired from Department of Chemical Engineering, IIT Kharagpur. Currently a fellow (2020-2021) under "Professor B. D. Tilak Visiting Fellowship Endowment" in ICT Mumbai.
2.	Dr. Chandan Guha	Professor	Department of Chemical Engineering, Jadavpur University.

5.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	HOD/In-Charge	Ex-Officio	Chairman
2.	Dr. Gautam Sarkhel	Professor	Internal Member
3.	Dr. (Mrs.) S. Goswami	Professor	Internal Member
4.	Dr. Arup Choudhury	Associate Professor	Internal Member
5.	Dr. Anand Bharti	Assistant Professor	Internal Member
6.	Dr. J Sudeepan	Assistant Professor	Internal Member
7.	Dr. Anupam Roy	Assistant Professor	Internal Member
8.	Dr. Sumit K Jana	Assistant Professor	Internal Member
9.	Dr. Dipti Prasad Mishra, Dept. of Mechanical Engg., BIT Mesra	Professor	External Member
10.	Dr. Sudip Das, Dept. of Space Engg. & Rocketry, BIT Mesra	Professor	External Member
11.	One student representative of UG programme	Student	Internal Member
12.	One Student representative of PG programme	Student	Internal Member
13.	Dr. Pallab Ghosh Dept. of Chemical Engineering, IIT, Guwahati	Professor	External Member
14.	Dr. Siddhartha Datta Dept. of Chemical Engineering, Jadavpur University	Professor	External Member

Sr. No.	Name of the Member	Designation	Role
15.	Dr. Pinakpani Biswas Environment Research Group, Tata Steel Ltd., Jamshedpur	Principal Scientist	External Member
16.	Prof. Priyabrata Sarkar Department of Poly Sci & Tech, University of Calcutta	Professor	External Member
17.	Dr. Suddhasatwa Basu Chemical Engineering, IIT Delhi	Professor	External Member

SECTION 6

OTHER INFORMATION

6.1 Publication by students


Publications in Journals :

1. Debasree Ghosh, Prasoon Kumar, Siddha Sharma, Chandan Guha, Joyjeet Ghose (2021). Numerical investigation on latent heat thermal energy storage in a phase change material using a heat exchanger. Heat Transfer, 50, 4289-4308.




6.2 Achievements of Students :

Sr. No	Name of Student	Achievement/Position/Award etc	Organized by	Date and Venue
1.	Akshay Sharma (BTECH/10307/18)	Received IASc-INSa-NASI Summer Research Fellowship - 2021 and worked with Dr. K.R.S. Chandrakumar, Bhabha Atomic Research Centre.	Indian Academy of Sciences - Indian National Science Academy- The National Academy of Sciences (IASc-INSa-NASI)	May-July 2021
2.	Sarvar E Abbas (BTECH/10693/18)	Received IASc-INSa-NASI Summer Research Fellowship - 2021 and worked with Dr. A.B. Pandit, Institute of Chemical Technology, Mumbai	Indian Academy of Sciences - Indian National Science Academy- The National Academy of Sciences (IASc-INSa-NASI)	May-July 2021
3.	Souvik Roy Chowdhury (BTECH/10601/18)	Selected for Paid Internship at Nexus Power.	Nexus Power	June-August 2021

6.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Mr. Lalan Kumar Paul Chief Manager (Production/Operations), Guwahati Refinery, Indian Oil Corporation Limited. Covered one module of the course CL 321 Petroleum Refinery Engineering & Petrochemicals through various lectures in online mode.	14.10.2020 - 31.10.2020	

6.4 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	 <p>Trisha Roy (2009-13)</p>	<p>Production Planning Manager (Amazon, Luxembourg) Production Planning Analyst (Amazon - Bangalore) Master of Business Administration (Indian School of Business)</p>
2.	 <p>Ankan Dey (2009-13)</p>	<p>Manager – (Corporate Strategy-Chemicals) Aditya Birla Group Post Graduate Diploma in Management, Indian Institute of Management Bangalore</p>
3.	 <p>Deepika Choudhary (2011-15)</p>	<p>Manager Business Planning (Tata Steel) Master of Business Administration, Indian Institute of Management Kozhikode</p>

6.5 Any other relevant information

Infrastructure / Equipment added during the year:

A computational Lab, with 25 nos. of high-end computers, has been created in the Department for teaching and research purposes.



Laboratory facility - Viscometer and dissolution set up for UG, PG and Research laboratory and work.



7. Special Covid Initiatives, if any

During the starting of the Covid 19 pandemic, there was a scarcity of sanitizer and personal protective equipment across the nation. At that unprecedented time, Department of Chemical Engineering took special initiative and worked with, Government of Jharkhand, Railways and local industry for setting up sanitizer plant and its quality testing.

Apart from this, Department of Chemical Engineering also developed and run the production of indigenously designed face shield. This personal protective equipment was distributed to frontline warrior through Government of Jharkhand and BIT Mesra.



Ranchi Admin helps make 1.4 lakh litre of sanitiser since March

DIVYA MODI ■ RANCHI

As the fear of coronavirus gripped the State capital, hand sanitizers identified as an essential commodity flew off from the shelves of departmental stores and chemists alike. Ensuring the safety of the people against the pandemic, the Ranchi district administration took up the task of manufacturing the same on March 24 and since then 1.4 lakh litres of sanitizers have been manufactured here.

The decision came after a short supply of sanitizers was seen in the market and the ones available were being sold at a whopping price of Rs 600 or more for a 500 ml bottle. Owing to its rising demand, private pharmaceutical companies were also involved in hoarding it to the extent that apart from the common man even hospitals and frontline workers fighting the virus did not have access to it.

"At a time when Ranchi was facing a critical shortage in the supply of good quality hand sanitizers and also when the public saw a steep rise in the cost of the essential commodity, the district administration started the production of alcohol based hand sanitizers in accordance with the



A woman arranges sanitizer bottles made by district administration

Pioneer photo

WHO norms. Since then it has been ensured that no one in the district faces a shortage of it nor has to struggle with the high prices," said Ranchi Deputy Commissioner, Rai Mahimapat. Under the Disaster Management Act, Bore Research Lab (BRL) in Nagri was identified as a facility for its mass production. The first batch produced was then sent to the Chemical Engineering Department at Birla Institute of Technology, Mesra for certification and quality check. In order to meet the huge demand, production was

in Tatisilwai. Initially, the sanitizers were being distributed from the District Collectorate at a price of Rs 200 per litre. Soon non-profit orga-

nization Dawai Dost was roped in to reach maximum people through its 17 outlets across the City. Sakhi Mandals of JSLPS were also involved in the production units, packaging and distribution of the bottles. "The locally made hand sanitizer is being provided to all hospitals, military establishments and frontline workers. Other districts including Gumla, Pakur, Godda, Dhanbad and Jamshepur which too ran short of the same have been supplied to. About 8,000 litres of the sanitizer has also been sent to Aurangabad and Rohtas in Bihar," said Priyush Jaiswal, consultant district administration.

About 26,000 litres have been supplied to RIMS and other hospitals. Stock has also been provided to CCL, SAIL and Tata Steel.



Department of Chemistry

SECTION 1

DEPARTMENTAL PROFILE



About the Department:

Department of Chemistry was established in 1955, offers undergraduate, postgraduate & Ph.D. programmes. The Department has received support under the "Fund for Improvement in Science & Technology Infrastructure" (FIST-2012) programme from the DST, New Delhi, for the NMR and Computational Chemistry facility. The Department is committed to high-quality research programmes supported by SERB-DST, UGC, DBT, CSIR, BRNS, and AICTE in significant thrust areas like Oscillatory Chemical Reactions and Dynamics, Fuel Cells, and Electrochemical Supercapacitors, Medicinal Chemistry, Polymers, Environmental Chemistry, Nanotechnology, Biomaterials, Computational Chemistry, Coordination Chemistry Organic-Inorganic Electronic Materials.

Vision & Mission

To become a recognized center of excellence for teaching, research, and innovations and contribute to producing academic professionals and entrepreneurs in frontier areas of chemical sciences.

- To impart quality education and fundamental concepts of chemical sciences to students & scholars through our state-of-the-art laboratory, teaching, and research facilities
- Building a scientific environment and motivation towards innovation with quality research in chemical sciences and interdisciplinary areas.

Research Facilities

- ◆ The Department has a State of Art facility of 400 MHz Nuclear Magnetic Resonance (NMR) to support spectroscopic characterization.
- ◆ Advanced equipment such as AUTO-LAB workstation, Electrochemical Analyzer (CHI), Microwave Reactor/VIS/NIR Spectrophotometer, Solar Simulator, Rotational Viscometer, Ultra-Low Immersion Chiller, Digital Osmometer, XYT Chart Recorder, Millipore, Refractometer, Ultra-Low Chiller, etc. is available for training and research.
- ◆ Department has a computational facility for conducting training and research in the area of molecular modeling, theoretical and computational chemistry.



SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects

a. Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Synthesis and development of novel HSP90 inhibitors as potential anti-HIV candidate molecules and elucidation of their mechanism of inhibition	Dr. A. Sharon, PI;	DST-SERB	03/10/18	23,38,000/	3 Years
2.	Band-Gap Engineering of Lead-Free Perovskite Quantum-Dots for Optoelectronic Application	Dr. Joydeep Dhar (PI)/ Dr. A. Sharon (Co-PI)	AICTE-TEQIP CRS	11/07/2019	11,45,000	2 Years
3.	Development of nondestructive process technology for simultaneous micronutrient fortification and bioavailability enhancement in Dal through selective binding of phytic acid	Dr S Naskar (Co-PI)	DBT	4.2.21	57.9 lac	3 yrs

b. Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Development of Transition Metal Complexes as Water Oxidation Catalyst	Dr S Naskar	SERB	1/7/17	28.34	27/12/20

SECTION 3

SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses Conducted

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Convenor	Funding / Sponsoring Agency	Date of Event
1.	International Webinar on Recent Advances in Science and Technology	Dr. P. K. Srivastava	Institute	18.07.2021 to 20.07.2021



3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr Sumit Mishra	International webinar on polymers, plastics & composites (Invited talk)	NA	Innovinc, USA	Online mode	21-22 Oct 2020
2.	Dr Sumit Mishra	Faculty development conclave (Invited talk)	NA	JNV University Jodhpur	Online mode	15-21 Sep 2020
3.	Dr Sumit Mishra	Faculty development Programme (Participation)	NA	AICTE	Online mode	7-11 June 2021
4.	Dr. Pradip Kar	Invited Talk in International Online Conference on Nano Materials (ICN 2021)	NA	MGU, Kottayam, Kerala, India	Online mode	9-11 April 2021
5.	Dr. Pradip Kar	Invited Talk in Materials of the Future: Smart Applications in Science and Engineering	NA	Qatar University, Qatar	e-Conference	29-31 March 2021

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

1. Anurag Mehata, J.P. Pandey, Gautam Sen (2021). Synthesis of diallyl dimethyl ammonium chloride grafted polyvinyl pyrrolidone (PVP-g-DADMAC) and its applications., Material Science & Engineering B. Vol.263,114750.
2. P. K. Kushwaha, N. Kumari, S. Nayak, K. Kishor, Ashoke Sharon, (2021), Structural basis for the understanding of entry inhibitors against SARS viruses; Current Medicinal Chemistry, DOI: 10.2174/0929867328666210514122418
3. Ashish kumar, J.P. Pandey, Satish Kumar (2020). Biosorptive removal of arsenate by Ficus benghalensis stem powder from aqueous medium. Indian Journal of Advances in Chemical Sciences. 206-215.
4. Joshi, G.; Kalra, S.; Yadav, U. P.; Sharma, P.; Singh, P. K.; Amrutkar, S.; Ansari, A. J.; Kumar, S.; Sharon, A.; Sharma, S.; Sawant, D. M.; Banerjee, U. C.; Singh, S.; Kumar, R.,

- (2020) E-pharmacophore guided discovery of pyrazolo[1,5-c]quinazolines as dual inhibitors of topoisomerase-I and histone deacetylase. Bioorganic Chemistry, 94, 103409.
5. C.J Mate, S. Mishra, P.K. Srivastava, (2021), Design of pH sensitive low-cost adsorbent from the exudate of Lannea coromandelica (Houtt) for remediation of Malachite Green dye from aqueous solution, Polymer Bulletin, 78(7), pp. 3459-3487
6. N. Thombare, S. Mishra, R. Shinde, M.Z. Siddiqui, U. Jha, (2021), Guar gum based hydrogel as controlled micronutrient delivery system: Mechanism and kinetics of boron release for agricultural applications, Biopolymers, 112(3), e23418
7. A. Mahto, S. Mishra, (2021), Guar Gum Grafted Itaconic Acid: A Solution for Different Waste Water Treatment, Journal of Polymers and the Environment, Article in press.



8. A. Mahto, S. Mishra, (2021), The removal of textile industrial Dye-RB-19 using Guar gum-based adsorbent with thermodynamic and kinetic evaluation parameters, *Polymer Bulletin*, Article in Press
9. Shipra Sagar, Arfa Parween, Tarun K. Mandal, William Lewis & Subhendu Naskar (2020). Mn(IV), Co(II) and Ni(II) complexes of the Schiff bases of 2-hydroxy- naphthaldehyde with amino alcohols: synthesis, characterization and electrochemical study; DFT study and Catecholase activity of Mn(IV) complex. *Journal of Coordination Chemistry*. VOL. 73, NOS. 20-22, 2919-2940
10. Swaraj Sengupta, Sahanwaj Khan, Binitendra Naath Mongal, William Lewis, Michel Fleck, Shyamal K. Chattopadhyay, Subhendu Naskar (2020). Electrocatalytic hydrogen production and carbon dioxide conversion by earth abundant transition metal complexes of the Schiff base ligand: (E)-1-((2-dimethylamino)-propylimino) methyl)naphthalene-2-ol. *Polyhedron* 191, 114798
11. Binitendra Naath Mongal, Sayantani Bhattacharya, Tarun Kanti Mandal, Jayati Datta & Subhendu Naskar (2021) Synthesis, characterization and photovoltaic studies of 2,2';6',2"- terpyridine-based ruthenium complexes with phenylamino, anthranyl and furfuryl substitutions at the 4'-position. *Journal of Coordination Chemistry*. <https://doi.org/10.1080/00958972.2021.1924368>.
12. N. Bage and P. Kar, Ultrasensitive electrochemical sensing of Biotin-Avidin interaction on gold electrode bio-conjugated with silver nanoparticles, *IEEE Sensors Journal* 21 (2021) 10400-10408.
13. S. Shalu, K. Dasgupta, S. Roy, P. Kar, T. Bal, B. D. Dasgupta, Thermal, mechanical, and dielectric properties of low loss PbZr_{0.3}Ti_{0.7}O₃/ polystyrene composites prepared by hot-press method, *Polymer Composites* 42 (2021) 1420-1428.
14. N. Bage, P. Kar, Electrochemical sensing by a covalently bonded biotin-avidin couple on a silver nanoparticle modified gold electrode, *Instrumentation Science and Technology* 49 (2021) 106-124.
15. S. Kumari, A. Shruti, N. Bage, B.D. Ghosh, P. Kar, Chemiresistive sensing of arsenic ion in water by thin film of poly(m-aminophenol) nano-fiber, *Journal of Environmental Chemical Engineering* 8 (2020) 104536.
16. A. Adhikari, P. Tiwary, D. Rana, A. Halder, J. Nath, A. Basu, D. Ghoshal, P. Kar, A.K. Chakraborty, D. Chattopadhyay, Na-cholate micelle mediated synthesis of polypyrrole nanoribbons for ethanol sensing, *Journal of Environmental Chemical Engineering* 8 (2020) 104249.
17. S. Samanta, P. Roy, P. Kar, Sensing of higher alcohols and selective sensing of iso-amyl alcohol by poly (o-phenylenediamine) nanofiber, *IEEE Sensors Journal* 20 (2020) 8973-8980.

4.2 Chapter(s) in Edited Book

1. Sumit Mishra and Nisha Kumari, Chapter 21: Nanocellulose based hydrogels and their applications, pp 521-552, Book: *Cellulose Nanoparticles: Chemistry and Fundamentals* Edited by Vijay Kumar Thakur, Elisabete Frollini and Janet Scott, The Royal Society of Chemistry.
2. P. Kar, 'Chapter 10: Nanomaterials Based Sensor for Air Pollution Control' in 'Environmental Nanotechnology, Vol 4 of Book series Environmental Chemistry for Sustainable World, Vol 32' edited by N. Dasgupta, S. Rajan and E. Lichtfouse (Published from Springer 2020) pp. 349-403. Print ISBN-13: 978-3-030-26667-7
3. B. Dasgupta Ghosh, S. Banerjee, A. Alentiev, I. Ronova, Y. Yampolskii, Chapter 2: Polyimides with bulky groups: Synthesis, Characterization and physical properties, , In: *Imidic Polymers and Green Polymer Chemistry: New Technology and Developments in process and Products*, Apple academic press., (ISBN: 9781771889032)



SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	Dr. A. Sharon Dr. C. Bal Mr. P. K. Kushwaha Ms. Neha Kumari	3-(Isoxazolylmethyl)-1,2,4-Oxadiazole Derivatives And Method Of Preparing The Same	202031034370 of 11.08.2020	2020

SECTION 6

ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. A. Sharon	Associate Professor & Head	No
2.	Dr. P. K. Srivastava	Professor	No
3.	Dr. U. Jha	Professor	No
4.	Dr. J. P. Pandey	Professor	No
5.	Dr. B. Verma	Associate Professor	No
6.	Dr S. Mishra	Associate Professor	No
7.	Dr. S. Naskar	Associate Professor	No
8.	Dr. P Kar	Associate Professor	No
9.	Dr. C. Bal	Assistant Professor	No
10.	Dr. Deepshikha	Assistant Professor	No
11.	Dr. B. D. Ghosh	Assistant Professor	No
12.	Dr. S. S. Mahapatra	Assistant Professor	No
13.	Dr. G. Sen	Assistant Professor	No
14.	Dr. G. K. Agrawal	Assistant Professor	No
15.	Dr. J. Dhar	Assistant Professor	Yes

6.2 List of Adjunct Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. Amit Basak	Senior adjunct Professor	Retd. Professor, Department of Chemistry, IIT, Kharagpur

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1	Dr. Ashoke Sharon	Professor, HOD (Ex-Officio)	Chairman
2	Dr. P.K. Srivastava	Professor	Internal Member



3	Dr. Usha Jha	Professor	Internal Member
4	Dr. J.P. Pandey	Professor	Internal Member
5	Dr. Sumit Mishra	Associate Professor	Internal Member
6	Dr. Subhendu Naskar	Associate Professor	Internal Member
7	Dr. P. Kar	Associate Professor	Internal Member
8	Dr. C. Bal	Associate Professor	Internal Member
9	Dr. G. Sen	Assistant Professor	Internal Member
10	Dr. T. Ghose	Professor	Internal Member
11	Dr. Sudip Das	Professor	Internal Member
12	Dr. Pradyut Ghosh	Professor, IACS, Kolkata	External Member
13	Dr. Manas K. Ghorai	Professor, IIT Kanpur	External Member
14	Prof. Satish Patil	Professor, IISc Bangalore	External Member
15	Dr. Rakeshwar Bandichhor	Vice President, Dr. Reddy's Lab, Hyderabad	External Member

SECTION 7

OTHER INFORMATION

7.1 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Shalini Divya, M.Sc. Batch: 2015, Co-Founder and Chief Technology Officer at Tasmanion, Newzealand	She, as a Co-Founder, has developed Aluminium Ion Batteries as an alternative to Lithium-Ion Batteries with activated carbon and 2D layered materials.



Department of Civil and Environmental Engineering

SECTION 1

DEPARTMENTAL PROFILE



1. About the Department :

The Department of Civil Engineering was established in 1957. It was renamed as Department of Civil and Environmental Engineering in 2014. The Department has well established laboratory facilities on:

- Concrete and Road Materials
- Geology
- Hydraulics
- Soil Mechanics
- Structural Engineering
- Surveying Laboratory
- Computer Laboratory
- Environmental Engineering

The faculty members are well qualified and are

having degrees from reputed Institutes.

Faculty members also possess work experience from reputed organizations from outside India. They are actively involved in research and consultancy. The department had contributed a lot in the infrastructural and industrial growth in Jharkhand by providing technical expertise and consultancy of worth several crores INR. Students from the Department have pursued internship from universities of International repute such as the Illinois Institute of Technology, Chicago.

The Department has facilities for:

- Field-testing in Geotechnical Engineering
- Transportation Engineering
- Non-Destructive Testing of concrete.

The Department offers the following programs:

Sr. No.	Program	Year of Starting	Intake	NBA Accreditation
1	B. Tech. (Civil Engineering)	1957	60	2002, 2009, 2016
2	M. Tech. (Structural Engineering)	1967	12	2009, 2016
3	M. Tech. (Soil Mechanics and Foundation Engineering)	1967	12	2002, 2009, 2018
4	M. Tech. (Environmental Science and Engineering)	2002	18	2016



SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects (Research and Consultancy)

a. Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	National Carbonaceous Aerosols Programme (NCAP): Working Group III – Emissions, sources apportionment and climate effects	Dr. R. Naresh Kumar (PI), Jawed Iqbal (Co-pI)	MoEFCC, India	30/03/2016	Rs. 159.50 Lakhs	30/3/2016 to 31/3/2023 (7 Years)
2.	Prediction of Particulate Matter And Gaseous Pollutant Concentration Through ANN, PNN And CART Models And Comparison With Calpuff And Aermid In Singrauli Coal Mines,	Dr. Tanushree Bhattacharya (PI) Dr. Prof. Bindhu Lal (Co-PI)	Coal India	30/04/2021	85.25 lakhs	3 years
3.	Development of Guidelines for design of all tiers of shovel dumper dump above dragline dump with delineation of phreatic surface within dragline dump, throughout the year and validation study of two dragline mines of Coal India Limited.	Dr. Indrajit Roy (PI), Dr. Anand Kumar Sinha (Co-PI), Dr. Bindhu Lal (Co-PI), Dr. Sudeshna Chakravarty (Co-PI)	Ministry of Coal, Government of India	10/04/2018	Rs. 75.30 Lakh	3 years
4.	Mobility, Bioaccessibility and Source Apportionment Study of Toxic Heavy Metals in Indoor and Outdoor Dust Environment: An Isotope Fingerprinting Approach	PI: Dr. Tanushree Bhattacharya	SERB	13.10.2017	Rs 41.90700 Lakhs	3 years
5.	Effect of blasting on opencast mine dump and development of relationship between blast induced vibration and dump design	Dr. Indrajit Roy (PI), Dr. Siddhartha Sengupta(CO-PI), Dr. Ashish Kumar Patnaik (Co-PI)	CIL	10/02/2021	33.00 lakh	2 year

b. Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Validation of Water sanitation and Hygiene across 740 schools of Jharkhand	Dr Kirti Avishek-PI	UNICEF	10th Feb Feb 2020	15.31 Lacs	10 Nov, 2020



c. Consultancy Projects carried out/ongoing :

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator / Co-Investigator	Ongoing/ Completed*
			from	to			
1.	Scrutiny of DPR of Rural Roads under PMGSY	NRIDA, Ministry of Rural Development, GoI	2002	Ongoing	Rs. 16,91,196 (during 2019-2020)	Prof. Anand Kr. Sinha and Prof. Bindhu Lal	Ongoing
2.	Catchment Area Treatment Plan for Chandil Watershed.	Sigma Pvt Lyd	Dec 2020	June 2021	5 Lacs	Kirti Avishek-PI	Completed
3.	Slope stability study of Wani area, Wani North area, Umrer area & Pench area	Western Coalfield Limited (WCL)	July, 2020	Jan 2021	Rs. 30.44 Lakhs	Dr Indrajit Roy	Completed
4.	Slope stability study of Mata-no-Madh, Umarsar, Panandhro lignite opencast mine	Gujrat Mineral Development corporation Ltd.	July 2020	Jan 2021	Rs.12 lakhs	Dr. Indrajit Roy (PI)	Completed

SECTION 3

SEMINAR / CONFERENCE

3.1 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Siddhartha Sengupta	Two Weeks Online Faculty Development Program on Delivering Online Course Using Canvas LMS	TEQIP III	BIT Mesra	BIT Mesra (Online)	27/07/2020 - 05/08/2020
2.	Dr. Siddhartha Sengupta	E-Training Program/ Short term course on "Advances in Civil Engineering"	TEQIP III	IIT Indore	IIT Indore (Online)	07/10/2020 - 11/10/2020
3.	Dr. Siddhartha Sengupta	E-Training Program/ Short term course on "Advancements in Civil Engineering (with emphasis on water resources, environment engineering and climate change)"	TEQIP III	IIT Indore	IIT Indore (Online)	02/11/2020 - 07/11/2020
4.	Dr. Siddhartha Sengupta	Short term course on "Safety Management For Construction Projects"	TEQIP III	IIT Delhi	IIT Delhi (Online)	09/11/2020 - 13/11/2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
5.	Dr. Siddhartha Sengupta	Short term training programme on on "Structural Audit For Earthquake Safety"	Govt. of India	National Institute of Disaster Management, Govt. of India & Delhi Technological University	Delhi Technological University (Online)	24/11/2020 - 28/11/2020
6.	Dr. Siddhartha Sengupta	Short term course on "Construction Project Management"	TEQIP III	IIT Delhi	IIT Delhi (Online)	30/11/2020 - 04/12/2020
7.	Dr. Siddhartha Sengupta	Short term training program on "Advances in Civil Engineering Structures"	NIT Bhopal	NIT Bhopal	NIT Bhopal (Online)	10/12/2020 - 14/12/2020
8.	Dr. Siddhartha Sengupta	ISSMGE TC 213 Workshop (Online) on "Scour and Erosion"	Indian Geotechnical Society	International Society for Soil Mechanics and Geotechnical Engineering, and Indian Geotechnical Society	College of Engineering, Andhra University, Visakhapatnam (Online)	16/12/2020
9.	Dr. Siddhartha Sengupta	Indian Geotechnical Conference (IGC 2020)	Indian Geotechnical Society	Indian Geotechnical Society	College of Engineering, Andhra University, Visakhapatnam (Online)	17/12/2020 - 19/12/2020
10.	Dr. Siddhartha Sengupta	Short term course on "Recent Advances in Geotechnical and Geoenvironmental Engineering"	TEQIP III	IIT Guwahati	IIT Guwahati (Online)	17/12/2020 - 23/12/2020
11.	Dr. Siddhartha Sengupta	Faculty development programme on "Mathematical Approaches in Mechanics"	TEQIP III	IIT Indore	IIT Indore (Online)	24/12/2020 - 31/12/2020
12.	Dr. Siddhartha Sengupta	Workshop on "Finite Element Analysis of Static and Dynamic Soil-Structure Interaction of Geosystems"	NIT Warangal	NIT Warangal	NIT Warangal (Online)	04/01/2021 - 08/01/2021
13.	Dr. Siddhartha Sengupta	Mathematics Seminar on Sciences & Engineering Applications (SEA - 2021)	TEQIP III	BIT Mesra	BIT Mesra (Online)	12/02/2021 - 13/02/2021



वार्षिक प्रतिवेदन 2020-2021

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
14.	Dr. Siddhartha Sengupta	Design of Water Retaining Structure (DWRS - 2021)	NIT Allahabad	NIT Allahabad	NIT Allahabad (Online)	11/03/2021 - 15/03/2021
15.	Dr. Siddhartha Sengupta	International Virtual Short-Term Course on "Futuristic Prospects of Geoenvironmental and Geotechnical Issues of Coal Mine Overburden and Mine Tailings"	Scheme for Promotion of Academic and Research Collaboration (SPARC), Government of India	IIT (ISM), Dhanbad, and University of Illinois at Chicago, USA	IIT (ISM), Dhanbad (Online)	15/03/2021 - 18/03/2021
16.	Dr. Siddhartha Sengupta	One Week Faculty Development Program On "Water Resources System Planning, Management and Development for the Water Scarce Areas"	TEQIP III	BIT Sindri	BIT Sindri (Online)	26/06/2021 - 30/06/2021
17.	Dr. Sukalyan Chakraborty	Invited lecture in Nanotechnology in the Environment	Fujian Normal University (FNU), China	Fujian Normal University (FNU), China	Online	June 11th 2021
18.	Dr. Sukalyan Chakraborty	Invited lecture in Green Skill Development programme on People's Biodiversity Registrar	MoEF & CC, GoI, New Delhi	ENVIS centre, on Environmental Biotechnology, University of Kalyani	Online	13th March 2021
19.	Dr. Sukalyan Chakraborty	Invited lecture in Webinar on Say no to plastic pollution	MoEF & CC, GoI, New Delhi	ENVIS centre on Environmental Biotechnology, University of Kalyani	Online	18th July, 2020
20.	Dr. Jawed Iqbal	Solid waste management processes	VIT-AP University	Dept. of chemistry, school of advanced sciences, VIT-AP	Online	01.12.2020
21.	Dr. Jawed Iqbal	Sustainable cities: a step towards clean and affordable energy	TATA STEEL	C-Rise, TQM & CQA, TATA Steel	Online	15.06.2021
22.	Dr. Neeta Kumari	Inculcating human values in technical education	AICTE	AICTE	5 day FDP online	19/04/21 to 23/04/21
23.	Dr. Neeta Kumari	Application of statistics in science and engineering		Dept. of Mathematics, BIT, Mesra, Ranchi	Online mode Dept. of Mathematics, BIT, Mesra, Ranchi	05/03/21 to 06/03/21



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
24.	Dr. Neeta Kumari	Innovative and responsible research practices (irrp-2020)	QIP-AICTE	Research and consultancy cell and Dept. of chemical engg., Sant Longwal institute of engineering and technology, Punjab	Short term course in online mode	15/09/2020 to 20/09/2020
25.	Mr. Mani Mohan	International Conference on Materials, Mechanics and Structures 2020 (ICMMS2020)	-	NIT Calicut	Online	14.07.2020 to 15.07.2020
26.	Mr. Mani Mohan	FDP on Earthquake Engineering	AICTE Training And Learning (ATAL) Academy	National Institute Of Technical Teachers Training And Research, Chennai	Online	21.09.2020 to 25.09.2020
27.	Dr. Ashish Kumar Patnaik	Advances in Transportation Engineering (5 day Short term course)		NIT Rourkela	Rourkela	23-27 September 2020
28.	Dr. Ashish Kumar Patnaik	Inculcating Universal Human Values in Technical Education (5 day FDP)		AICTE	New Delhi	19-23 April 2021

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

- Patnaik, Ashish Kumar, D. Prasanth Kumar, Mahabir Panda, and Prasanta Kumar Bhuyan. "Entry Capacity Quantifying Model through Drivers' Behavior at Roundabouts." Transportation research procedia 48 (2020): 707-718.
- Kumar, Manish, Anand Kumar Sinha, and Jitu Kujur. "Mechanical and durability studies on high-volume fly-ash concrete." Structural Concrete 22 (2021): E1036-E1049.
- Kumari, Shweta, and R. Naresh Kumar. "River water treatment using electrocoagulation for removal of acetaminophen and natural organic matter." Chemosphere 273 (2021): 128571.
- Sahay, Narmadeshwar, Siddhartha Sengupta, Arun Kumar, and Lakshmy Parameshwaran. "Kinematic Response of Pile Foundations in Liquefiable Soil of Indo-Gangetic Basin During Earthquake." Indian Geotechnical Journal 51, no. 2 (2021): 286-314.
- Lenka, Swadhina Priyadarshini, Wasim Akram Shaikh, Gary Owens, Lokesh P. Padhye, Sukalyan Chakraborty, and Tanushree Bhattacharya. "Removal of Copper from Water and Wastewater Using Dolochar." Water, Air, & Soil Pollution 232, no. 5 (2021): 1-15.
- Kumar, Abhishek, and Tanushree Bhattacharya. "Biochar: a sustainable solution." Environment, Development and Sustainability 23, no. 5 (2021): 6642-6680.
- Kumar, Abhishek, and Tanushree Bhattacharya. "Removal of arsenic by wheat straw biochar from soil." Bulletin of Environmental Contamination and Toxicology (2021): 1-8.
- Bhattacharya, Tanushree, Shikha Kumari Pandey, Vimal Chandra Pandey, and Abhishek



- Kumar. "Potential and safe utilization of Fly ash as fertilizer for *Pisum sativum* L. Grown in phytoremediated and non-phytoremediated amendments." *Environmental Science and Pollution Research* (2021): 1-14.
9. Mondal, A., S. Chowdhury, N. K. Mondal, W. A. Shaikh, P. Debnath, and S. Chakraborty. "Insecticidal and fungicidal performance of bio-fabricated silver and gold nanoparticles." *International Journal of Environmental Science and Technology* (2021): 1-20.
10. Shaikh, Wasim Akram, Rafique Ul Islam, and Sukalyan Chakraborty. "Stable silver nanoparticle doped mesoporous biochar-based nanocomposite for efficient removal of toxic dyes." *Journal of environmental chemical engineering* 9, no. 1 (2021): 104982.
11. Jha, Aditya Kumar, and Sukalyan Chakraborty. "Photocatalytic degradation of Congo Red under UV irradiation by zero valent iron nano particles (nZVI) synthesized using *Shorea robusta* (Sal) leaf extract." *Water Science and Technology* 82, no. 11 (2020): 2491-2502.
12. Shaikh, Wasim Akram, Md Arsh Alam, Md Osaid Alam, Sukalyan Chakraborty, Gary Owens, Tanushree Bhattacharya, and Naba Kumar Mondal. "Enhanced aqueous phase arsenic removal by a biochar based iron nanocomposite." *Environmental Technology & Innovation* 19 (2020): 100936.
13. Dr. Birendra Kumar Singh, "Assessment of Railway Embankment" *SSRG International Journal of Civil Engineering* 8.2 (2021): 9-10
14. Dr. Birendra Kumar Singh, "Comparison of Friction Velocity with other Roughness", *Parameters Journal of Water Resources and Pollution Studies*. 5.3 (2020)
15. Dr. Birendra Kumar Singh, "Determination of Limiting Value of Depth of Steel Girder for Railway Bridge using Different Forms of Equations for Maximum Applied Load Parameters" *Journal of Recent Activities in Infrastructure Science*. 5.2 (2020)
16. Dr. Birendra Kumar Singh, "Correlation For Vertical Thrust of Water & Settlement of Pavement In Case of Flood" *SSRG International Journal of Civil Engineering* 8.2 (2021): 7-8.
17. Sarangi, S. K., D. P. Mishra, H. Ramachandran, N. Anand, V. Masih, and L. S. Brar. "Analysis and optimization of the curved trapezoidal winglet geometry in a compact heat exchanger." *Applied Thermal Engineering* 182 (2021): 116088.
18. Sarangi, S. K., D. P. Mishra, H. Ramachandran, N. Anand, V. Masih, and L. S. Brar. "Analysis and optimization of the curved trapezoidal winglet geometry in a high-efficiency compact heat exchanger." *International Journal of Thermal Sciences* 164 (2021): 106872.
19. Verma, Meeta, Indrajit Roy, and U. C. Sahoo. "Design of Haul Roads in Open Cast Mines in India—A Mechanistic Design Approach." *Journal of The Institution of Engineers (India): Series D* (2020): 1-17.

4.2 Publications in Proceeding

1. Patnaik, A.K., Mishra, N.B., Bhuyan, P.K. (2020), Comparative study of Critical gap at Roundabouts: Heterogeneous Traffic Condition", 13th TPMDC, Transportation Planning and Implementation Methodologies for Developing Countries, 10-11 December, Mumbai, India (International Conference).
2. Mohan, M., Apurva, A., Kumar, N. and Ojha, A., 2020, September. A Review on Use of Crushed Brick Powder as a Supplementary Cementitious Material. In *IOP Conference Series: Materials Science and Engineering* (Vol. 936, No. 1, p. 012001). IOP Publishing.
3. Singh, B.K., Sengupta, S. (2020). "A critical review on effect of temperature on fly ash based geopolymer bricks." *Abstract Proceedings, International Conference on Recent Development in Sustainable Infrastructures: Research and Practices (ICRDSI - 2020)*, KIIT, Bhubaneswar, December 19-21, 2020, Page 2-5. <https://online.pubhtml5.com/hpwr/ronf/>
4. Kumar, D., Sengupta, S. (2020). "A-state-of-the-art review of soil liquefaction mitigation methods." *Abstract Proceedings, International Conference on Recent Development in Sustainable Infrastructures: Research and Practices (ICRDSI - 2020)*, KIIT, Bhubaneswar, December 19-21, 2020, Page 5-18. <https://online.pubhtml5.com/hpwr/ronf/>
5. Azim, U., Sengupta, S. (2020). "A state of art



- review on constitutive modeling of soft clays." Abstract Proceedings, International Conference on Recent Development in Sustainable Infrastructures: Research and Practices (ICRDSI - 2020), KIIT, Bhubaneswar, December 19-21, 2020, Page 5-16. (Awarded as the Best Paper in the Technical Session). <https://online.pubhtml5.com/hpwr/ronf/>
6. Azim, U., Sengupta, S. (2021). "Numerical study of pile supported embankment Resting on Layered Soft Soil." Presented in International Conference on Advances in Construction Technology and Management (ACTM 2021), College of Engineering, Pune, 11 - 12 March, 2021.
 7. Hayat, M.Y., Sengupta, S. (2021). "A state-of-the-art review of soil nailing." Presented in International Conference on Advances in Construction Technology and Management (ACTM 2021), College of Engineering, Pune, 11 - 12 March, 2021.
 8. Singh, A.K., Sengupta, S. (2021). "A state-of-the-art review of stabilization of slopes subjected to seepage forces using numerical techniques." Presented in International Conference on Advances in Construction Technology and Management (ACTM 2021), College of Engineering, Pune, 11 - 12 March, 2021.
- 4.3 Chapter(s) in Edited Book**
1. Sarangi S., Sinha A.K., Singh B.K., Mohan D. (2021) Effect of FRC Due to Saline Water and Urea Solution. In: Das B., Barbhuiya S., Gupta R., Saha P. (eds) Recent Developments in Sustainable Infrastructure. Lecture Notes in Civil Engineering, vol 75. Springer, Singapore, DOI: https://doi.org/10.1007/978-981-15-4577-1_55, Print ISBN - 978-981-15-4576-4, Online ISBN - 978-981-15-4577-1, First Online - 03 July 2020.
 2. Mishra, A., & Lal, B. (2021). Determining the Role of Leaf Relative Water Content and Soil Cation Exchange Capacity in Phytoextraction Process: Using Regression Modelling. In Spatial Modeling and Assessment of Environmental Contaminants (pp. 107-120). Springer, Cham.
 3. Kumar, D., Sengupta, S. (2020). "Dynamic response of fly ash blended sand and its liquefaction resistance." Advances in Sustainable Construction Materials, Select Proceedings of ASCM 2020, (eds. Biswas, S., Metya, S., Kumar, S., Samui, P.), 389-395, (Scopus indexed, Published by Springer).
 4. Azim, U., Sengupta, S. (2020). "Numerical modeling of geogrid reinforced embankment resting on pile supported layered soft soil." Advances in Sustainable Construction Materials, Select Proceedings of ASCM 2020, (eds. Biswas, S., Metya, S., Kumar, S., Samui, P.), 267-275, (Scopus indexed, Published by Springer).
 5. "Ecological Consequences of Genetically Modified Crops on Soil Biodiversity" in Ecological and Practical Applications for Sustainable Agriculture (Springer Nature Publisher) 2020.
 6. Singh V., Chakraborty S. (2021) Quantification and Characterization of Microplastics in Kanke Lake, a Freshwater System of Ranchi, Jharkhand, India. In: Bhuiyan C., Flügel WA., Jain S.K. (eds) Water Security and Sustainability. Lecture Notes in Civil Engineering, vol 115. Springer, Singapore. https://doi.org/10.1007/978-981-15-9805-0_23
 7. Kirti Avishek, Ankit Kumar (2021) Environmental Hazards due to grassland ecosystem degradation: perspectives on land management in India. In Ed. Rai PK, Singh P, Mishra VN, Recent Technologies for Disaster Management and Risk Reduction-Sustainable Community Resilience & Responses. Springer Nature.



SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Award / Recognition Bestowed on Faculties (State / National / International)

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Dr. Siddhartha Sengupta	Awarded for the Best Paper in one of the Technical Sessions of International Conference on Recent Development in Sustainable Infrastructures: Research and Practices (ICRDSI - 2020), KIIT, Bhubaneswar, December 19-21, 2020	KIIT Bhubaneswar	National Level	December 19-21, 2020
2.	Kirti Avishek	Member-State Environmental Appraisal Committee	MoEFCC, GoI	State Level	3yrs

5.2 MoUs / Collaborations:

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	NHAI, Govt. of India	Transportation Engineering	29th July, 2020 (5 year)

SECTION 6

ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. Sudeshna Chakravarty	Professor, Head of the Department	No
2.	Dr. Anand Kumar Sinha	Professor	No
3.	Dr. Rajeev Sahay	Professor	No
4.	Dr. Bindhu Lal	Professor	No
5.	Dr. Birendra Kumar Singh	Professor	No
6.	Dr. Siddhartha Sengupta	Associate Professor	No
7.	Dr. Indrajit Roy	Associate Professor	No
8.	Dr. Kirti Avishek	Assistant Professor	No
9.	Dr. Radhakrishnan Naresh Kumar	Assistant Professor	No
10.	Dr. Sukalyan Chakraborty	Assistant Professor	No
11.	Dr. Tanushree Bhattacharya	Assistant Professor	No
12.	Dr. Jawed Iqbal	Assistant Professor	No



Sr. No.	Name	Designation	TEQIP Sponsored
13.	Dr. Neeta Kumari	Assistant Professor	No
14.	Mr. Mani Mohan	Assistant Professor	No
15.	Mr. Vikky Masih	Assistant Professor	Yes
16.	Dr. Puja Rajhans	Assistant Professor	No
17.	Dr. Ashish Kumar Patnaik	Assistant Professor	No

6.2 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. Sunil K. Sinha	Adjunct Professor	Virginia Tech,, Blacksburg, USA

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Sudeshna Chakravarty	Professor, Head of the Department, (Ex Officio)	Chairman
2.	Dr. Anand Kumar Sinha	Professor	Internal
3.	Dr. Rajeev Sahay	Professor	Internal
4.	Dr. Bindhu Lal	Professor	Internal
5.	Dr. Birendra Kumar Singh	Professor	Internal
6.	Dr. Indrajit Roy	Associate Professor	Internal
7.	Dr. Kirti Avishek	Associate Professor	Internal
8.	Dr. Manjari Chakraborty	Professor (Architecture)	Internal
9.	Dr. R P Sharma	Professor (Mechanical, Head)	Internal
10.	Dr. S. K. Maity	Professor (ESE), IIT (ISM), Dhanbad	External
11.	Dr. Rajesh Kumar	Professor (CE), IIT(BHU), Varanasi	External
12.	Dr. Rakesh Pratap Singh	Associate Professor (CE), NIT Jamshedpur	External
13.	Mr. Sujib Chatterjee	Chief Manager (Civil), CMPDIL, Ranchi	External
14.	Mr. Rammohon Chatterjee	GM, CET, SAIL, Durgapur	External
15.	Mr. Suvendu Basu	Head, Redimix, Health and Safety, Lafarge, Kolkata	External
16.	Prof. (Dr.) Balram Singh	HOD, Patna Centre, BIT, Invited Member	External
17.	Miss. Mansi Jha (BE/10686/17)	Student Representative	Internal
18.	Mr. Sharique Khan (BE/10295/17)	Student Representative	Internal



SECTION 7

OTHER INFORMATION

7.1 Publication by students

Publications in Journals :

1. Sahay, N., Sengupta, S., Kumar, A., Parameshwaran, L. (2021). "Kinematic response of pile foundations in liquefiable soil of Indo-Gangetic basin during earthquake." *Indian Geotechnical Journal*, 51(2), 286-314. <https://doi.org/10.1007/s40098-020-00446-y> <https://doi.org/10.1007/s40098-020-00446-y> (Scopus indexed, Published by Springer).
2. Swadhina Priyadarshini Lenka, Wasim Akram Shaikh, Gary Owens, Lokesh P. Padhye, Sukalyan Chakraborty & Tanushree Bhattacharya (2021).. Removal of Copper from Water and Wastewater Using Dolochar. *Water Air Soil Pollut*, 232, p. 167
3. A. Mondal, S. Chowdhury, N. K. Mondal, W. A. Shaikh, P. Debnath, S. Chakraborty. Insecticidal and Fungicidal performance of bio-fabricated silver and gold nano particles. (2021). *International Journal of Environmental Science and Technology* <https://doi.org/10.1007/s13762-021-03181-w>
4. Wasim Akram Shaikh, Rafique Ul Islam, Sukalyan Chakraborty. 2021. Stable Silver nanoparticle doped mesoporous biochar-based nanocomposite for efficient removal of toxic dyes. *Journal of Environmental Chemical Engineering*, p. 104982.
5. Aditya Kumar Jha, Sukalyan Chakraborty. 2020. Photocatalytic degradation of Congo Red under UV irradiation by zero valent iron nano particles (nZVI) synthesized using Shorea robusta (Sal) leaf extract. *Water Science and Technology*. (2020) 82 (11): 2491–2502.
6. Wasim Akram Shaikh, Md. Arsh Alam, Md. Osaid Alam, Sukalyan Chakraborty, Gary Owens, Tanushree Bhattacharya, Naba Kumar Mondal. 2020. Enhanced aqueous phase arsenic removal by a biochar based iron nanocomposite. *Environmental Technology & Innovation*. <https://doi.org/10.1016/j.eti.2020.100936> 2352-1864/© 2020.
- Brick Powder as a Supplementary Cementitious Material. In IOP Conference Series: Materials Science and Engineering (Vol. 936, No. 1, p. 012001). IOP Publishing.
2. Kumar, D., Sengupta, S. (2020). "Dynamic response of fly ash blended sand and its liquefaction resistance." *Advances in Sustainable Construction Materials, Select Proceedings of ASCM 2020*, (eds. Biswas, S., Metya, S., Kumar, S., Samui, P.), 389-395, (Scopus indexed, Published by Springer).
3. Azim, U., Sengupta, S. (2020). "Numerical modeling of geogrid reinforced embankment resting on pile supported layered soft soil." *Advances in Sustainable Construction Materials, Select Proceedings of ASCM 2020*, (eds. Biswas, S., Metya, S., Kumar, S., Samui, P.), 267-275, (Scopus indexed, Published by Springer).
4. Singh, B.K., Sengupta, S. (2020). "A critical review on effect of temperature on fly ash based geopolymer bricks." *Abstract Proceedings, International Conference on Recent Development in Sustainable Infrastructures: Research and Practices (ICRDSI - 2020)*, KIIT, Bhubaneswar, December 19-21, 2020, Page 2-5. <https://online.pubhtml5.com/hpwr/ronf/>
5. Kumar, D., Sengupta, S. (2020). "A-state-of-the-art review of soil liquefaction mitigation methods." *Abstract Proceedings, International Conference on Recent Development in Sustainable Infrastructures: Research and Practices (ICRDSI - 2020)*, KIIT, Bhubaneswar, December 19-21, 2020, Page 5-18. <https://online.pubhtml5.com/hpwr/ronf/>
6. Azim, U., Sengupta, S. (2020). "A state of art review on constitutive modeling of soft clays." *Abstract Proceedings, International Conference on Recent Development in Sustainable Infrastructures: Research and Practices (ICRDSI - 2020)*, KIIT, Bhubaneswar, December 19-21, 2020, Page 5-16. (Awarded as the Best Paper in the Technical Session). <https://online.pubhtml5.com/hpwr/ronf/>
7. Azim, U., Sengupta, S. (2021). "Numerical study of pile supported embankment Resting on Layered Soft Soil." Presented in International Conference on Advances in Construction

Publications in Proceedings: (International/ National)



1. Mohan, M., Apurva, A., Kumar, N. and Ojha, A., 2020, September. A Review on Use of Crushed

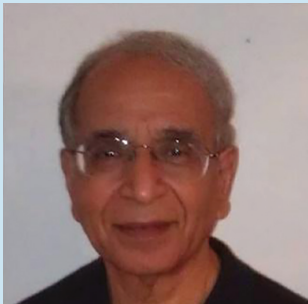

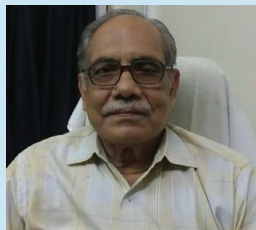
- Technology and Management (ACTM 2021), College of Engineering, Pune, 11 - 12 March, 2021.
8. Hayat, M.Y., Sengupta, S. (2021). "A state-of-the-art review of soil nailing." Presented in International Conference on Advances in Construction Technology and Management (ACTM 2021), College of Engineering, Pune, 11 - 12 March, 2021.
 9. Singh, A.K., Sengupta, S.(2021). "A state-of-the-art review of stabilization of slopes subjected to seepage forces using numerical techniques." Presented in International Conference on Advances in Construction Technology and Management (ACTM 2021), College of Engineering, Pune, 11 - 12 March, 2021.

7.2 Achievements of Students :

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1.	Uzma Azim	Awarded for the Best Paper in one of the Technical Sessions of International Conference on Recent Development in Sustainable Infrastructures: Research and Practices (ICRDSI - 2020), KIIT, Bhubaneswar, December 19-21, 2020	KIIT Bhubaneswar	KIIT Bhubaneswar, December 19-21, 2020

7.3 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Ms. Dorji Choden BE, Civil Engg Batch of 1984, Politician, Bhutan's Works and Human Settlement Ministry	 <p>Minister</p> <p>Aum Dorji Choden (born 5 December 1960) is a Bhutanese politician. She was appointed minister of Bhutan's Works and Human Settlement Ministry in 2013, making her the first woman to serve as a minister in Bhutan.</p>
2.	Dr. Niraj Verma BE, Civil Engg. Batch of 1980 L. Douglas Wilder School of Government & Public Affairs.	 <p>Professor at L. Douglas Wilder School of Government & Public Affairs. Niraj Verma is an expert in urban planning and management. He joined the Wilder School in 2010 and served as its director and first dean until 2016.</p>

Sr.No	Name, Batch and Affiliation	Short Description
3.	Mr. Surinder Chadha BSc, Civil Engg. Batch of 1963, MetLife	 <p>Senior Consultant</p>
4.	Mr. Sharad Jaipurkar BE, Civil Engg. Batch of 1980, MECON Limited	 <p>Retired General Manager, I/C Civil and Architecture, MECON Limited.</p>
5.	Dr. B. K. Rath B.Sc., Civil Engg. Batch of 1966 Retired Director, NIT Rourkela	 <p>Retired Director, NIT Rourkela</p>

7.4 Any other relevant information

Infrastructure / Equipment added during the year:

- Maxwell Reciprocal Theorem Apparatus,
- Pin Jointed Truss Apparatus,
- Behavior of columns and struts Apparatus,
- Two hinged arch Apparatus,
- Elastic Properties of Deflected Beam Apparatus,
- L Shape box apparatus,
- J-Ring,
- PC-Controlled automatic Blaine apparatus,
- Automatic Vicat apparatus

Department of Computer Science and Engineering

SECTION 1

DEPARTMENTAL PROFILE



1. About the Department :

The Department of Computer Science & Engineering was established in the year 1983 and is now recognized as one of the leading departments with infrastructure and facilities to match the very best in the country. The department remains committed towards its mission, which is twofold. One is to provide students with the fundamental knowledge and problem solving skills in Computer Science required for a fulfilling career. The other goal is to create and disseminate knowledge to improve Computer Science research, education and practice.

The department has had academic collaborations with University of New Brunswick, Canada, University of Melbourne, Australia and University of Manitoba, Canada.

Vision

The department strives to be recognized for outstanding education and research, leading to excellent professionals and innovators in the field of Computer Science and Engineering, who can positively contribute to the society.

Mission

To impart quality education and equip the students with strong foundation that could make them capable of handling challenges of the new century.

To maintain state of the art research facilities and facilitate interaction with world's leading universities, industries and research

organization for constant improvement in the quality of education and research.

Undergraduate Programmes

The Department offers a four-year B.Tech. programme in Computer Science and Engineering in eight semesters. All programmes are accredited by the All India Council for Technical Education (AICTE).

The Undergraduate Programme offered by the Department are:

B.Tech. in Computer Science and Engineering (4 Years: 8-Semesters, Intake: 120)

B.Tech. in Information Technology (4 Years: 8-Semesters, Intake: 60)

Postgraduate Programmes

The Masters programme offered by the Department are:

M.Tech in Computer Science (2 Years: 4-Semesters, Intake: 16)

M.Tech in Information Technology (2 Years: 4-Semesters, Intake: 18)

M.Tech in Information Security (2 Years: 4-Semesters, Intake: 18)

Master of Computer Application (2 Years: 4-Semesters, Intake: 60)

Doctoral Programmes

The Department of Computer Science and Engineering offers PhD programmes in various branches of the subject.



Software Available

Sr. No.	Software	Sr. No.	Software
1.	IBM Rational Suit Enterprise	14.	Prolog
2.	MATLAB (Mathworks)	15.	Turbo C 3
3.	JAVA(1.8) , (JAVA djk 1.7)	16.	LDRA
4.	Eclipse 4.4	17.	Turbo C++ 4.5
5.	NetBeans	18.	Argo
6.	Code Blocks	19.	Swi-Prolog
7.	MySQL	20.	Oracle database 10g express ed.
8.	R Studio	21.	Open Office
9.	CCS (Code Composer Studio)	22.	UniFlash
10.	Agro UML	23.	Jdk 1.8.0.51
11.	Code Blocks EP	24.	Rapid Miner Studio
12.	Python Anaconda 3	25.	Lingo 17
13.	TORA		

Sr. No.	Software	Sr. No.	Software
1.	MS Office	7.	WinRAR
2.	Acrobat reader	8.	Putty
3.	Google Chrome	9.	Internet Explorer
4.	Mozilla Firefox	10.	ESET Endpoint Security 5.0 (antivirus)
5.	NetSim Academic	11.	NetSim Standard
6.	Net Beans 8.1		

SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects (Research and Consultancy)

a. Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Development of machine learning algorithms for the early diagnosis of delinquent behaviour of juveniles"	PI: Dr. S. Mahapatra Co-PI: Dr. V. Bhattacharjee	CSRI, DST	File No. DST/CSRI/2017/400(G)	Rs. 22,54,800/-	2022
2.	Skill Development Center	PI: Dr K. K. Senapati	AICTE	18TH January 2019	14.78 Lakhs	3 Years



Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
3.	Auto Robotic resection of Tumours by Volumetric Analysis of Medical Images	Co-PI: Dr. K. K. Senapati	AICTE	18th June 2019	11.38 Lakhs	3 Years

SECTION 3**SEMINAR / CONFERENCE****3.1 Seminar / Conferences / Short – Term Courses Conducted :**

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	ATAL-FDP on Blockchain Technology	K Sridhar Patnaik	AICTE	Sep 7-11,2020
2.	ATAL-FDP on Quantum Computing	K Sridhar Patnaik	AICTE	Jun 21-25,2021
3.	"Cyber Security"	Dr. K.K. Senapati	AICTE, TEQIP-III	11-15 September 2020
4.	"Cyber Security Awareness"	Dr. K.K. Senapati	MHRD, TEQIP-III	11-13 December 2020
5.	"Deep Learning"	Dr. K.K. Senapati	AICTE-ISTE	14-19 December 2020
6.	"Research Through HPC	Dr. K.K. Senapati	TEQIP-III	19 September 2020, 23-24 & 30-31 January 2021
7.	"Deep Learning"	Dr. K.K. Senapati	AICTE-ISTE	29th April to 5th May 2021
8.	"Deep Learning"	Dr. K.K. Senapati	AICTE-ISTE	24-29 May 2021



3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by

Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr S P Singh	"Deep Learning"	AICTE/ISTE	Birla Institute of Technology, Mesra, Ranchi, Jharkhand.	Online	24.05.2021 to 29.05.2021
2.	K. Sridhar Patnaik	One week Online Mobile App Development,		RIT IEEE Branch,Vizag in association with MadBlocks Technologies Ltd. Hyderabad	Online	28 July - 1st Aug,2020
3.	K. Sridhar Patnaik	One week Online Mobile App Development,		RIT IEEE Branch,Vizag in association with MadBlocks Technologies Ltd. Hyderabad	Online	28 July - 1st Aug,2020
4.	A. Nigam	Two Day	Collegiate Education and Technical Education Department, Government of Telangana	National level workshop organized by IAE	Online	21st & 22nd June 2021
5.	A. Nigam	Three Day	BIT	Innovation Research Foundation, Ahmedabad	Online	5th , 12th and 19th June, 21
6.	A. Nigam	Thirty Days		Human Resource & Development Centre, University of Rajasthan, Jaipur	Online	23rd Nov. 2020 to 22nd Dec, 2020
7.	Kalyan Samanta	Inculcating Universal Human Values in Technical Education	All India Council for Technical Education (AICTE)	AICTE	ONLINE	19 April, 2021 to 23 April, 2021
8.	Kalyan Samanta	Deep Learning	AICTE	BIT, Mesra	ONLINE	24th - 29th MAY, 2021
9.	Debjani Mustafi	Online Faculty Development Program on Machine Learning	AICTE	Online from IIT, Kanpur	Online from IIT, Kanpur	23rd Nov. to 4th Dec., 2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
10.	Debjani Mustafi	Online Faculty Development Program on Artificial Intelligence and Machine Learning in Healthcare	AICTE	Online from BIT, Mesra	Online from BIT, Mesra	27th July to 31st July, 2020
11.	Debjani Mustafi	AICTE-ISTE Approach Refresher Course on Deep Learning	AICTE	Online from BIT, Mesra	Online from BIT, Mesra	29th May to 5th June, 2021
12.	Amritanjali	2-week online FDP on AI & ML	Selffinanced	Finland Labs in association with IIT Roorkee	Online	Nov 02-13, 2020
13.	Amritanjali	TEQIP-III Sponsored Online Training on Research Through HPC	TEQIP, BIT Mesra	Dept. of CSE, BIT Mesra	Online	Sep 19, 2020, Jan 23-24 2021, Jan 30-31, 2021
14.	Dr. B. K. Sarkar	Deep Learning	AICTE	Birla Institute of Technology, Ranchi, Jharkhand	Deptt. of Computer Sc. and Engg., BIT Mesra	14th Dec., 2020 to 19th Dec., 2020
15.	Dr. Bhaskar Karn	AICTE-ISTE approved Orientation / Refresher Programme on "Deep Learning"	BIT Mesra	BIT Mesra	On line	24th May, 2021 to 29th May, 2021
16.	Dr. Kumar Rajnish	Online FDP on Machine Learning	TEQIP, IIT Kharagpur	IIT Kharagpur	Online	23rd Nov. 2020 to 4th Dec., 2020
17.	Dr. V. Bhattacharjee	Online FDP on Machine Learning	TEQIP, IIT Kharagpur	IIT Kharagpur	Online	23rd Nov. 2020 to 4th Dec., 2020
18.	Dr. S. K. Saha	Online FDP on Machine Learning	TEQIP, IIT Kharagpur	IIT Kharagpur	Online	23rd Nov. 2020 to 4th Dec., 2020
19.	Dr. S.K. Saha	Online FDP on Machine Learning	TEQIP, IIT Kharagpur	IIT Kharagpur	Online	23rd Nov. 2020 to 4th Dec., 2020
20.	Dr. K.K. Senapati	Open-source Cyber Security Tools	Self	National Institute of Technical Teachers Training at Chandigarh	Online	18-22 May 2020.



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
21.	Dr. K.K. Senapati	Cyber Security and Cyber Crime Investigation	Self	Computer Society of India, Mumbai Chapter	Online	28-29 August 2020.
22.	Dr. K.K. Senapati	Ethical Hacking	Self	National Institute of Technical Teachers Training at Chandigarh	Online	28-30 June 2021.

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

- Agarwal, P., Singh, S. P., & Shrivastava, P. (2021). A Safe and Resilient Cryptographic System for Dynamic Cloud Groups with Secure Data Sharing and Efficient User Revocation. Turkish Journal of Computer and Mathematics Education (TURCOMAT), 12(3), 5164–5175. <https://doi.org/10.17762/turcomat.v12i3.2144>. NON-PAID SCOPUS.
- Sonia Saini, S P Singh, Ruchi Agarwal (2021), "Healthcare analytic with R and MongoDB Using Social media", International Journal of Advance Intelligence Paradigm 2021. DOI 10.1504/IJAIP. 10021025. ISSN, 17550386, 17550394. NON-PAID SCOPUS. <https://www.inderscienceonline.com > IJAIP.2021.113788>.
- A. Priya and S. K. Sahana, 2020, "Multiprocessor Scheduling based on Evolutionary Technique for Solving Permutation Flow Shop Problem," in IEEE Access, ISSN: 2169-3536, DOI 10.1109/ACCESS.2020.2973575. (SCIE) (IF: 3.745).
- A. Priya and S. K. Sahana, 2020, A Deterministic Flowshop Scheduling Problem to minimizing the Makespan using PA-ACO, International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-9 Issue-3, pp 1555-1560. (SCOPUS)
- Dholey, M.K., Sinha, D., Mukherjee, S., Das, A.K. and Sahana, S.K. "A Novel Broadcast Network Design for Routing in Mobile Ad-Hoc Network," in IEEE Access, vol. 8, pp. 188269-188283, 2020, doi: 10.1109/ACCESS.2020.3030802. (SCIE, IF 3.745)
- Sweta Mehta, K.S Patnaik, Improved Prediction of Software Defects Using Ensemble Machine Learning Techniques" Neural Computing and Applications. Springer, <https://doi.org/10.1007/s00521-021-05811-3>, March, 2021
- Kumari, R., Nigam, A. & Pushkar, S. (2020) Machine learning technique for early detection of Alzheimer's disease. Microsyst Technol. <https://doi.org/10.1007/s00542-020-04888-5> [SCI]
- Patil, D., Nigam, A., Mohapatra, S., (2020), "Automation of geometric feature computation through image processing approach for single-layer laser deposition process", International Journal of Computer Integrated Manufacturing, 10.1080/0951192X.2020.1815843 [SCIE]
- Nigam, A., Gupta, A., Singh, R. K., (2020), "Novel image analysis based method for residence time distribution analysis in steel making tundish", Transactions of the Indian Institute of Metals, Vol 74, Issue 2, pages 243-254 10.1007/s12666-020-02142-0 [SCIE].
- Kumari, R., Nigam, A., & Pushkar, S. (2021) "Multimodality based Diagnosis of Alzheimer's Disease using Machine Learning Technique on Volumetric and Cognitive Assessments". Microsyst Technol. [SCI] Accepted for publication.
- Rakesh Raja, Indrajit Mukherjee, and Bikash Kanti Sarkar (2020): A Systematic Review of Healthcare Big Data. -Scientific Programming (Hindawi), Volume 2020, Article ID 5471849, 15 pages (<https://doi.org/10.1155/2020/5471849>)
- A. Gupta and B.K. Sarkar (2020): Biswapped-Torus Network: A New Efficient Node Symmetrical Optoelectronic Network. -Nat'l. Acad. Sci. Lett. <https://doi.org/10.1007/s40009020-00942-y>
- Rakesh Raja, Indrajit Mukherjee, and Bikash Kanti Sarkar (2021): A Machine Learning Based Prediction Model for Preterm Birth in Rural India.



- Journal of Healthcare Engineering (Hindawi) Volume 2021, Article ID 6665573, 11 pages (<https://doi.org/10.1155/2021/6665573>).
14. M. Gupta, K. Rajnish and V. Bhattacharjee, Impact of Parameter Tuning for Optimizing Deep Neural Network Models for Predicting Software Faults, *Scientific Programming* 2021(3):1-17, June 2021[SCIE Indexed].
 15. C. Wahi, S. Chakraverty and V. Bhattacharjee, A Trust-Based Secure AODV Routing Scheme for MANET, *International Journal of Ad Hoc and Ubiquitous Computing*, Accepted, April 2021[SCIE Indexed].
 16. U. Gupta, P. S. Bishnu and V. Bhattacharjee, Clustering on Ranked Data for Campaign Selection, 2020, *IEEE Access* [SCIE Indexed].
 17. P. S. Bishnu, U. Gupta and V. Bhattacharjee, Outlier Detection in Wireless Sensor Networks Based on Neighbourhood, *Wireless Personal Communications*, August 2020, <https://doi.org/10.1007/s11277-020-07722-3> [SCIE Indexed].
 18. Prashant Pranav, Soubhik Chakraborty, and Sandip Dutta, A New Cipher System using Seminal Composition in Indian Raga (SCIE Indexed, Impact Factor- 2.784), *Soft Comput*, Springer, Volume 24, pp- 1529–1537 (2020)
 19. Ankur Priyadarshi and Sujan Kumar Saha. (2021 – in press). The First Named Entity Recognizer in Maithili: Resource Creation and System Development. *Journal of Intelligent and Fuzzy Systems*. [SCIE 1.851 as on JCR 2020]
 20. Ankur Priyadarshi, Sujan Kumar Saha. (2020) Towards the First Maithili Part of Speech Tagger: Resource Creation and System Development. *Computer Speech & Language Elsevier*, Vol. 62 (July 2020) 101054. July 2020. ISSN: 0885-2308. DOI: <https://doi.org/10.1016/j.csl.2019.101054> [IF 1.899 – Q3]
 21. Sujan Kumar Saha. 2021. Towards Development of a System for Automatic Assessment of a Question Paper. *Smart Learning Environments* (Springer, SCOPUS). 8: 4(2021). <https://doi.org/10.1186/s40561-021-00148-9>.
 22. Nandini Kumari, Shamama Anwar, Vandana Bhattacharjee (2021), "DCGAN based pretrained model for Image reconstruction using Image Net", *IEEE 7th International Conference on Biosignals, Image and Instrumentation*, pp 1-6, [ISBN: 978-0-7381-4471-9/21]
 23. Utpal K. Mukhopadhyay, Richa N. K. Sharma, Shamama Anwar, Atmadeep Dutta (2021), "Earthquakes and Thermal Anomalies in a Remote Sensing Perspective", in *Machine Learning and Big Data Analytics Paradigms: Analysis, Applications and Challenges* (pp. 185-217). Springer, Cham. https://doi.org/10.1007/978-3-030-59338-4_11 [ISBN: 978-3-030-59337-7 and 978-3-030-59338-4]
 24. Nandini Kumari, Shamama Anwar, Vandana Bhattacharjee (2021), "A Combinational Deep Learning Approach to Visually Evoked EEG based Image Classification", accepted for publication in *Fundamentals and Methods of Machine and Deep Learning: Algorithms, Tools, and Applications*, Wiley-Scrivener. [In Press].
 25. Nandini Kumari, Shamama Anwar, Vandana Bhattacharjee (2021), "Convolutional Neural Network based visually evoked EEG classification model on MindBig Data", In: Pan I., Mukherjee A., Piuri V. (eds) *Proceedings of Research and Applications in Artificial Intelligence. Advances in Intelligent Systems and Computing*, vol 1355. Springer, Singapore. https://doi.org/10.1007/978-981-16-1543-6_22
 26. Nandini Kumari, Shamama Anwar, and Vandana Bhattacharjee (2020). "Correlation and Relief Attribute Rank-based Feature Selection Methods for Detection of Alcoholic Disorder Using Electroencephalogram Signals." *IETE Journal of Research* (2020): 1-13. ISSN: Print ISSN: 0377-2063 Online ISSN: 0974-780X, doi: <https://doi.org/10.1080/03772063.2020.1780166> [SCIE, IF: 1.125]
 27. Shamama Anwar and G. Rajamohan (2020). "Improved Image Enhancement Algorithms based on the Switching Median Filtering Technique", *Arabian Journal for Science and Engineering*, Springer, pp.1-12 ISSN: 2191-4281, Online ISSN: 2193-567X <https://doi.org/10.1007/s13369-020-04983-9> [SCIE, IF: 2.334]
 28. Shamama Anwar and Afrin Alam (2020). "A Convolutional Neural Network based learning approach to Acute Lymphoblastic Leukaemia detection with automated feature extraction", in *Medical & Biological Engineering & Computing* 58, 3113–3121 <https://doi.org/10.1007/s11517->



- 020-02282-x, ISSN: 1741-0444, 0140-0118 [SCI, IF: 2.022] Shruti Garg, Ashwani Garg, "Comparison of Machine learning Algorithms for Content Based Personality Resolution of Tweets" to be published in Social Science and Humanities Open, 4(1), 2021, Elsevier, ISSN: 2590-2911.
29. Shruti Garg, Soumyajit Behera, Rahul Kumar Patro, Ashwani Garg, "Deep Neural Network for Electroencephalogram based Emotion Recognition", accepted to publish in the IOP : Materials Science & Engineering (MSE). (Scopus)
30. Quazi Warisha Ahmed, Shruti Garg, "Energetic Data Security Management Scheme using Hybrid Encryption Algorithm over Cloud Environment." Turkish Journal of Computer and Mathematics Education (TURCOMAT) Vol.12, no. 6, pp. 201-208, April 2021. (Scopus)
31. Quazi Warisha Ahmed and Shruti Garg, "Understanding Information Security through Advanced Encryption Standard", SAMBODHI, Vol. 43, no 3(II), Nov. 2020, pp. 155163 (UGC Care) ISSN: 2249-6661.
32. Deepika Bhanudas Patil, Akriti Nigam and Subrajeet Mohapatra, Automation of Geometric Feature Computation through Image Processing Approach for Single-Layer Laser Deposition Process, International Journal of Computer Integrated Manufacturing, Taylor & Francis, September, 33(9), 895-910, September, 2020 [SCI: JCR 2018 Impact Factor 2.09]
34. Alpna, Satish Chand, Subrajeet Mohapatra and Vivek Mishra, Automated Char Classification using Image Analysis and Artificial Intelligence, International Journal of Oil, Gas and Coal Technology, Inder Science, 2020 [SCI : In Press]
35. Rakesh Raja, Indrajit Mukherjee, Bikash Kanti Sarkar, "A Systematic Review of Healthcare Big Data", Scientific Programming, vol. 2020, Article Id 5471849, 15 pages, 2020. <https://doi.org/10.1155/2020/5471849>.
36. Mukherjee, R., Kundu, A., Mukherjee, I. et al. IoT-cloud based healthcare model for COVID19 detection: an enhanced k-Nearest Neighbour classifier based approach. Computing (2021). <https://doi.org/10.1007/s00607-021-00951-9>
37. Rakesh Raja, Indrajit Mukherjee, Bikash Kanti Sarkar, "A Machine Learning Prediction Model for Preterm Birth in Rural India", Journal of Healthcare Engineering, vol. 2021, Article Id 6665573, 11 pages, 2021. <https://doi.org/10.1155/2021/6665573>
38. Mahato, S., Paul, Sanchita, "Classification of Depression Patients and Normal Subjects Based on Electroencephalogram (EEG) Signal Using Alpha Power and Theta Asymmetry", Journal Medical System, Springer, 44, 1-28 (2020). (DOI: <https://doi.org/10.1007/s10916019-1486-z>.) [SCIE, IF-3.058]
39. Shalini Mahato, Nishant Goyal, Daya Ram, Sanchita Paul, "Detection of Depression and Scaling of Severity Using Six Channel EEG Data", Journal of Medical Systems, Springer, Volume 44 (118), Pages 1-12, 2020. (DOI: 10.1007/s10916-020-01573-y). [SCIE, IF-3.058]
40. S. Gedam and S. Paul, "A Review on Mental Stress Detection using Wearable Sensors and Machine Learning Techniques," in IEEE Access, doi: 10.1109/ACCESS.2021.3085502, May 2021. (In Press) [SCIE, IF-3.745]
41. Ravi Prakash and Shashank Pushkar, An Approach Using Heuristic Pheromones-Based ACO Modeling for Green Vehicle Routing Optimization, International Journal of Ad Hoc and Ubiquitous Computing(2021) (In Press) [SCIE indexed]
42. Kumari, R., Nigam, A. & Pushkar, S. Machine learning technique for early detection of Alzheimer's disease. Microsyst Technol 26, 3935–3944 (2020). <https://doi.org/10.1007/s00542-020-04888-5>[SCIE indexed].
43. P P Dash, S K Mishra, Kishore Kumar Senapati, G Panda "Interactive Teaching Learning Based Optimization technique for multiple objects Tracking", Multimedia Tools and Applications, Volume 80, Issue 3, November 2020, <https://doi.org/10.1007/s11042-020-10057-7>[SCI]
- ### 4.2 Publications in Proceedings:
1. Gupta V., Sahana S.K. (2020) Nudge-Based Hybrid Intelligent System for Influencing Buying Decision. In: Sahana S., Bhattacharjee V. (eds) Advances in Computational Intelligence. Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore, Print ISBN: 978-981-13-8221-5, Online ISBN: 978-981-13-8222-2, DOI: https://doi.org/10.1007/978-981-13-8222-2_14, https://link.springer.com/chapter/10.1007/978-981-13-8222-2_14



2. Priyadarshi N., Bhoi A.K., Sahana S.K., Mallick P.K., Chakrabarti P. (2020) Performance Enhancement Using Novel Soft Computing AFLC Approach for PV Power System. In: Mallick P., Balas V., Bhoi A., Chae GS. (eds) Cognitive Informatics and Soft Computing. Advances in Intelligent Systems and Computing, vol 1040. Springer, Singapore, pp 439447 ISBN: 978-981-15-1450-0, DOI: https://doi.org/10.1007/978-981-15-1451-7_47.
3. Patil, D. B, Nigam, A., & Mohapatra, S. (2020) "Investigation to identify most appropriate edge detection technique on a layer of laser deposition process" in Proceedings of 6th International Conference on Nano-electronics, Circuits & Communication Systems (NCCS2020).
4. Kumari, R., Nigam, A., & Pushkar, S. (2021) "Classification of MRI images for detecting Alzheimer's disease using Convolutional Neural Network". Soft Computing, Optimization Theory and Applications (SCOTA 2021). Springer-Scopus International conference.
5. Debjani Mustafi, Vandana Bhattacharjee, Jyotasana Bharti (2020). Advancement of Image Captioning: A Comprehensive Survey. 6th International Conf. on Nano Electronics Circuits & Communication Systems,(In Press)
6. N. Verma, S. Sharma, K. Sinha, P. Paul, and Amritanjali, Selection on Traditional Cryptographic Algorithm for Real-Time Video Transmission and Storage: A Study, Lecture Notes in Electrical Engineering (Proceedings of NCCS 2018), pp. 229-238, 2020. DOI: 10.1007/978-981-15-2854-5_21
7. R. Chaddha, A. Kumar, K. Sinha, P. Paul, and Amritanjali, Selection on Various Traditional Image Encryption Techniques: A Study, Lecture Notes in Electrical Engineering (Proceedings of NCCS 2018), pp. 219-228, 2020. DOI: 10.1007/978-981-15-2854-5_20
8. Kumar Rajnish, Vandana Bhattacharjee and Vishnu Chandrabanshi, Applying Cognitive and Neural Network Approach over Control Flow Graph for Software Defect Prediction, In 2021 Thirteenth International Conference on Contemporary Computing (IC3-2021) (IC3'21), August 05-07, 2021, Noida, India, ACM, Newyork, USA, ISBN: 978-1-4503-8920-4/21/08, <https://doi.org/10.1145/3474124.3474127>.
9. Adla Sanober, Shamama Anwar (2020), "A concept of E – medical record storage and sharing based on blockchain technology", 5th International Conference on Internet of Things and Connected Technologies, ICIoTCT, 2020, 03 – 05 July, 2020 at IIT Patna, proceedings to be published in Advances in Intelligent Systems and Computing, Springer. [In Press]
10. Afrin Alam, Shamama Anwar (2020), "Detecting Acute Lymphoblastic Leukemia through Microscopic Blood Images using CNN", International Conference on Emerging Wireless Communication Technologies and Information Security, EWCIS 2020, 08-09 October, 2020 at Amity University, Ranchi, proceedings in Trends in Wireless Communication and Information Security. Lecture Notes in Electrical Engineering, vol 740. Springer, Singapore. https://doi.org/10.1007/978-981-33-6393-9_22 [ISBN: 978-981-33-6392-2 and 978-981-33-6393-9]
11. Satish Chander, P Vijaya, " Tunicate swarm-based black hole entropic fuzzy clustering for data clustering using COVID data", 2020 IEEE 17th Indian Council International Conference(INDICON), 10-13 Dec. 2020.
12. Neha Perna Tigga, Shruti Garg, Ranjita Pandey, A Multiclass Emotion Recognition using Hybrid CNN-LSTM Neural Network, presented in 1st International Conference on Nanoelectronics Machine Learning Internet of Things & Computing Systems (NMIC2021) organized by IETE & ISVE Ranchi Centre on 13-14th March 2021 at ARTTC, BSNL near Jumar River, Hazaribag Road, Ranchi.
13. Quazi Warisha Ahmed and Shruti Garg, "Understanding Information Security through Advanced Encryption Standard" presented in First Online International Conference on "Continuity, Consistency and Innovation in Applied Sciences and Humanities" (ICCIASH2020) organized by Department of Science and Humanities, St. Martin's Engineering College, Dhulapally, Secunderabad, T.S, India on 13th& 14th August 2020.
14. Shruti Gedam and Sanchita Paul, "Automatic Stress Detection Using Wearable Sensors and Machine Learning: A Review", 2020 11th International Conference on Computing, Communication and Networking Technologies (ICCCNT), date -July 1-3 2020, place- IIT Khargpur. [IEEE xplora].



15. Arjun Besra, Amir Junaid Ahmad, Sabina Priyadarshini, "missing person tracking system", 5th international conference on microelectronics computing and communication system, MCCA 2020.
16. Sabina Priyadarshini, Sony suman, Prediction of whether more Eastern dishes or Western dishes were sold in a period of time using Machine learning in the 6th International Conference on Nanoelectronics Circuits & Communication Systems (NCCS-2020) organized by IETE & ISVE at Advanced Regional Telecom Training Centre, BSNL, Hazaribag Road, Ranchi. Dec 2020

4.3 Book:

1. Prashant Pranav, Sandip Dutta and Soubhik Chakraborty, "Recent Trends in Cryptography and its Allied Areas: Securing Voice Communication using Music", RAR Publication, 2020.
2. Dr. Kunal Sinha and Dr. K.K. Senapati, Design and Development of Data Model for Cyber Threat, Lambert Academic Publishing, Republic of Moldova, ISBN-13-978-620-3-58221-5, ISBN-10-6203582212

4.3.1 Chapter(s) in Edited Book

1. Priya, A., & Sahana, S. K. (2020). Processor Scheduling in High-Performance Computing (HPC) Environment. In Holland, B. (Ed.), Emerging Trends and Impacts of the Internet of Things in Libraries (pp. 151-179). IGI Global. <http://doi:10.4018/978-1-7998-4742-7.ch009>
2. Priya, A., & Sahana, S. K. (2020). Multi-Processor Job Scheduling in High-Performance Computing (HPC) Systems. In Sharma, P., & Nair, R. (Ed.), FPGA Algorithms and Applications for the Internet of Things (pp. 168-203). IGI Global. <http://doi:10.4018/978-15225-9806-0.ch009>.
3. S. Chakravorty, Amritanjali, S. Dubey, Combating Improper Seed Selection and Cycles for Efficient Random Number Generation, A Treatise on Computational Mathematics, Bentham Science, Accepted for Publication in 2021.
4. D R Das Adhikari, S Tripathy, Dheeresh K Mallick, C Azad, Intelligent and Cloud Computing,

Springer, 31 October 2020, ISBN: 978-981-15-5971-6.

5. Kumar Rajnish, Vandana Bhattacharjee and Mansi Gupta, "A Novel Convolutional Neural Network Approach to Predict Software Defects", accepted in the book titled "Fundamentals and Methods of Machine and Deep Learning: Algorithms, Tools, and Applications", January 17, 2021, Index: Scopus and Web of Science.
6. Garg, S. (2021) Forecasting of Gold Prices Using Bayesian Regularization Neural Network. In: Nath V., Mandal J.K. (eds) Proceedings of International Conference on Nano electronics, Circuits and Communication Systems 2019 (pp. 147-153). Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. ISBN 978-981-15-74863 https://doi.org/10.1007/978-981-15-74863_15
7. Tigga N.P., Garg S. (2021) Predicting Type 2 Diabetes Using Logistic Regression. In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_42
8. Priya A., Garg S. (2020) A Comparison of Prediction Capabilities of Bayesian Regularization and Levenberg-Marquardt Training Algorithms for Cryptocurrencies. In: Satapathy S., Bhateja V., Mohanty J., Udgata S. (eds) Smart Intelligent Computing and Applications. Smart Innovation, Systems and Technologies, vol 159. Springer, Singapore.
9. Duggal P.S., Mukherjee I. (2021) Prediction and Classification of Semi-structured Medical Data Using Artificial Neural Fuzzy Inference System. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-74863_67.
10. Manorama Mohapatro, Itu Snigdha, (2020), 'Security in IoT', IoT Security Paradigms and Applications: Research and Practices, Pages 237, CRC Press, 2020.

**SECTION 5****AWARD / PATENT / COLLABORATIONS****5.1 Award / Recognition Bestowed on Faculties**

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	K. Sridhar Patnaik	NPTEL Motivated Learner Award	NPTEL	National	Dec,2020
2.	Debjani Mustafi	Best Paper Award in 6th International Conf. on Nano Electronics Circuits & Communication Systems, for presenting the paper "Advancement of Image Captioning: A Comprehensive Survey".	BSNL, Ranchi	International	December, 2020

5.2 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No.	Year
1.	Dr S P Singh	Single CavityScoop Mould With Stripper Plate Ejection	344773-001	2021
2.	Dr S P Singh	Utility Pen with USB Pen Drive and Led Light	346115-001	2021

SECTION 6**ACTIVITIES/ FACULTY MEMBERS / BOS /DAS****6.1 Departmental Students' Activities**

Sr. No.	Name of the Activity	Students' Co-ordinator	Faculty Co-ordinator	Date / Duration
1.	Competitive Programming Workshop (Basic, Intermediate and Advanced)	-	-	5th February, 2021 to 7th February, 2021
2.	Overnite Coding Challenge in association with Codechef	-	-	13th February, 2021
3.	Introduction to Deep Learning Workshop (Basic and Advanced)	-	-	15th Jan - 5.15 pm - 8.00pm 16th Jan - 9.00 am - 5.00pm 17th Jan - 9.00 am - 5.00pm



Sr. No.	Name of the Activity	Students' Co-ordinator	Faculty Co-ordinator	Date / Duration
4.	Coder of the Month	-	-	Every Month from August 2020 to April 2021
5.	CNC (Code n Conquer) – Coding Contests	-	-	18th October 2020, 22nd November 2020, 19th December 2020

6.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. (Mrs). V. Bhattacharjee	Professor	No
2.	Dr. Sandip Dutta	Professor	No
3.	Dr. D. K. Mallick	Associate Professor	No
4.	Dr. (Mrs.) Aruna Jain	Associate Professor	No
5.	Dr. Bhaskar Karn	Associate Professor	No
6.	Dr. V. K. Jha	Associate Professor	No
7.	Dr. K. S. Patnaik	Associate Professor	No
8.	Dr. K. Rajnish	Associate Professor	No
9.	Dr. Abhijit Mustafi	Associate Professor	No
10.	Dr. Sujana Kumar Saha	Associate Professor	No
11.	Dr. B. K. Sarkar	Assistant Professor	No
12.	Dr. I. Mukherjee	Assistant Professor	No
13.	Dr. (Mrs.) Itu Snigdha	Assistant Professor	No
14.	Prof. Ritesh Jha	Assistant Professor	No
15.	Prof. I. D. Ram	Assistant Professor	No
16.	Dr. Anup Kumar Keshri	Assistant Professor	No
17.	Dr. K. K. Senapati	Assistant Professor	No
18.	Dr. (Mrs.) Amritanjali	Assistant Professor	No
19.	Dr. (Mrs.) Sanchita Paul	Assistant Professor	No
20.	Dr. (Mrs.) Shruti Garg	Assistant Professor	No
21.	Dr. Sudip Kumar Sahana	Assistant Professor	No
22.	Prof. B. K. Chanda	Assistant Professor	No
23.	Dr. S. Pushkar	Assistant Professor	No
24.	Dr. S. Priyadarshini	Assistant Professor	No
25.	Dr. (Mrs.) Shamama Anwar	Assistant Professor	No



Sr. No.	Name	Designation	TEQIP Sponsored
26.	Prof. Kalyan Samanta	Assistant Professor	No
27.	Dr. S. Mohapatra	Assistant Professor	No
28.	Dr. (Mrs) Akriti Nigam	Assistant Professor	No
29.	Prof. Sumit Srivasatava	Assistant Professor	No
30.	Dr. Niraj Kumar Singh	Assistant Professor	No
31.	Dr. Pankaj Kumar Gupta	Assistant Professor	No
32.	Dr. Satya Prakash Singh	Assistant Professor	No
33.	Dr. Satish Kumar Chander	Assistant Professor	No
34.	Dr. Mrs. D. Mustafi	Associate Lecturer	No
35.	Mr. Amit Prakash	TCRF	No
36.	Kumar Gaurav	Assistant Professor	Yes
37.	Radhamadhab Dalai	Assistant Professor	Yes
38.	Alok Kumar	Assistant Professor	Yes
39.	Surya Narayan Mahapatra	Assistant Professor	Yes
40.	Arunangshu Pal	Assistant Professor	Yes
41.	Satya Prakash Patel	Assistant Professor	Yes
42.	Ashish Kumar	Assistant Professor	Yes
43.	Shishir Singh Chauhan	Assistant Professor	Yes
44.	Najima Begum	Assistant Professor	Yes
45.	Rashmi Rathi Upadhyay	Assistant Professor	Yes
46.	Mayur. V. Shrirame	Assistant Professor	Yes
47.	Rosamma K.S	Assistant Professor	Yes
48.	Deo Dutta Ishar	Assistant Professor	Yes
49.	Dhananjay Kumar	Assistant Professor	Yes
50.	Gaurav Kumar	Assistant Professor	Yes

6.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. (Prof.) Supratim Biswas	Adjunct Faculty	IIT Bombay
2.	Dr. (Prof.) R. K. Ghose	Adjunct Faculty	IIT Kharagpur

6.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. V. Bhattacherjee	Professor & HOD	Chairman
2.	Dr. S. Dutta	Professor	Internal Member
3.	Dr. K. S. Patnaik	Associate Professor	Internal Member



Sr. No.	Name of the Member	Designation	Role
4.	Dr. S. K. Saha	Associate Professor	Internal Member
5.	Dr. S. Puskar	Assistant Professor	Internal Member
6.	Dr. S. Anwar	Assistant Professor	Internal Member
7.	Faculty Member CSE, Nominee of Director BIT Jaipur	Nominee of Director	Internal Member
8.	Faculty Member CSE, Nominee of Director BIT Patna	Nominee of Director	Internal Member
9.	Faculty Member CSE, Nominee of Director BIT Deoghar	Nominee of Director	Internal Member
10.	Faculty Member CSE, Nominee of Director BIT Noida	Nominee of Director	Internal Member
11.	Faculty Member CSE, Nominee of Director BIT Lalpur	Nominee of Director	Internal Member
12.	Mr. Amitabh Bhattacharjee	Chief General Manager (IT Services)	External Member (Mecon, Ranchi)
13.	Dr. Annapa B	Professor	External Member NITK Surathkal
14.	Dr. Asif Ekba1	Associate Professor	External Member IIT Patna
15.	Mr. Suparna Kanti Das	Scientist	External Member (DRDO Kolkata)
16.	Mr. D.S. Verma	Scientist	External Member (JAPIT Ranchi)
17.	Dr. Ujjwal Maulik	Professor	External Member (Jadavpur University)
18.	Dr. Punam Bedi	Professor	External Member (University of Delhi)

SECTION 7

OTHER INFORMATION

7.1 Publication by students,

Publications in Journals :

- Agarwal, P., Singh, S. P., & Shrivastava, P. (2021). A Safe and Resilient Cryptographic System for Dynamic Cloud Groups with Secure Data Sharing and Efficient User Revocation. Turkish Journal of Computer and Mathematics Education (TURCOMAT), 12(3), 5164-5175. <https://doi.org/10.17762/turcomat.v12i3.2144>. NON-PAID SCOPUS.
- Sonia Saini, S P Singh, Ruchi Agarwal(2021), "Healthcare analytic with R and MongoDB Using Social media", International Journal of Advance Intelligence Paradigm 2021. DOI 10.1504/IJAIP.10021025. ISSN, 17550386, 17550394. NON-PAID SCOPUS. <https://www.inderscienceonline.com > IJAIP.2021.113788>.
- Priya and S. K. Sahana, 2020, "Multiprocessor Scheduling based on Evolutionary Technique for Solving Permutation Flow Shop Problem," in



- IEEE Access, ISSN: 2169-3536, DOI 10.1109/ACCESS.2020.2973575. (SCIE) (IF: 3.745).
4. Priya and S. K. Sahana, 2020, A Deterministic Flowshop Scheduling Problem to minimizing the Makespan using PA-ACO, International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-9 Issue-3, pp 1555-1560. (SCOPUS)
 5. Dholey, M.K., Sinha, D., Mukherjee, S., Das, A.K. and Sahana, S.K. "A Novel Broadcast Network Design for Routing in Mobile Ad-Hoc Network," in IEEE Access, vol. 8, pp. 188269188283, 2020, doi: 10.1109/ACCESS.2020.3030802. (SCIE, IF 3.745)
 6. Sweta Mehta, K.S Patnaik, Improved Prediction of Software Defects Using Ensemble Machine Learning Techniques" Neural Computing and Applications. Springer, <https://doi.org/10.1007/s00521-021-05811-3>, March, 2021
 7. Kumari, R., Nigam, A. & Pushkar, S. (2020) Machine learning technique for early detection of Alzheimer's disease. Microsyst Technol. <https://doi.org/10.1007/s00542-020-04888-5> [SCI]
 8. Patil, D., Nigam, A., Mohapatra, S., (2020), "Automation of geometric feature computation through image processing approach for single-layer laser deposition process", International Journal of Computer Integrated Manufacturing, 10.1080/0951192X.2020.1815843 [SCIE]
 9. Nigam, A., Gupta, A., Singh, Singh R. K., (2020), "Novel image analysis based method for residence time distribution analysis in steel making tundish", Transactions of the Indian Institute of Metals, Vol 74, Issue 2, pages 243-254 10.1007/s12666-020-02142-0 [SCIE].
 10. Kumari, R., Nigam, A., & Pushkar, S. (2021) "Multimodality based Diagnosis of Alzheimer's Disease using Machine Learning Technique on Volumetric and Cognitive Assessments". Microsyst Technol. [SCI] Accepted for publication.
 11. Rakesh Raja, Indrajit Mukherjee, and Bikash Kanti Sarkar (2020): A Systematic Review of Healthcare Big Data. -Scientific Programming (Hindawi), Volume 2020, Article ID 5471849, 15 pages (<https://doi.org/10.1155/2020/5471849>)
 12. Gupta and B.K. Sarkar (2020): Biswapped-Torus Network: A New Efficient NodeSymmetrical Optoelectronic Network. -Natl. Acad. Sci. Lett. <https://doi.org/10.1007/s40009020-00942-y>
 13. Rakesh Raja, Indrajit Mukherjee, and Bikash Kanti Sarkar (2021): A Machine Learning Based Prediction Model for Preterm Birth in Rural India. -Journal of Healthcare Engineering (Hindawi) Volume 2021, Article ID 6665573, 11 pages (<https://doi.org/10.1155/2021/6665573>).
 14. M. Gupta, K. Rajnish and V. Bhattacharjee, Impact of Parameter Tuning for Optimizing Deep Neural Network Models for Predicting Software Faults, Scientific Programming 2021(3):1-17, June 2021[SCIE Indexed].
 15. Wahi, S. Chakraverty and V. Bhattacharjee, A Trust-Based Secure AODV Routing Scheme for MANET, International Journal of Ad Hoc and Ubiquitous Computing, Accepted, April 2021[SCIE Indexed].
 16. U. Gupta, P. S. Bishnu and V. Bhattacharjee, Clustering on Ranked Data for Campaign Selection, 2020, IEEE Access [SCIE Indexed].
 17. P. S. Bishnu, U. Gupta and V. Bhattacharjee, Outlier Detection in Wireless Sensor Networks Based on Neighbourhood, Wireless Personal Communications, August 2020, <https://doi.org/10.1007/s11277-020-07722-3> [SCIE Indexed].
 18. Prashant Pranav, Soubhik Chakraborty, and Sandip Dutta, A New Cipher System using Seminal Composition in Indian Raga (SCIE Indexed, Impact Factor- 2.784), Soft Comput, Springer, Volume 24, pp- 1529–1537 (2020)
 19. Ankur Priyadarshi and Sujana Kumar Saha. (2021 – in press). The First Named Entity Recognizer in Maithili: Resource Creation and System Development. Journal of Intelligent and Fuzzy Systems. [SCIE 1.851 as on JCR 2020]
 20. Ankur Priyadarshi, Sujana Kumar Saha. (2020) Towards the First Maithili Part of Speech Tagger: Resource Creation and System Development. Computer Speech & Language Elsevier, Vol. 62 (July 2020) 101054. July 2020. ISSN: 0885-2308. DOI: <https://doi.org/10.1016/j.csl.2019.101054> [IF 1.899 – Q3]
 21. Sujana Kumar Saha. 2021. Towards Development of a System for Automatic Assessment of a Question Paper. Smart Learning Environments (Springer, SCOPUS). 8: 4(2021). <https://doi.org/10.1186/s40561-021-00148-9>.



22. Nandini Kumari, Shamama Anwar, Vandana Bhattacharjee (2021), "DCGAN based pretrained model for Image reconstruction using Image Net", IEEE 7th International Conference on Biosignals, Image and Instrumentation, pp 1-6, [ISBN: 978-0-7381-4471-9/21]
23. Utpal K. Mukhopadhyay, Richa N. K. Sharma, Shamama Anwar, Atmadeep Dutta (2021), "Earthquakes and Thermal Anomalies in a Remote Sensing Perspective", in Machine Learning and Big Data Analytics Paradigms: Analysis, Applications and Challenges (pp. 185-217). Springer, Cham. https://doi.org/10.1007/978-3-030-59338-4_11 [ISBN: 978-3-030-59337-7 and 978-3-030-59338-4]
24. Nandini Kumari, Shamama Anwar, Vandana Bhattacharjee (2021), "A Combinational Deep Learning Approach to Visually Evoked EEG based Image Classification", accepted for publication in Fundamentals and Methods of Machine and Deep Learning: Algorithms, Tools, and Applications, Wiley-Scrivener. [In Press].
25. Nandini Kumari, Shamama Anwar, Vandana Bhattacharjee (2021), "Convolutional Neural Network based visually evoked EEG classification model on MindBigData", In: Pan I., Mukherjee A., Piuri V. (eds) Proceedings of Research and Applications in Artificial Intelligence. Advances in Intelligent Systems and Computing, vol 1355. Springer, Singapore. https://doi.org/10.1007/978-981-16-1543-6_22
26. Nandini Kumari, Shamama Anwar, and Vandana Bhattacharjee (2020). "Correlation and Relief Attribute Rank-based Feature Selection Methods for Detection of Alcoholic Disorder Using Electroencephalogram Signals." IETE Journal of Research (2020): 1-13. ISSN: Print ISSN: 0377-2063 Online ISSN: 0974-780X, doi: <https://doi.org/10.1080/03772063.2020.1780166> [SCIE, IF: 1.125]
27. Shamama Anwar and G. Rajamohan (2020). "Improved Image Enhancement Algorithms based on the Switching Median Filtering Technique", Arabian Journal for Science and Engineering, Springer, pp.1-12 ISSN: 2191-4281, Online ISSN: 2193-567X <https://doi.org/10.1007/s13369-020-04983-9> [SCIE, IF: 2.334]
28. Shamama Anwar and Afrin Alam (2020). "A Convolutional Neural Network based learning approach to Acute Lymphoblastic Leukaemia detection with automated feature extraction", in Medical & Biological Engineering & Computing 58, 3113-3121 <https://doi.org/10.1007/s11517-020-02282-x>, ISSN: 1741-0444, 0140-0118 [SCI, IF: 2.022]
29. Shruti Garg, Ashwani Garg, "Comparison of Machine learning Algorithms for Content Based Personality Resolution of Tweets" to be published in Social Science and Humanities Open, 4(1), 2021, Elsevier, ISSN: 2590-2911.
30. Shruti Garg, Soumyajit Behera, Rahul Kumar Patro, Ashwani Garg, "Deep Neural Network for Electroencephalogram based Emotion Recognition", accepted to publish in the IOP : Materials Science & Engineering (MSE). (Scopus)
31. Quazi Warisha Ahmed, Shruti Garg, "Energetic Data Security Management Scheme using Hybrid Encryption Algorithm over Cloud Environment." Turkish Journal of Computer and Mathematics Education (TURCOMAT) Vol.12, no. 6, pp. 201-208, April 2021. (Scopus)
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33. Deepika Bhanudas Patil, Akriti Nigam and Subrajeet Mohapatra, Automation of Geometric Feature Computation through Image Processing Approach for Single-Layer Laser Deposition Process, International Journal of Computer Integrated Manufacturing, Taylor & Francis, September, 33(9), 895-910, September, 2020 [SCI: JCR 2018 Impact Factor 2.09]
34. Alpana, Satish Chand, Subrajeet Mohapatra and Vivek Mishra, Automated Char Classification using Image Analysis and Artificial Intelligence, International Journal of Oil, Gas and Coal Technology, Inder Science, 2020 [SCI : In Press]
35. Rakesh Raja, Indrajit Mukherjee, Bikash Kanti Sarkar, "A Systematic Review of Healthcare Big Data", Scientific Programming, vol. 2020, Article Id 5471849, 15 pages, 2020. <https://doi.org/10.1155/2020/5471849>.
36. Mukherjee, R., Kundu, A., Mukherjee, I. et al. IoT-cloud based healthcare model for COVID19 detection: an enhanced k-Nearest Neighbour classifier based approach. Computing (2021).



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 38. Mahato, S., Paul, Sanchita, "Classification of Depression Patients and Normal Subjects Based on Electroencephalogram (EEG) Signal Using Alpha Power and Theta Asymmetry", *Journal Medical System*, Springer, 44, 1-28 (2020). (DOI: <https://doi.org/10.1007/s10916019-1486-z>) [SCIE, IF-3.058]
 39. Shalini Mahato, Nishant Goyal, Daya Ram, Sanchita Paul, "Detection of Depression and Scaling of Severity Using Six Channel EEG Data", *Journal of Medical Systems*, Springer, Volume 44 (118), Pages 1-12, 2020. (DOI: 10.1007/s10916-020-01573-y). [SCIE, IF-3.058]
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 41. Ravi Prakash and Shashank Pushkar, An Approach Using Heuristic Pheromones-Based ACO Modeling for Green Vehicle Routing Optimization, *International Journal of Ad Hoc and Ubiquitous Computing*(2021)(In Press) [[SCIE indexed]
 42. Kumari, R., Nigam, A. & Pushkar, S. Machine learning technique for early detection of Alzheimer's disease. *Microsyst Technol* 26, 3935–3944 (2020). <https://doi.org/10.1007/s00542-020-04888-5>[[SCIE indexed].
 43. P P Dash, S K Mishra, Kishore Kumar Senapati, G Panda "Interactive Teaching Learning Based Optimization technique for multiple objects Tracking", *Multimedia Tools and Applications*, Volume 80, Issue 3, November 2020, <https://doi.org/10.1007/s11042-02010057-7>[SCI]
- Publications in Proceedings:**
1. Gupta V., Sahana S.K. (2020) Nudge-Based Hybrid Intelligent System for Influencing Buying Decision. In: Sahana S., Bhattacharjee V. (eds) *Advances in Computational Intelligence*. *Advances in Intelligent Systems and Computing*, vol 988. Springer, Singapore, Print ISBN: 978-981-13-8221-5, Online ISBN: 978-981-13-8222-2, DOI: https://doi.org/10.1007/978-981-13-8222-2_14, https://link.springer.com/chapter/10.1007/978-981-13-8222-2_14
 2. Priyadarshi N., Bhoi A.K., Sahana S.K., Mallick P.K., Chakrabarti P. (2020) Performance Enhancement Using Novel Soft Computing AFLC Approach for PV Power System. In: Mallick P., Balas V., Bhoi A., Chae GS. (eds) *Cognitive Informatics and Soft Computing*. *Advances in Intelligent Systems and Computing*, vol 1040. Springer, Singapore, pp 439447 ISBN: 978-981-15-1450-0, DOI: https://doi.org/10.1007/978-981-15-1451-7_4
 3. Patil, D. B, Nigam, A., & Mohapatra, S. (2020) "Investigation to identify most appropriate edge detection technique on a layer of laser deposition process" in *Proceedings of 6th International Conference on Nano-electronics, Circuits & Communication Systems (NCCS2020)*.
 4. Kumari, R., Nigam, A., & Pushkar, S. (2021) "Classification of MRI images for detecting Alzheimer's disease using Convolutional Neural Network". *Soft Computing, Optimization Theory and Applications (SCOTA 2021)*. Springer-Scopus International conference.
 5. Debjani Mustafi, Vandana Bhattacharjee, Jyotasana Bharti (2020). *Advancement of Image Captioning: A Comprehensive Survey*. 6th International Conf. on Nano Electronics Circuits & Communication Systems, (In Press)
 6. N. Verma, S. Sharma, K. Sinha, P. Paul, and Amritanjali, Selection on Traditional Cryptographic Algorithm for Real-Time Video Transmission and Storage: A Study, *Lecture Notes in Electrical Engineering (Proceedings of NCCS 2018)*, pp. 229–238, 2020. DOI: 10.1007/978-981-15-2854-5_21
 7. R. Chaddha, A. Kumar, K. Sinha, P. Paul, and Amritanjali, Selection on Various Traditional Image Encryption Techniques: A Study, *Lecture Notes in Electrical Engineering (Proceedings of NCCS 2018)*, pp. 219–228, 2020. DOI: 10.1007/978-981-15-2854-5_20
 8. Kumar Rajnish, Vandana Bhattacharjee and Vishnu Chandrabanshi, Applying Cognitive and Neural Network Approach over Control Flow Graph for Software Defect Prediction, In *2021 Thirteenth International Conference on Contemporary Computing (IC3-2021) (IC3'21)*,



August 05-07, 2021, Noida, India, ACM, Newyork, USA, ISBN: 978-1-4503-8920-4/21/08, <https://doi.org/10.1145/3474124.3474127>.

9. Adla Sanobar, Shamama Anwar (2020), "A concept of E – medical record storage and sharing based on blockchain technology", 5th International Conference on Internet of Things and Connected Technologies, ICIoTCT, 2020, 03 – 05 July, 2020 at IIT Patna, proceedings to be published in Advances in Intelligent Systems and Computing, Springer. [In Press]
10. Afrin Alam, Shamama Anwar (2020), "Detecting Acute Lymphoblastic Leukemia through Microscopic Blood Images using CNN", International Conference on Emerging Wireless Communication Technologies and Information Security, EWCIS 2020, 08-09 October, 2020 at Amity University, Ranchi, proceedings in Trends in Wireless Communication and Information Security. Lecture Notes in Electrical Engineering, vol 740. Springer, Singapore. https://doi.org/10.1007/978-981-33-6393-9_22 [ISBN: 978-981-33-6392-2 and 978-981-33-6393-9]
11. Satish Chander, P Vijaya, "Tunicate swarm-based black hole entropic fuzzy clustering for data clustering using COVID data", 2020 IEEE 17th Indian Council International Conference(INDICON), 10-13 Dec. 2020.
12. Neha Prerna Tigga, Shruti Garg, Ranjita Pandey, A Multiclass Emotion Recognition using Hybrid CNN-LSTM Neural Network, presented in 1st International Conference on Nanoelectronics Machine Learning Internet of Things & Computing Systems (NMIC2021) organized by IETE & ISVE Ranchi Centre on 13-14th March 2021 at ARTTC, BSNL near Jumar River, Hazaribag Road, Ranchi.
13. Quazi Warisha Ahmed and Shruti Garg, "Understanding Information Security through Advanced Encryption Standard" presented in First Online International Conference on "Continuity, Consistency and Innovation in Applied Sciences and Humanities" (ICCIASH2020) organized by Department of Science and Humanities, St. Martin's Engineering College, Dhulapally, Secunderabad, T.S, India on 13th& 14th August 2020.
14. Shruti Gedam and Sanchita Paul, "Automatic Stress Detection Using Wearable Sensors and Machine Learning: A Review", 2020 11th International Conference on Computing, Communication and Networking Technologies (ICCCNT), date -July 1-3 2020, place- IIT Khargpur. [IEEE xplora].
15. Arjun Besra, Amir Junaid Ahmad, Sabina Priyadarshini, "missing person tracking system", 5th international conference on microelectronics computing and communication system, MCCS 2020.
16. Sabina Priyadarshini, Sony suman, Prediction of whether more Eastern dishes or Western dishes were sold in a period of time using Machine learning in the 6th International Conference on Nanoelectronics Circuits & Communication Systems (NCCS-2020) organized by IETE & ISVE at Advanced Regional Telecom Training Centre, BSNL, Hazaribag Road, Ranchi. Dec 2020

7.2 Achievements of Students :

Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
1.	Kevin Mathew T, Divyanshu Pandey, Aryan Dosaj	11th ICPC Kharagpur Regional, 82nd ICPC Online Round	ICPC (International Collegiate Programming Contest), ICPC Kharagpur Regional.	2020
2.	Abhilasha Sinha	Top 5 finalist Wining Team	MHRD, gov of India, NIT Allahabad.	2020



7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture (Insert Picture here. Further send the JPEG file along with the email.)
1.	Professor Kaushik Pal, Department of CE IIT, Roorkee	12/12/2020	
2.	Mr. Subrata Mohant a Cyber Security Expert PWC, INDIA	12/12/2020	
3.	Dr. A S Murty Deputy Director Cyber Expert, C- DAC, Hyderabad India	13/12/2020	
4.	Professor Dharmendra Singh Department of CSE Prof. & Head, IIT, Roorkee	13/12/2020	
5.	Mr. Abhishek Kumar Cyber Security Exper, UBER, South Asia	13/12/2020	
6.	Dr. S.K. Nagarajan Associate Professor, Annamalai University	11/12/2020	

7.4 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Ms. Pratysha Pratik 2015-2018 Walmart Labs, India	She is working in the field of Enterprise application software Development.
2.	Mr. Shibu Ghose, 2017-2020, Jr. Software Engineer, Cognizant Technology Solution	He is working in the field CDE Full Stack Developer
3.	Mr. Kumar Gaurav, 2016-2019 Tech Mahindra.	He is working in the field of Data Science and Analytics
4.	Ms. Anne Kedia, 2017-2020, Deloitte USI, Strategy and Analyst (AI and Data Operations)	She is working in the field of Oracle Hyperion Suite

7.5 Infrastructure Development

Sl. No.	Room Description	Faculty Name	Room Area	Shared/ Exclusive	Capacity	Equipped with
1.	1FG1	Dr. B.K. Sarkar	13'4"x 9'4"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
2.	2FG2	Dr. S. Paul	9'7"x 9'	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.



वार्षिक प्रतिवेदन 2020-2021

Sl. No.	Room Description	Faculty Name	Room Area	Shared/ Exclusive	Capacity	Equipped with
3.	2FG3	Dr. G. Sahoo	10' x 13'7"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
4.	3FG4	Dr. B.Karn	10' x 13'7"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
5.	4FG5	Dr. A. Jain	10' x 13'7"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
6.	5FG6	(a). Prof. B.K. Chanda (b). Prof. R.Jha	15'x12'	Shared	2	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
7.	FG7	Dr. A. Nigam	8'9" x 9'9"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
8.	6FG8	Dr. K.S. Patnaik	9'3" x 14'9"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
9.	7FG9	Dr. K.K. Senapati	9'3" x 14'9"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
10.	8FG10	Dr. D Mustafi	8'10"x11' 5"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
11.	FG11	(a). Dr. S. Garg (b). Dr. S.Anwar	14'9"x10' 10'	Shared	2	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
12.	1FF1 0	Dr. S.Dutta	9'3' x 14'9"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
13.	1FF2 1	Dr. V. Bhattacharjee	9'3' x 14'9"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
14.	1FF3 2	Dr. A. Mustafi	9'3' x 14'9"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.



Sl. No.	Room Description	Faculty Name	Room Area	Shared/ Exclusive	Capacity	Equipped with
15.	1FF4 3	Dr. Itu Snigdh	9'3"x 9'	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
16.	FF5	Dr. S.K. Saha	13'4'x9'. 4'	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
17.	1FS1 4	(a). Prof. K. Samanta (b). Prof. S. Srivastava	13'4"x10'	Shared	2	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
18.	FS2	Dr. S.K. Sahana	9'7" x 8'8"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
19.	1FS3 5	Dr. D.K. 11Mallick	9.3" x 13'5"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
20.	1FS4 6	Dr. V.K. Jha	9.3" x 13'5"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
21.	1FS5 7	Dr. I. Mukharjee	9.3" x 13'5"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
22.	1FS6 8	Dr.K.Rajnish	9.3" x 13'5"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
23.	1FS7 9	(a) Dr. N.K. Singh (b) Prof. Amit Prakash	12' x 10'3"	Shared	2	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
24.	2FS8 0	Dr. S. Mohapatra	12' x 10'3"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
25.	2FS9 1	Dr. S. Priyadarsini	11'5" x 10'3"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
26.	2FS10 2	Dr. S. Pushkar	8'1" x 9'3"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.



Sl. No.	Room Description	Faculty Name	Room Area	Shared/ Exclusive	Capacity	Equipped with
27.	2FS11 3	Dr. I.D. Ram	8' x 9'	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
28.	2FS12 4	Dr. A.K. Keshri	8'8" x 9'	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
29.	2FS13 5	Dr. Amritanjali	9'3" x 9'	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.

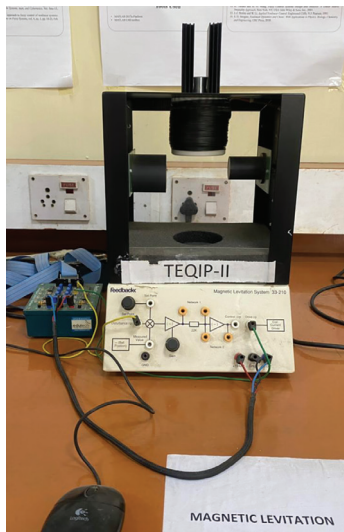
8. Special Covid Initiatives, if any:

- Smooth conducting of online classes by faculty members assisted by lab personnel in sessional courses for achieving quality teaching learning process.
- Providing mentorship/guidance to students affected by COVID-19 by taking up their case sympathetically to the concerned authorities/ departments.
- Placing sanitizers at important locations and ensuring distancing and wearing of mask.

Department of Electrical and Electronics Engineering

SECTION 1

DEPARTMENTAL PROFILE



1 About the Department :

The Department of Electrical and Electronics offers B.Tech. in Electrical and Electronics Engineering, M. Tech. in Electrical Engineering with three different specializations, viz., Power System, Control System and Power Electronics and Ph.D. in Electrical Engineering. CBCS Course Structure has been implemented from MO/2018 offering B.Tech. and M.Tech. in EEE. All the UG and PG (Power Electronics) programmes are accredited by NBA. Thirty six research scholars are currently pursuing their doctoral degree on different concepts related to Micro grid, Reliability, Hybrid Electric Vehicles, Multi-level Inverters, Robotics, Fault Tolerant Multi Phase Drives, Image Processing, Nonlinear control, Sensors, Power System Voltage Stability, System Identifications, Applications of Soft Computing Techniques etc. Department of EEE is utilizing the grants received from DST (FIST), UGC (SAP), MODROB, TEQIP and Institute grant to strengthen the research and postgraduate lab facility. The department is continuously working in the direction of elevating the standard of 13 laboratories for research and teaching purpose. Many major equipments, such as Twin Rotor MIMO System, Coupled Tank, Magnetic Levitation System, DC Servo fundamental trainer kit,

Temperature, Pressure, Level and flow controller (both manual and PLC based), ACB, SVC, Relay Testing System, Generator Protection System, several numbers of DSO, Programmable Function Generator, Harmonic Analyser, NI Power Measurement System, Variable DC Power Supply, LCQ Meter, different ratings of DC and AC Motors, M-G Set, BLDC Motor, Single Phase And Three Phase Transformers, NI Data Acquisition Card CRIO, LabVIEW, 5kW Solar Photovoltaic System, Smart Energy Meter and NAO Humanoid Robot, Machine Fault Simulator, Typhoon Hil, Micro Lab box, DSO 1000 MHZ, DSPACE Kit, Data Acquisition system Integrated with Sensor, 3 Phase Multilevel Inverter based Induction Motor Drive, NI ELVIS Rotary Inverted Pendulum, ETAP Software are available in the key laboratories like Control System, Power System, Power Electronics, Measurement and Process Control and Machines, Power Electronic, Smart Grid, Measurement, and Drive labs. In the financial year 2019-20, Department has procured Rotary Inverted Pendulum and Coupled Tank System from Quanser for Control Lab, DSO in Power System Lab, AC/DC current probe, DSPACE ACE Kit, NI Data Acquisition Card for Drives Lab and DC Motor + AC Three Phase Alternator for Smart Grid Lab.



SECTION 2

RESEARCH PROJECTS

2. Sponsored Projects (Research and Consultancy)

a. Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (in Lacs)	Duration of the Project
1	Design of IoT Based Energy Management System Using Cloud Computing Platform	Dr. Aftab Alam	SERB-DST	01 May 2019	38.70	3 Years (2019-2022)
2	Analysis, Design and Verification of coordinated control for laboratory prototype hybrid AC-DC microgrid with IoT based cloud computation platform	Dr. T. Ghose	RPS-AICTE	01 November 2019	10.50	3 Years (2019-2022)
3	SMG-BIT (SKYMAP GLOBAL sponsored R& D project- Birla Institute of Technology), Agriculture Research Project.	Dr. S. K. Mishra et al. (Co-PI)	SKY Map Global	22 February 2019	7.5	1.5 Years (2019-2020)

SECTION 3

SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1	ATAL FDP on "Trends in Measurement and Control for System Automation"	Dr. Vijaya Laxmi	AICTE, New Delhi	28.06.21-02.07.21

3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Vijaya Laxmi	TEQIP-III sponsored e-training Faculty Development Programme (FDP) on "Machine Learning Techniques for Cross-domain Applications" organized by IIT Indore	TEQIP-III	IIT, Indore	Online	21.12.20-26.12.20
2.	Dr. Vijaya Laxmi	Online Lecture on "Preparations for SAR and NBA" by Prof. P.V. Vavia, ICT, Mumbai at 2:00 pm	ICT, Mumbai		Online	10.02.2021
3.	Dr. Vijaya Laxmi	Online Lecture on "Importance of Blooms Taxonomy Outcome Based Education" by Dr. Snehasis Chakraborty, ICT, Mumbai at 3:00 pm.			Online	10.02.21



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
4.	Dr. Vijaya Laxmi	AICTE-Workshop on Examination Reforms- Online		AICTE	Online	27.02.21-01.03.21
5.	Dr. Vijaya Laxmi	AICTE-ISTE sponsored refresher program on Use of ICT in Engineering Education organized by MSIT	AICTE, ISTE	MSIT		07.04.21-13.04.21
6.	Dr. Vijaya Laxmi	AICTE-ISTE workshop on Deep Learning at BIT Mesra	AICTE, ISTE	BIT, Mesra	Online	29.04.21-03.05.21
7.	Dr. Vijaya Laxmi	Universal Human Values by AICTE	AICTE	AICTE	Online	07.06.21-11.06.21
8	Dr. P.K Upadhyay	AICTE-ISTE workshop on Deep Learning at BIT Mesra	AICTE, ISTE	BIT, Mesra	Online	14.12.20-19.12.20
9	Dr. P.K Upadhyay	TEQIP-III sponsored e-training Faculty Development Programme (FDP) on "Machine Learning Techniques for Cross-domain Applications" organized by IIT Indore	TEQIP-III	IIT, Indore	Online	21.12.20-26.12.20
10.	Prem Prakash	ATAL FDP on "Trends in Measurement and Control for System Automation"		BIT, Mesra	Online	28.06.21-02.07.21
11.	Prem Prakash	Power Electronics Challenges and Solutions for the Integration of Electric Vehicle Charging network		IIT BHU	Online	24.03.21-26.03.21
12.	Prem Prakash	Seminar on Applications of Statistics in Sciences & Engineering (ASSE-2021)		BIT, Mesra	Online	05.03.21-06.03.21
13.	Dr. Debomita Ghosh	ATAL FDP-Green Building and Built Environment		AICTE	Online	31.05.21-04.06.21
14.	Dr. Debomita Ghosh	ATAL FDP- Outcome based education and Digital Pedagogy - focusing on outcome based education, accreditation requirements and its compliance using digital pedagogy in professional courses		AICTE	Online	26.06.21-03.06.21
15.	Dr. T. Ghose	ATAL-FDP-Control Systems and Sensor Technology		AICTE	online	21.09.20-25.09.20
16	Dr. T. Ghose	ATAL-FDP-Blockchain		AICTE	online	07.09.20-11.09.20



SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

1. Prabhat Kumar Upadhyay, Chetna Nagpal (2020). Wavelet Based Performance Analysis of SVM and RBF Kernel for Classifying Stress Conditions of Sleep EEG. Romanian Journal of Information Science and Technology, Romanian Academy, Vol 23, No 03, pp. 292-310. (SCIE indexed)
2. Prabhat Kumar Upadhyay, Chetna Nagpal (2020). PCA aided FCM Identifies Stressful Events of Sleep EEG under Hot Environment. IETE Journal of Research, DOI: 10.1080/03772063.2020.1782273. pp. 1-14. (SCIE indexed)
3. Prabhat Kumar Upadhyay, Chetna Nagpal (2020). Time-Frequency Analysis and Fuzzy Based Detection of Heat Stressed Sleep EEG Spectra. Medical & Biological Engineering & Computing. DOI:10.1007/s11517-020-02278-7 pp. 23-39. (SCIE indexed)
4. Prabhat Kumar Upadhyay, Pandita, Archana, and Nisheeth Joshi (Nov. 2020). Fuzzy Logic Based Detection of SLA Violation in Cloud Computing-A Predictive Approach, International Journal of Next-Generation Computing, Vol. 11 Issue 3, pp 250-262. (Scopus indexed)
5. Subham Dey, Dipak Kumar Giri, Kumar Gaurav, Vijaya Laxmi. Robust Non-singular Terminal Sliding Mode Attitude Control of Satellites, Journal of Aerospace Engineering 34(1), (SCIE, Web of Science) [https://doi.org/10.1061/\(ASCE\)AS.1943-5525.0001224](https://doi.org/10.1061/(ASCE)AS.1943-5525.0001224).
6. Kumar Nikhil, Vijaya Laxmi, Dinesh Chandra(2020). Designing Controller Using Stable Krylov Subspace Method. Psychology and Education. 57(9): 5046-5053. DOI: <https://doi.org/10.17762/pae.v57i9.2001>.
7. Prabhat Tripathi, Parashuram Thakura, Vijaya Laxmi, Ritesh Keshri. Stand-alone PV Water Pumping System Based on High-Gain Resonant Inverter Fed Induction Motor Serving Two-Head for Permanent Water Supply, International Journal of Circuit Theory and Applications. <https://doi.org/10.1002/cta.2983>.
8. Niteesha Kumari, S. Shiva Kumar and V. Laxmi. Design of an efficient bipolar converter with fast MPPT algorithm for DC nanogrid application, International Journal of Circuit Theory and Applications. <https://doi.org/10.1002/cta.3020>.
9. Piyush K. Ojha, Parashuram Thakura and Sarode S. Kumar (2021). Generalized Transfer Function-Based Modelling, Designing and Analysis of a Single-Stage Boost Inverter International journal of Power and Energy, ACTAPress. Vol. 41.
10. Kumar, S., Chakraborty, S. Design (2020). Validation, and Comparison of UDE-based Pitch-axis Control of Helicopter with existing Conventional and Non-conventional Controllers. Arab J Sci Eng . <https://doi.org/10.1007/s13369-020-04775-1>.
11. Kumar, Manish, Sudhansu Kumar Mishra, Justin Joseph, Sunil Kumar Jangir, and Dinesh Goyal(2021). Adaptive comprehensive particle swarm optimisation-based functional-link neural network filter model for denoising ultrasound images. IET Image Processing. vol 15 [Online]. Available: 10.1049/ipr2.12100, Indexing: SCIE.
12. Mishra, A., Sahu, S.S., Sharma, R. and Mishra, S.K. (2021). Denoising of Electrocardiogram Signal Using S-Transform Based Time-Frequency Filtering Approach. Arabian Journal for Science and Engineering, 1 [Online]. Available: 10.1007/s13369-021-05333-z, Indexing: SCIE.
13. Dash, Prajna Parimita, Sudhansu Kumar Mishra, Kishore Kumar Senapati, and Ganapati Panda(2021). Interactive teaching learning based optimization technique for multiple object tracking. Multimedia Tools and Applications, vol.7 [Online]. Available: 10.1007/s11042-020-10057-7, Indexing: SCIE.
14. Sahoo, Amit Kumar, Sudhansu Kumar Mishra, Babita Majhi, Ganapati Panda, and Suresh Chandra Satapathy(2021). Real-Time Identification of Fuzzy PID-Controlled Maglev System using TLBO-Based Functional Link Artificial Neural Network. Arabian Journal for Science and Engineering. vol 46, [Online]. Available: 10.1007/s13369-020-05292-x, Indexing: SCIE.
15. Acharya, D. S., S. K. Swain, and S. K. Mishra (2020). Real-Time Implementation of a Stable 2 DOF PID Controller for Unstable Second-Order Magnetic Levitation System with Time Delay. Arabian Journal for Science and Engineering. vol 9[Online]. Available: 10.1007/s13369-020-



- 04425-6, Indexing: SCIE.
16. Kumar, Manish, Sudhansu Kumar Mishra, Dilip Kumar Choubey, Sunil Kumar Jangir, and Dinesh Goyal(2021). Multichannel heuristic learning based single layer neural network filter for mixed noise suppression from color Doppler ultrasound images. Journal of Real-Time Image Processing. [Online]. Available: 10.1007/s11554-020-01061-z, Indexing: SCIE.
 17. Vikash Kumar and Sudhansu Kumar Mishra (2021). A Comparative performance evaluation of a set of swarm intelligence based optimization algorithms for economic operation with FACTS devices in Power system. Journal of Scientific and Industrial Research (JSIR).vol.80, Indexing: SCIE.
 18. Deep Shekhar Acharya, Sudhansu Kumar Mishra, and Ganapati Panda (2021). A Comparative Performance Assessment of Evolutionary Fractional Order PID Controllers for Magnetic Levitation Plant with Time Delay. Journal of Scientific and Industrial Research (JSIR), vol.80, 2021, Indexing: SCIE.
 19. Sarat Kumar Mishra and Sudhansu Kumar Mishra(2021). Solution of the combined environmental economic dispatch problem using multi-objective cat swarm optimization. International Journal on Electrical Engineering and Informatics. Accepted. Indexing: Scopus.
 20. Acharya, Deep Shekhar, and Sudhansu Kumar Mishra(2020). A multi-agent based symbiotic organisms search algorithm for tuning fractional order PID controller Measurement. vol 155 [Online]. Available: 10.1016/j.measurement.2020.107559, Indexing: SCIE.
 21. Mishra, Sudhansu Kumar, Amit Kumar Sahoo, Rudra Narayan Pandey, Prajna Parimita Dash (2020). Identification of Real-Time Maglev Plant using Long-Short Term Memory Network based Deep Learning Technique. Journal of Scientific and Industrial Research (JSIR). vol 79, [Online]. Available: nopr.niscair.res.in/handle/123456789/55727, Indexing: SCIE.
 22. Sagar, Priya, Ashruti Upadhyaya, Sudhansu Kumar Mishra, Rudra Narayan Pandey, Sitanshu Sekhar Sahu, and Ganapati Panda(2020). A Circular Adaptive Median Filter for Salt and Pepper Noise Suppression from MRI Images. Journal of Scientific and Industrial Research (JSIR). vol.79, Indexing: SCIE.
 23. Sarat Kumar Mishra and Sudhansu Kumar Mishra (2020). A solution of economic emission dispatch problem of solar integrated thermal power system using multi-objective teaching learning based optimization. Journal of Advanced Research in Dynamical and Control Systems. vol. 12, [Online]. Available: 10.5373/JARDCS/V12I3/20201167, Indexing: Scopus.
 24. Mishra, Sarat, and Sudhansu Kumar Mishra (2020). Performance Assessment of a Set of Multi-Objective Optimization Algorithms for Solution of Economic Emission Dispatch Problem. Informatica. vol .44, [Online]. Available10.31449/inf.v44i3.1969, Indexing: Scopus.
 25. Sahoo, Amit Kumar, and Sudhansu Kumar Mishra (2020). Design of Lagrangian based FOPID Controller for Desired Closed Loop System. Journal of Circuits, Systems and Computers. [Online]. Available: 10.1142/S021812662150064X, Indexing: SCIE.
 26. Deep Shekhar Acharya, Sudhansu Kumar Mishra (2020). Optimal Consensus Recovery of Multi-Agent System subjected to Agent Failure. International Journal of Artificial Intelligent Tools. Vol.29 [Online]. Available: 10.1142/S0218213020500177, Indexing: SCIE.
 27. Manish Kumar, Sudhansu Kumar Mishra (2020). A Comprehensive Review of Nature Inspired Neural Network based Adaptive Filter for Eliminating Noise from Medical Images. Current Medical Imaging. Vol.16, 2020. [Online]. Available: 10.2174/157340561466618080111334, Indexing: SCIE.
 28. Nilesh Kumar Rajalwal, Debomita Ghosh (2020). Recent Trends in Integrity Protection of Power System: A Literature Review"International Transaction on Electrical Energy Systems, Wiley. p.1, Vol. 30, No.10.
 29. Sonal, Debomita Ghosh (2021). Novel Trends in Resilience Assessment of a Distribution System using Synchrophasor Application: A Literature Review. International Transaction on Electrical Energy Systems, Wiley. p.1 DOI: <https://doi.org/10.1002/2050-7038.12934>.
 30. Sourav Chakraborty, Panneru Arvind & Deepak Kumar (2021). Coordinated Control for Frequency Regulation in a Stand-Alone Microgrid Bolstering



Demand Side Management Capability. Electric Power Components and Systems (Taylor & Francis, SCI). DOI: 10.1080/15325008.2021.1937391.

31. Kumari Sandhya, T. Ghose, Deepak Kumar, Kalyan Chatterjee (2020). PN Inference Based Autonomous Sequential Restoration of Distribution System under Natural Disaster. IEEE Systems Journal. p. 5160, Vol. 14.
32. Sumit Kumar Jha, Deepak Kumar, M. Lehtonen. Modified V-I droop based adaptive vector control scheme for demand side management in a stand-alone microgrid. International Journal of Electrical Power & Energy Systems. Vol. 130, ISSN 0142-0615, <https://doi.org/10.1016/j.ijepes.2021.106950>.
33. Sandip Gupta, T. Ghose, K Chatterjee (2020). Optimal coordination between PV smart inverters and different demand response programs for voltage regulation in distribution system. International Transactions on Electrical Energy Systems, volume 31, issue 3.
34. Nionika Loitongbam, Kumar Raja, T. Ghose (2020). Assessment of the potential of multifarious demand response programs in reducing transformer loss of life. International Journal of Emerging Electric Power Systems. Vol. 21, issue 5.

4.2 Publications in Proceedings:

1. Aparna Arunkumar Gautam, Vijaya Laxmi (2020). FPGA Controlled 3 Phase VSI - A Hardware Perspective. 3rd IEEE ICSSIT 2020 Francis Xavier Engineering College, Tirunelveli, Tamil Nadu. DOI: 10.1109/ICSSIT48917.2020.9214152
2. Aparna Arunkumar Gautam, Vijaya Laxmi (2020). Role of Power Electronics in Microgrid Systems", INDIAN SCIENCE CONGRESS 2020, UAS (University of Agricultural Sciences), Bangalore.
3. A. Ranjan, S. Chakraborty and Vijaya Laxmi (2020). Gain-Scheduled Feedback Controller Design for a Nonlinear Continuous Stirred Tank Reactor. International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET) DOI: 10.1109/ICEFEET49149.2020.9187017.
4. P. Ganchaudhuri and S. Chakraborty (2020). SMC tracking control of 2-link robotic manipulator subjected to external

disturbances. International Conference for Emerging Technology (INCET), DOI: 10.1109/INCET49848.2020.9154149.

5. S. Kumar and S. Chakraborty (2021). Performance analysis of 2-link Robotic Manipulator with LPF and α -filter based UDE controller. IEEE Second International Conference on Control, Measurement and Instrumentation (CMI). DOI: 10.1109/CMI50323.2021.9362904.
6. Sonal, Debomita Ghosh (2020). Impact of Distributed Generation on the Reliability Allocation of Distribution System : A mesh-Grid Approach. International conference on Emerging Frontiers in electrical and electronic Technologies. Patna, India, IEEE.
7. Sonal, Debomita Ghosh. Resilience Assessment of Microgrid Using Complex Network Theory (2021). 1st International Conference on Power Electronics and Energy (ICPEE), Bhuwaneshwar, India, IEEE.
8. Sourav kumar Sahu, Debomita Ghosh (2021). Photovoltaic Hosting Capacity Increment in an Unbalanced Active Distribution Network. 1st International Conference on Power Electronics and Energy (ICPEE), Bhuwaneshwar, India, IEEE.
9. Souvik Bera, Deepak Kumar (2021). Decentralized Control Strategy for Voltage Unbalanced Mitigation in Stand -Alone Microgrid. International Conference on Intelligent Technologies (CONIT).
10. S. K. Jha and D. Kumar (2021). Investigating the Demand Side Management Capability of Stand-Alone Microgrid with V-I Droop Approach. 1st International Conference on Power Electronics and Energy (ICPEE). DOI: 10.1109/ICPEE50452.2021.9358760.
11. N. Ali and D. Kumar (2021). Inverter Control Strategy for Voltage Unbalance Mitigation. 1st International Conference on Power Electronics and Energy (ICPEE). DOI: 10.1109/ICPEE50452.2021.9358647.

4.3 Book:

1. M. Jaya Bharata Reddy, Dushmantha Kr. Mohanta, Deepak Kumar, Debomita Ghosh, "Advances in Smart Grid Automation and Industry 4.0", Lecture Notes in Electrical Engineering, Springer. ISBN 978-981-15-7675-1.



4.3.1 Chapter(s) in Edited Book

1. Ranjan A., Chakraborty S. (2021). Phase Portrait Analysis of Continuous Stirred Tank Reactor (CSTR). In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_18.
2. Kumar R., Sahu S.K., Ghosh D., Chakraborty S. (2021). A Multi HIL-Based Approach for Real-Time Phasor Data Monitoring Using Phasor Measurement Unit. In: Reddy M.J.B., Mohanta D.K., Kumar D., Ghosh D. (eds) Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering, vol 693. Springer, Singapore. https://doi.org/10.1007/978-981-15-7675-1_62.
3. Vartika V., Singh S., Das S., Mishra S.K., Sahu S.S. (2021). A Review on Intelligent PID Controllers in Autonomous Vehicle. In: Reddy M.J.B., Mohanta D.K., Kumar D., Ghosh D. (eds) Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering, vol 693. Springer, Singapore. https://doi.org/10.1007/978-981-15-7675-1_39.
4. Acharya D.S., Mishra S.K., Sarkar B., Bharti D. (2021) Fractional Order Particle Swarm Optimization to Optimize a Fractional Order PID Controller for a Vertical Take-Off and Landing System. In: Reddy M.J.B., Mohanta D.K., Kumar D., Ghosh D. (eds) Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering, vol 693. Springer, Singapore. https://doi.org/10.1007/978-981-15-7675-1_14.
5. Acharya D.S., Mishra S.K., Kumar S., Kumar S. (2021). Design of 2-Degree of Freedom Fractional Order PID Controller for Magnetic Levitation Plant with Time Delay. In: Reddy M.J.B., Mohanta D.K., Kumar D., Ghosh D. (eds) Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering, vol 693. Springer, Singapore. https://doi.org/10.1007/978-981-15-7675-1_15.
6. Sourav Kumar Sahu, Debomita Ghosh, Dushmantha Kumar Mohanta (2021). Effect of Harmonics due to Distributed Energy Resources on Hosting Capacity of Microgrid: A Hardware in Loop (HIL) Based Assessment", Hosting Capacity of Modern Power Grids, pp 47-85, Editors: Zobia, A.F., Abdel-Aleem, S.H.E., Ismael, S.M., Ribeiro, P.F. (Eds.), Springer.
7. Nilesh Kumar Rajalwal, Debomita Ghosh (2021). A Novel Method to avoid Distance Relay Mal-operation Under Stressed System Conditions", Wide-area Power Systems Stability, Protection, and Security" pp 393-42, Editors: Hassan Haes Alhelou, Almoataz Y. Abdelaziz, Pierluigi Siano, Springer.
8. Sweta Kumari, Sitanshu Sekhar Sahu, Bharat Gupta, Sudhansu Kumar Mishra (2020) "Energy harvesting via human body activities" In Advances in ubiquitous sensing applications for healthcare, chapter 5, Elsevier.
9. Sonal, Debomita Ghosh (2021). "Fuzzy Logic based Planning and Operation of a Resilient Microgrid", Applications of Fuzzy Logic in Planning and Operation of Smart Grids, Editor: Rahmani-Andebili, Springer.
10. Sahu S.K., Ghosh D. (2021) Spectral Kurtosis-Based Fault Detection for a Highly Penetrated Distributed Generation: A Real-Time Analysis. In: Reddy M.J.B., Mohanta D.K., Kumar D., Ghosh D. (eds) Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering, vol 693. Springer, Singapore. https://doi.org/10.1007/978-981-15-7675-1_65.
11. Sonal, Ghosh D., Mohanta D.K. (2021) Resilience Trapezoid-Based Operational Reliability of Distribution System. In: Reddy M.J.B., Mohanta D.K., Kumar D., Ghosh D. (eds) Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering, vol 693. Springer, Singapore. https://doi.org/10.1007/978-981-15-7675-1_64.
12. Nilesh Kumar Rajalwal, Debomita Ghosh (2021). Petri net Modeling for Reliability Assessment of Integrity Protection Scheme. In: Reddy M.J.B., Mohanta D.K., Kumar D., Ghosh D. (eds) Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering, vol 693. Springer, Singapore. <https://doi.org/10.1007/978-981-15-7675-1>.
13. Sourav Chakraborty, Deepak Kumar (2021). Closed Loop V-f Control Strategy for PV Battery Energy Storage System in Stand-Alone Microgrid: Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical



Engineering, vol 693. Springer, Singapore. <https://doi.org/10.1007/978-981-15-7675-1>.

14. Nada Ali, Deepak Kumar. State of the Art Review on Microgrid Control Strategies and Power Management with Distributed Energy Resources : Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering, Springer, Singapore. <https://doi.org/10.1007/978-981-15-7675-1>.

15. Sumit Kumar Jha and Deepak Kumar. Enabling the Technologies for incorporating Battery Energy Storage System with Standalone Microgrid: Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering, Springer, Singapore. <https://doi.org/10.1007/978-981-15-7675-1>.

16. Prabhat Kumar Upadhyay, and Chetna Nagpal, "ANFIS detects the changes in stressful patterns of sleep EEG", Lecture Notes in Bioengineering book series (LNBE), Springer Nature Singapore, DOI 978-981-15-6329-4_9, © 2021, pp. 91-101, September 2020.

17. Prabhat Kumar Upadhyay, and Chetna Nagpal. "Sleep Stage and Heat Stress Classification of Rodents Undergoing High Environmental Temperature." Computational Methods and Data Engineering, Part of the Advances in Intelligent Systems and Computing book series (AISC, volume 1227), https://doi.org/10.1007/978-981-15-6876-3_47, pp. 577-587, Springer, Singapore, August 2020.

SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Sourav Sahu, Debomita Ghosh	Best Paper Award	IEEE	International conference on Power Electronics and Energy	January 2021
2.	Dr. T. Ghose	Delivered expert lecture on Smart Grid: Implementation, Challenges and Avenues	IIIT, Bhagalpur	Faculty Development Program	April 2021

SECTION 6

ACTIVITIES/ FACULTY MEMBERS / BOS / DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
1.	Andriod App Development Workshop	Ayush Kumar Singh BTECH/10113/18		20/03/2021 To 21/03/2021
2.	Data Structures and Algorithms Workshop	Adarsh Kumar BTECH/10384/18		20/03/2021 To 21/03/2021

6.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. (Mrs.) Sarbani Chakraborty	Professor and Head	No
2.	Dr. Tirthadip Ghose	Professor	No



Sr. No.	Name	Designation	TEQIP Sponsored
3.	Dr. (Mrs.) Vijaya Laxmi	Professor	No
4.	Dr. D. K. Mohanta	Professor	No
5.	Dr. Aftab Alam	Assistant Professor	No
6.	Dr Mrs Debomita Ghosh	Assistant Professor	No
7.	Dr. G. S. Gupta	Assistant Professor	No
8.	Dr. Sushma Kamlu	Assistant Professor	No
9.	Dr. Surendra Kumar	Assistant Professor	No
10.	Dr. S. Shiva Kumar	Assistant Professor	No
11.	Dr. Deepak Kumar	Assistant Professor	No
12.	Dr. Sudhansu Kumar Mishra	Assistant Professor	No
13.	Dr. Prabhat Kumar Upadhyay	Assistant Professor	No
14.	Mr. Prem Prakash	Assistant Professor	No
15.	Mr. B. M. Prasad	Assistant Professor	No
16.	Mr. Subrat Swain (on study leave)	Assistant Professor	No

6.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Prof. Goshaidas Ray	Professor	IIT, Kharagpur
2.	Dr. Subhasis Chaudhuri	GM, R&D, Iron & Steel	SAIL, Ranchi

6.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1	HOD, Electrical	Ex-Officio	Chairman
2	Dr. T. Ghose	Professor	Internal Member
3	Dr. D. K. Mohanta	Professor	Internal Member
4	Dr. (Mrs.) Vijaya Laxmi	Professor	Internal Member
5	Dr. (Mrs.) Sarbani Chakraborty	Professor	Internal Member
6	Dr. Sudhansu Kumar Mishra	Assistant Professor	Internal Member
7	Dr. Deepak Kumar	Assistant Professor	Internal Member
8	Dr. S. S. Solanki	Professor, Dept. of ECE	Internal Member
9	Dr. (Mrs.) Aruna Jain	Associate Professor, Dept. of CSE	Internal Member
10	Dr. Pankaj Mishra	Assistant Professor, BIT Deoghar off campus	Internal Member
11	Mr. Sanjay Kumar, Assistant Professor,	Assistant Professor, BIT Patna off campus	Internal Member



Sr. No.	Name of the Member	Designation	Role
12	Mr. P.S. Rathore, Assistant Professor,	Assistant Professor, BIT Jaipur off campus	Internal Member
13	UG Student representative	Final year having good Academic record and no backlog	Internal Member
14	PG Student representative	Final year having good Academic record and no backlog	Internal Member
15	Mr. Vijay Kr. Karan	Ph.D. Scholar, BIT Mesra	Internal Member
16	Prof. Siddhartha Sen	Professor, Department of Electrical Engineering, IIT, Kharagpur	External Member
17	Prof. Saikat Chakraborty	Professor, Department of Electrical Engineering, IIT, Kanpur	External Member
18	Prof. S. A. Soman	Professor, Head of the Department of Electrical Engineering, IIT, Bombay	External Member
19	Prof. Sunit Kumar Sen	Professor, Department of Applied Physics, University of Calcutta	External Member
20	Prof. Amitava Chattejee	Professor, Department of Electrical Engineering, Jadavpur University	External Member
21	Prof. Anup Kumar Panda	Professor, Head of the Department of Electrical Engineering, NIT, Rourkela	External Member
22	Prof. Nilanjan Senroy	Professor, Department of Electrical Engineering, IIT, Delhi	External Member
23	Mr. Sharat Kumar	Chief, TATA Steel, Jamshedpur	External Member
24	Mr. Partha Pratim Sen	Chief General Manager (CGM), Electrical, MECON Ltd., Ranchi	External Member
25	Mr. Tapan Dasgupta	Managing Director, Powertronix Engineering Pvt. Ltd., Kolkata, www.powertronix.co.in	External Member
26	Mr. Deepak Kumar	AGM, Electrical, MECON Ltd., Ranchi	External Member

SECTION 7

OTHER INFORMATION

7.1 Publication by students, if any

Publications in Journals :

- Subham Dey, Dipak Kumar Giri, Kumar Gaurav, Vijaya Laxmi. Robust Non-singular Terminal Sliding Mode Attitude Control of Satellites, Journal of Aerospace Engineering 34(1), (SCIE, Web of Science) [https://doi.org/10.1061/\(ASCE\)AS.1943-5525.0001224](https://doi.org/10.1061/(ASCE)AS.1943-5525.0001224)
- Kumar Nikhil, Vijaya Laxmi, Dinesh Chandra (2020). Designing Controller Using Stable Krylov Subspace Method. Psychology and Education. 57(9): 5046-5053. DOI: <https://doi.org/10.17762/pae.v57i9.2001>
- Prabhat Tripathi, Parashuram Thakura, Vijaya Laxmi, Ritesh Keshri. Stand-alone PV Water Pumping System Based on High-Gain Resonant Inverter Fed Induction Motor Serving Two-Head for Permanent Water Supply, International Journal of Circuit Theory and Applications. <https://doi.org/10.1002/cta.2983>
- Niteesha Kumari, S. Shiva Kumar and V. Laxmi. Design of an efficient bipolar converter with fast MPPT algorithm for DC nanogrid application, International Journal of Circuit Theory and Applications. <https://doi.org/10.1002/cta.3020>
- Piyush K. Ojha, Parashuram Thakura and Sarode



- S. Kumar(2021). Generalized Transfer Function–Based Modelling, Designing and Analysis of a Single-Stage Boost Inverter International journal of Power and Energy, ACTA Press. Vol. 41.
6. Kumar, S., Chakraborty, S. Design (2020). Validation, and Comparison of UDE-based Pitch-axis Control of Helicopter with existing Conventional and Non-conventional Controllers. Arab J Sci Eng . <https://doi.org/10.1007/s13369-020-04775-1>
 7. Kumar, Manish, Sudhansu Kumar Mishra, Justin Joseph, Sunil Kumar Jangir, and Dinesh Goyal (2021). Adaptive comprehensive particle swarm optimisation-based functional-link neural network filter model for denoising ultrasound images. IET Image Processing. vol 15 [Online]. Available: 10.1049/ipr2.12100, Indexing: SCIE.
 8. Mishra, A., Sahu, S.S., Sharma, R. and Mishra, S.K. (2021). Denoising of Electrocardiogram Signal Using S-Transform Based Time–Frequency Filtering Approach. Arabian Journal for Science and Engineering, 1 [Online]. Available: 10.1007/s13369-021-05333-z, Indexing: SCIE.
 9. Dash, Prajna Parimita, Sudhansu Kumar Mishra, Kishore Kumar Senapati, and Ganapati Panda (2021). Interactive teaching learning based optimization technique for multiple object tracking. Multimedia Tools and Applications, vol.7 [Online]. Available: 10.1007/s11042-020-10057-7, Indexing: SCIE.
 10. Sahoo, Amit Kumar, Sudhansu Kumar Mishra, Babita Majhi, Ganapati Panda, and Suresh Chandra Satapathy (2021). Real-Time Identification of Fuzzy PID-Controlled Maglev System using TLBO-Based Functional Link Artificial Neural Network. Arabian Journal for Science and Engineering. vol 46, [Online]. Available: 10.1007/s13369-020-05292-x, Indexing: SCIE.
 11. Acharya, D. S., S. K. Swain, and S. K. Mishra (2020). Real-Time Implementation of a Stable 2 DOF PID Controller for Unstable Second-Order Magnetic Levitation System with Time Delay. Arabian Journal for Science and Engineering. vol 9 [Online]. Available: 10.1007/s13369-020-04425-6, Indexing: SCIE.
 12. Kumar, Manish, Sudhansu Kumar Mishra, Dilip Kumar Choubey, Sunil Kumar Jangir, and Dinesh Goyal (2021). Multichannel heuristic learning based single layer neural network filter for mixed noise suppression from color Doppler ultrasound images. Journal of Real-Time Image Processing. [Online]. Available: 10.1007/s11554-020-01061-z, Indexing: SCIE.
 13. Vikash Kumar and Sudhansu Kumar Mishra (2021). A Comparative performance evaluation of a set of swarm intelligence based optimization algorithms for economic operation with FACTS devices in Power system. Journal of Scientific and Industrial Research (JSIR).vol.80, Indexing: SCIE.
 14. Deep Shekhar Acharya, Sudhansu Kumar Mishra, and Ganapati Panda (2021). A Comparative Performance Assessment of Evolutionary Fractional Order PID Controllers for Magnetic Levitation Plant with Time Delay. Journal of Scientific and Industrial Research (JSIR), vol.80, 2021, Indexing: SCIE.
 15. Sarat Kumar Mishra and Sudhansu Kumar Mishra (2021). Solution of the combined environmental economic dispatch problem using multi-objective cat swarm optimization. International Journal on Electrical Engineering and Informatics. Accepted. Indexing: Scopus.
 16. Acharya, Deep Shekhar, and Sudhansu Kumar Mishra (2020). A multi-agent based symbiotic organisms search algorithm for tuning fractional order PID controller Measurement. vol 155 [Online]. Available: 10.1016/j.measurement.2020.107559, Indexing: SCIE.
 17. Mishra, Sudhansu Kumar, Amit Kumar Sahoo, Rudra Narayan Pandey, Prajna Parimita Dash (2020). Identification of Real-Time Maglev Plant using Long-Short Term Memory Network based Deep Learning Technique. Journal of Scientific and Industrial Research (JSIR). vol 79, [Online]. Available: nopr.niscair.res.in/handle/123456789/55727, Indexing: SCIE.
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 19. Sarat Kumar Mishra and Sudhansu Kumar Mishra (2020). A solution of economic emission



- dispatch problem of solar integrated thermal power system using multi-objective teaching learning based optimization. Journal of Advanced Research in Dynamical and Control Systems. vol. 12, [Online]. Available: 10.5373/JARDCS/V12I3/20201167, Indexing: Scopus.
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 22. Deep Shekhar Acharya, Sudhansu Kumar Mishra (2020). Optimal Consensus Recovery of Multi-Agent System subjected to Agent Failure. International Journal of Artificial Intelligent Tools. Vol.29 [Online]. Available: 10.1142/S0218213020500177, Indexing: SCIE.
 23. Manish Kumar, Sudhansu Kumar Mishra (2020). A Comprehensive Review of Nature Inspired Neural Network based Adaptive Filter for Eliminating Noise from Medical Images. Current Medical Imaging. Vol.16, 2020. [Online]. Available: 10.2174/157340561466618080111334, Indexing: SCIE.
 24. Nilesh Kumar Rajalwal, Debomita Ghosh (2020). Recent Trends in Integrity Protection of Power System: A Literature Review "International Transaction on Electrical Energy Systems, Wiley. p.1, Vol. 30, No.10.
 25. Sonal, Debomita Ghosh (2021). Novel Trends in Resilience Assessment of a Distribution System using Synchrophasor Application: A Literature Review. International Transaction on Electrical Energy Systems, Wiley. p.1 DOI: <https://doi.org/10.1002/2050-7038.12934>
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 28. Sumit Kumar Jha, Deepak Kumar, M. Lehtonen. Modified V-I droop based adaptive vector control scheme for demand side management in a stand-alone microgrid. International Journal of Electrical Power & Energy Systems. Vol. 130, ISSN 0142-0615, <https://doi.org/10.1016/j.ijepes.2021.106950>.
 29. Sandip Gupta, T. Ghose, K Chatterjee (2020). Optimal coordination between PV smart inverters and different demand response programs for voltage regulation in distribution system. International Transactions on Electrical Energy Systems, volume 31, issue 3.
 30. Nionika Loitongbam, Kumar Raja, T. Ghose (2020). Assessment of the potential of multifarious demand response programs in reducing transformer loss of life. International Journal of Emerging Electric Power Systems. Vol.21, issue 5.
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1. Aparna Arunkumar Gautam, Vijaya Laxmi (2020). FPGA Controlled 3 Phase VSI - A Hardware Perspective. 3rd IEEE ICSSIT 2020 Francis Xavier Engineering College, Tirunelveli, Tamil Nadu. DOI: 10.1109/ICSSIT48917.2020.9214152
 2. Aparna Arunkumar Gautam, Vijaya Laxmi (2020). Role of Power Electronics in Microgrid Systems", INDIAN SCIENCE CONGRESS 2020, UAS (University of Agricultural Sciences), Bangalore.
 3. A. Ranjan, S. Chakraborty and Vijavalaxmi (2020). Gain-Scheduled Feedback Controller Design for a Nonlinear Continuous Stirred Tank Reactor. International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET) DOI: 10.1109/ICEFEET49149.2020.9187017.
 4. P. Ganchaudhuri and S. Chakraborty (2020). SMC tracking control of 2-link robotic manipulator subjected to external disturbances. International Conference for Emerging Technology (INCET), DOI: 10.1109/INCET49848.2020.9154149.
 5. S. Kumar and S. Chakraborty (2021).



- Performance analysis of 2-link Robotic Manipulator with LPF and α -filter based UDE controller. IEEE Second International Conference on Control, Measurement and Instrumentation (CMI). DOI: 10.1109/CMI50323.2021.9362904.
6. Sonal, Debomita Ghosh (2020). Impact of Distributed Generation on the Reliability Allocation of Distribution System : A mesh-Grid Approach. International conference on Emerging Frontiers in electrical and electronic Technologies. Patna, India, IEEE.
 7. Sonal, Debomita Ghosh. Resilience Assessment of Microgrid Using Complex Network Theory (2021). 1st International Conference on Power Electronics and Energy (ICPEE), Bhuwaneshwar, India, IEEE.
 8. Sourav kumar Sahu, Debomita Ghosh (2021). Photovoltaic Hosting Capacity Increment in an Unbalanced Active Distribution Network. 1st International Conference on Power Electronics and Energy (ICPEE), Bhuwaneshwar, India, IEEE.
 9. Souvik Bera, Deepak Kumar (2021). Decentralized Control Strategy for Voltage Unbalanced Mitigation in Stand -Alone Microgrid. International Conference on Intelligent Technologies (CONIT).
 10. S. K. Jha and D. Kumar (2021). Investigating the Demand Side Management Capability of Stand-Alone Microgrid with V-I Droop Approach. 1st International Conference on Power Electronics and Energy (ICPEE). DOI: 10.1109/ICPEE50452.2021.9358760.
 11. N. Ali and D. Kumar (2021). Inverter Control Strategy for Voltage Unbalance Mitigation. 1st International Conference on Power Electronics and Energy (ICPEE). DOI: 10.1109/ICPEE50452.2021.9358647.

7.2 Achievements of Students :

Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
1	Atulya Arya	GHC Student Scholarship Selected for Samsung PRISM Program	AnitaB.org, Samsung R&D Institute India - Bangalore	3rd July, 2021, Virtual Conference
3	Anurag Gupta	Google Summer of Code Student Developer 2021	Google	17th May, 2021, Online
4	Md. Zeeshan Equbal Ansari	Google Summer of Code'21 selection at Zulip	Google	17th May 2021, Online
5.	Abhishek Raj	Successful Participation in the Project - Node MCU MQTT Client under student Mentorship Programme	Electrical and Electronics Engg Society, BIT Mesra	February – May 2021, Online
6	Setika Raj	First Position in Mentorship Programme for the Project - Node MCU MQTT Client	Electrical and Electronics Engg Society, BIT Mesra	February – May 2021, Online
7	Ankit Kumar	First Runner Up position in Mentorship Programme for the Project – Online Code Editor/IDE	Electrical and Electronics Engg Society, BIT Mesra	February – May 2021, Online
8	Kumari Shikha	Successful Participation in the Project - Online Code Editor/ IDE under student Mentorship Programme	Electrical and Electronics Engg Society, BIT Mesra	February – May 2021, Online
9	Alakshendra Singh	Successful Participation in the Project – Modelling of BLDC Motor under student Mentorship Programme	Electrical and Electronics Engg Society, BIT Mesra	February – May 2021, Online



7.3 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Shree Nayar, BE, Electrical Engineering Batch of 1984	Columbia University, Professor, Computer Science
2.	Anjan Lahiri, BE, Electrical And Electronics Engineering Batch of 1987	Birlasoft CEO

8. Any other relevant information:

New faculties with sound academic and research backgrounds from reputed institutes will be joining the department shortly.

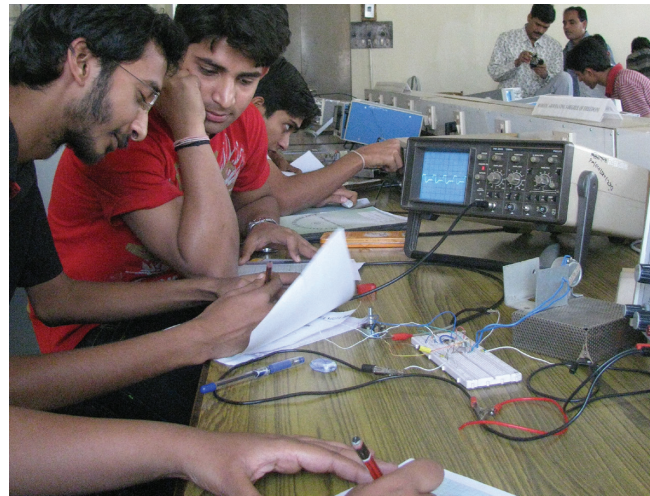
Infrastructure / Equipment added during the year: Coupled Tank System from Quanser

9. Special Covid Initiatives, if any: Covid protocols are maintained as per institute policy

Department of Electronics and Communication Engineering

SECTION 1

DEPARTMENTAL PROFILE



1. About the Department:

The Department of Electronics and Communication Engineering was established in the year 1960. It is one of the largest departments in the institute having a large number of students. Due to its modern infrastructure and exposure given to the students, it is one of the elite departments in India. Apart from B.Tech. in ECE, the department offers three specializations at PG level which are M.Tech. in Microwave Engineering, Instrumentation and Control and Wireless Communication. Departments also offers Ph.D in different areas of Electronics and Communication Engineering.

The department has well equipped modern laboratories having various software tools

such as Altair Solid Thinking Embed, Multisim, Vivado, Beam Prop and Opti System, Lab view and PLC, Visual TCAD, Cadence, IE3D, HFSS, Fidelity, MD Spice, Sonnet, Advanced Design System, CST and AWR. Some of the hardware equipments in the laboratories are Optical Spectrum Analyzer, Optical Time Domain Reflectometer, Monochromator, Multiplexers, Scalar Network Analyzer with Plotter (22 GHz), Spectrum Analyzer, Sweep Oscillators, Pattern Generator and Signal Generator, Vector Network Analyzer (N5230A, 10 MHz - 20 GHz), R & S Signal Generator (SMR20, 1 GHz - 20 GHz), R & S Spectrum Analyzer (FSP, 9 KHz - 30 GHz) and Anechoic Chamber. Department also has facilities for measurement and fabrication of various RF circuit components.

SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects (Research and Consultancy)

a. Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Design of Ultra Low Power CMOS Temperature Sensor for Aerospace Applications	Dr. Vijay Nath	SAC ISRO Bangalore	16th Nov2015	25.00 lakhs	3 years extended up to 6 years



Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
2.	Modernization of VLSI Design Lab & Semiconductor Devices	HoD, ECE	MODROBs AICTE New Delhi	20th Dec2019	6.8/20 lakhs	3 years
3.	Study of HEMT and its performance in amplifier circuit	PI: Dr. Aminul Islam	DRDO	ERIP/ER/DG-MED &CoS/ 990216301/ M/01/ 1675 dated 04 July 2017	23.742 lakh	3.5 years

b. Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	MEMS Based Piezoelectric Energy Harvester for implanted medical devices	Co-PI: Dr. Neela Chatteraj	SERB (Science & Engineering Research Board)	29th March 2017	38,86,020/-	28/09/2020
2.	Computational identification and validation of genome wide protein-protein interaction network in rice and rice blast	PI : Dr. S.S. Sahu	SERB, DST, Govt. of India	3/06/2017	22.62 Lakhs	12/12/2020
3.	Electroencephalogram based Sleep Stages Detection using Advance Wavelet Techniques	PI : Dr. S.S. Sahu	NPIU, MHRD, Govt. of India	18/06/2019	14.42 Lakhs	30/06/2021

c. Consultancy Projects carried out/ongoing :

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. Lakhs)	Principal Investigator / Co-Investigator	Ongoing/ Completed*
			from	to			
1.	Design and Development of Proximity Sensing System based on RADARs for Heavy Vehicles in Mines	Rizitek India Pvt. Ltd., Ranchi.	21/07/20	20/07/21	2.08	Prof. S K Ghorai (Co-ordinator) and Dr S S Tripathy (Co-coordinator)	Ongoing

**SECTION 3****SEMINAR / CONFERENCE****3.1 Seminar / Conferences / Short – Term Courses Conducted**

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	Artificial Intelligence and Machine learning in Healthcare	Dr. S.S. Sahu & Dr. Koel Mukherjee	TEQIP-III, BIT Mesra	27th -31st July 2020
2.	Artificial Intelligence	Dr. S.S. Sahu & Dr. Koel Mukherjee	ATAL- AICTE	25th -29th January 2021
3.	Professional Communication	Dr. Swati Prasad	AICTE	03.12.20-08.12.20
4.	Professional Communication	Dr. Swati Prasad	AICTE	01.03.21-06.03.21
5.	Professional Communication	Dr. Swati Prasad	AICTE	07.06.21-12.06.21

3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Srikanta Pal	4th International Conference "2021 Devices for Integrated Circuit (DevIC)	—	Department of ECE, KGEC and IEEE EDS Kolkata Chapter	Department of ECE, KGEC	19/05/2021-20/05/2021
2.	Dr. Srikanta Pal	Sustainable Energy and Future Electric Transportation (SEFET)	—	—	Hyderabad, Telangana	21/01/2021-23/01/2021
3.	Dr. Srikanta Pal	1st International Science Exhibition Congress Symposium (SECS) 2020	—	IETE & ISVE Ranchi Centre, ARTTC, BSNL, Ranchi	ARTTC, BSNL, Ranchi	12/09/2020-13/09/2020
4.	Dr. Srikanta Pal	5th International Conference on Microelectronics, Computing & Communication Systems (MCCS-2020)	—	IETE & ISVE Ranchi Centre, ARTTC, BSNL, Ranchi	ARTTC, BSNL, Ranchi	11/07/2020-12/07/2020
5.	Dr. Srikanta Pal	IEEE international Conference on Electronics, Computing and Communication Technologies, , CONECCT 2020	—	—	—	02/07/2020-04/07/2020
6.	Vishal H Shah	Inculcating Human Vallues in Technical Education	AICTE	AICTE	Online	28/06/2021 – 02/07/2021



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
7.	Vishal H Shah	Zoom Security and Privacy	No Fee	Cyber Peace Foundation	Online	03/07/2021
8.	Vishal H Shah	Artificial Intelligence	No Fee	AICTE	Online	01/10/2020 – 05-10/2020
9.	Vishal H Shah	Artificial Intelligence and Machine Learning in Healthcare	TEQIP	BIT Mesra	Online	27/07/2020 – 31/07/2020
10.	Vishal H Shah	Recent trends and applications in Biomedical Signal and Image Processing	No Fee	AICTE	Online	21/09/2020 – 25/-9/2020
11.	Janardan Sahay	Online workshop on "Disruptive Wireless Communication Paradigms: The Road towards 6G,"	No Fee	IIIT Guwahati	Online	05/02/2021- 07/02/2021
12.	Janardan Sahay	Virtual Symposium on RF & Microwave Propagation	No Fee	BIIS-PILANI	Online	30-01-21
13.	Janardan Sahay	TEQIP III sponsored E-Training Program/ Short -term course on 5G and Beyond Wireless Technologies: Modelling and Simulations using MATLAB	No Fee	IIT-Indore	Online	24-12-20 – 26-12-20
14.	Janardan Sahay	AICTE-ISTE approved Orientation/Refresher Programme on "Deep Learning"	No Fee	BIT Mesra	Online	14-12-20 - 19-12-20
15.	Janardan Sahay	TEQIP III Sponsored One-week Online Faculty Development Programme on "Artificial Intelligence and Machine Learning in Healthcare."	No Fee	Jointly organized by the Department of Bio-engineering and ECE, Birla Institute of Technology Mesra, Ranchi	Online	27/07/2020 – 31/07/2020
16.	Dr. Sanjeet Kumar	PYTHON + MATLAB-Based Summer Research School on Convex Optimization for Machine-Learning and 5G Wireless Technology	BIT+Self	IIT Kanpur	Online	14/06/2021 -27/06/2021



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
17.	Sanjaya Shankar Tripathy	"Inculcating Universal Human Values in Technical Education"	AICTE	AICTE	Online	19.04.2021-23.04.2021.
18.	Sanjaya Shankar Tripathy	AICTE-ISTE Approved Orientation/ Refresher Programme on "Deep Learning"	AICTE	BIT Mesra	online	24.05.2021 to 29.05.2021
19.	Dr. S. S. Sahu	Computer Science & Biology	AICTE	KIIT University,	KIIT University, Bhubaneswar, Odisha	1/10/2020-5/10/2020
20.	Dr. Somnath Sengupta	Deep Learning	AICTE-ISTE	BIT MESRA	BIT MESRA	24/05/2021-29/05/2021
21.	Dr. Anjini Kumar Tiwary	Introduction to Coding Theory	--	NITTTR, Kolkata	Online	31.08.2020-04.09.2020
22.	Prajna Parimita Dash	Instructor Led Live Online Training On Deep Learning Using Medical Data	Self	Finland Labs (A Unit of Revert Technology Pvt. Ltd.)	Online	08/02/2020-12/02/2021
23.	Santashraya Prasad	2021 Devices for Integrated Circuits (DevIC), 19-20 May 2021, pp. 512-516,	Self	2021 Devices for Integrated Circuit (DevIC),	Online, Kalyani Govt. Engg. College, Nadia, West Bengal, India	19/05/2021-20/05/2021
24.	Dr. (Mrs.) Soumya Sidhishwari	TEQIP-III Approved Faculty Development Programme on "Research through HPC"	No Fee	Birla Institute of Technology, Mesra, Ranchi, Jharkhand	Online	Term1: 19th September 2020 Term2: 23-24 January 2021 Term3: 30-31 January 2021
25.	Dr. (Mrs.) Soumya Sidhishwari	3-Day online Workshop on DISRUPTIVE WIRELESS COMMUNICATION PARADIGMS: THE ROAD TOWARDS 6G	No Fee	Indian Institute of Information Technology Guwahati	Online	05-2-2021-07-2-2021
26.	Dr. (Mrs.) Soumya Sidhishwari	Inculcating Universal Human Values in Technical Education	No Fee	All India Council for Technical Education (AICTE)	Online	19-4-2021-23-4-2021
27.	Dr. (Mrs.) Soumya Sidhishwari	AICTE-ISTE Approved Orientation/ Refresher Programme on "Deep Learning"	No Fee	Birla Institute of Technology, Mesra, Ranchi, Jharkhand	Online	24-5-2021-29-5-2021

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

1. Ricky Mohanty, Bandi Kumar Mallik, Sandeep Singh Solanki (2020), "Normalized approximate descent used for spike based automatic bird species recognition system", International Journal of Speech Technology <https://doi.org/10.1007/s10772-020-09735-6>, Received: 5 March 2019 / Accepted: 8 July 2020 © Springer Science+Business Media, LLC, part of Springer Nature 2020.
2. Tusar Kanti Dash, Sandeep Singh Solanki, Ganapati Panda & Suresh Chandra Satapathy (2020), "Development of statistical estimators for speech enhancement using multi-objective grey wolf optimizer Evolutionary Intelligence", <https://link.springer.com/article/10.1007/s12065-020-00446-0>, Special Issue published on 14th July 2020.
3. Tusar Kanti Dash, Sandeep Singh Solanki, & Ganapati Panda (2021), "Multi-objective Approach to Speech Enhancement Using Tunable Q-Factor-based Wavelet Transform and ANN Techniques", Springer Circuits, System, and Signal Processing (2021) <https://link.springer.com/article/10.1007/s00034-021-01753-2>.
4. Ashish Raj, and Nisha Gupta (2020), "Radiation characteristics of microstrip antenna on frequency selective surface absorbing layer." International Journal of Microwave and Wireless Technologies, pp. 1-7.
5. Divya Prakash, and Nisha Gupta (2021), "Applications of metamaterial sensors: a review." International Journal of Microwave and Wireless Technologies (2021) pp. 1-15.
6. Atul Kumar Pandey, and Nisha Gupta (2021), "An Energy Efficient Adaptive Wake-Up Radio MAC (EEAWuR-MAC) Protocol for IoT Wireless Body Area Networks." Wireless Personal Communications pp. 1-25.
7. Atul Kumar Pandey, and Nisha Gupta (2021), "An energy efficient hybrid MAC protocol for smart home networks". Serbian Journal of Electrical Engineering, 18(1), pp.63-73.
8. Sheelu Kumari, Vibha Rani Gupta and Shweta Srivastava (2021), "Analysis of a narrow slot loading on half guided wavelength Folded Substrate Integrated Waveguide", Vol 19, No.2, pp. 174 -181, ECTI Transactions on Electrical Engineering, Electronics, and Communications. <https://doi.org/10.37936/ecti-eec.2021192.241655>
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10. Sheelu Kumari, Vibha Rani Gupta and Shweta Srivastava (2020), "Analysis of Staggered-Via Loss in Substrate Integrated Waveguide", IETE Journal of Research, pp. 1-5, DOI: 10.1080/03772063.2020.1811785
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12. Shailendra Singh, Madhur Deo Upadhayay, Srikanta Pal (2021), "Study on generation of higher order orbital angular momentum modes and parameters affecting the vortex", Iranian Journal of Electrical & Electronic Engineering (IJEEE). Vol.17, No. 2, pp 18-22, DOI: 10.22068/IJEEE.17.2.1822
13. Mishra, D., Shree, S., Gupta, A., Priyadarshi, A., Das, S., Pal, S. K., Chakravarty, D., Pal, S., Chattopadhyay, T., Pal, A (2020), "Weld defect localization in friction stir welding process", Welding in the World, Springer, DOI: <https://doi.org/10.1007/s40194-020-01028-5>
14. A. N. Ghazali, Mohd Sazid and S. Pal (2021), "Multiple Passband Transmission Zeros Embedded Compact UWB Filter based on Microstrip/CPW Transition," AEÜ-International Journal of Electronics and Communications, Vol. 129, 153549, DOI: <https://doi.org/10.1016/j.aeeu.2020.153549>
15. Ashutosh Anand, Srikanta Pal, Sudip Kundu (2021), "Multi-perforated energy efficient piezoelectric energy harvester using improved



- stress distribution", IETE Journal of Research, DOI: 10.1080/03772063.2021.1913071.
16. Ashutosh Anand, Srikanta Pal, Sudip Kundu (2021), "Bandwidth and Power Enhancement in the MEMS Based Piezoelectric Energy Harvester using Magnetic Tip Mass", Bulletin of the polish academy of sciences: technical sciences, DOI: 10.24425/bpasts.2021.137509.)
 17. Mishra, Debasish; Gupta, Abhinav; Raj, Pranav; Kumar, Aman; Anwer, Saad; Pal, Surjya; Chakravarty, Debashish; Pal, Srikanta (2021), "Sensor based real-time information for monitoring and control of a manufacturing process", IOP - Engineering Research Express (Accepted, June 2, 2021).
 18. Parikshit Vasisht, Robert Mark, Neela Chatteraj (2021), "An ultra-wideband rectangular ring dielectric resonator antenna integrated with hybrid shaped patch for wireless applications "Frequenz 2021
 19. Prasad D, Dutta K, Kumar S., Paul P., Nath V.(2020), "A Novel Design of UWB Low Noise Amplifier for 2-10 GHz Wireless Sensor Applications" Sensor International, Elsevier, pp 100041.
 20. Nath P., Biswas A., Nath V.(2020), "Performance optimization of solar cells using non-polar, semi-polar and polar InGaN/GaN multiple quantum wells alongside AlGaIn blocking layers" Microsystem Technologies, vol-27. pp.301-306.
 21. Shashank Kumar Dubey, Meena Mishra, and Aminul Islam (2020), "Characterization of AlGaIn/GaN Based HEMT for Low Noise and High Frequency Application" in International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, Publisher: Wiley. DOI: <https://doi.org/10.1002/jnm.2932>
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35. Shashank Kumar Dubey, Krishnpriya Sinha, Pawan Kumar Sahu, Ritesh Ranjan, Aminul Islam, (2020), "Characterization of InP-based pseudomorphic HEMT with T-gate," in *Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems*, vol. 26, no. 7, pp. 2183 - 2191, DOI: 10.1007/s00542-019-04491-3, Publisher: Springer. <https://doi.org/10.1007/s00542-019-04491-3>
36. Krishnpriya Sinha, Shashank Kumar Dubey, Aminul Islam, (2020), "Study of high Al fraction in AlGaIn barrier HEMT and GaN and InGaIn channel HEMT with In_{0.17}Al_{0.83}N barrier," in *Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems*, vol. 26, no. 7, pp. 2145 - 2158, DOI: 10.1007/s00542-019-04466-4, Publisher: Springer. <https://doi.org/10.1007/s00542-019-04466-4>
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38. R. Nagi, SS Tripathy. (2021), "Severity Estimation of Grapevine Diseases from Leaf Images Using Fuzzy Inference System" *Agric Res* .<https://doi.org/10.1007/s40003-021-00540-4>
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40. Satyajit Mahapatra, Sitanshu Sekhar Sahu, (2021), "Integrating Resonant Recognition Model and Stockwell Transform for Localization of Hotspots in Tubulin" *IEEE Transactions on NanoBioscience*, Vol. 20 (3)
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42. Satyajit Mahapatra, Vivek Raj Gupta, Sitanshu Sekhar Sahu, Ganapati Panda (2021), "Deep neural network and extreme gradient boosting based Hybrid classifier for improved prediction of Protein-Protein interaction" *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, Vol. 19 (1), (In press)
43. Ankita Mishra, Sitanshu Sekhar Sahu, Rajeev Sharma, Sudhansu Kumar Mishra (2021), "Denoising of Electrocardiogram Signal Using S-Transform Based Time-Frequency Filtering Approach" *Arabian Journal for Science and Engineering*, pp. 1-11, (In press)
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 56. Prajna Parimita Dash, Sudhansu Kumar Mishra, Kishor Kumar Senapati, Ganapati Panda (2021), "Interactive Teaching Learning Based Optimization Technique for Multiple Object Tracking", Multimedia Tools and Applications, 80(7), pp.10577-10600.
 57. Amit Kumar Sahoo, Rudra Narayan Pandey, Sudhansu Kumar Mishra, Prajna Parimita Dash (2020), "Identification of Real-Time Maglev Plant using Long-Short Term Memory Network based Deep Learning Technique." Journal of Scientific and Industrial Research (JSIR) 79 (12) 1101-1105.
 58. Prajna Parimita Dash, and Dipti Patra (2020), "An efficient hybrid framework for visual tracking using Exponential Quantum Particle Filter and Mean Shift Optimization", Multimedia Tools and Applications, Springer, 79 (29), pp 21513-21537.
- #### 4.2 Publications in Proceedings:
1. Ashish Raj, and Nisha Gupta (2020), "Electromagnetic Characteristics of Carbon Fiber Based Microwave Absorber for Fixed Mobile FSS Band." in 2020 IEEE International Women in Engineering (WIE) Conference on Electrical and Computer Engineering (WIECON-ECE), pp. 170-172. IEEE.
 2. Niraj Prasad Gupta, Srikanta Pal (2021), "Design of 2-7 GHz Voltage-Controlled Oscillator Using Multi-stage Current Starved Configuration", Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems, DOI: 10.1007/978-981-15-5546-6_33, January 2021



3. S. R. Nayini, K. Sai Kushal Gella, S. K. Dubey, M. Guduri and A. Islam (2021), "Robust Design of Noise Tolerant 2-Phase Non Overlapping Clock Generating Circuit," 2021 Devices for Integrated Circuit (DevIC), 19-20 May 2021, pp. 211-215
4. S. K. Dubey and A. Islam (2021), "AlGaIn/GaN HEMT with Recessed T-Gate and Floating Metal for High Power Applications," 2021 Devices for Integrated Circuit (DevIC), 19-20 May 2021, pp.216-220, doi:10.1109/DevIC50843.2021.9455871.
5. J. P. Kotni, M. Pandey, S. Prasad and A. Islam (2021), "Radiation-Hardened Low Read Delay 12T-SRAM Cell for Space Applications," 2021 Devices for Integrated Circuit (DevIC), 19-20 May 2021, pp. 512-516, doi:10.1109/DevIC50843.2021.9455796.
6. Vikas Pathak, Satyasai Jagannath Nanda, Amit Mahesh Joshi, Sitanshu Sekhar Sahu (2021), "VLSI Implementation of Tunable Band-Pass Notch IIR Filter for Localization of Hot spots in Proteins", International Conference on Microelectronics, Computing and Communication Systems, Springer, Singapore, pp: 563-575.
7. Vartika V., Singh S., Das S., Mishra S.K., Sahu S.S. (2021), "A Review on Intelligent PID Controllers in Autonomous Vehicle" Advances in Smart Grid Automation and Industry 4.0., Lecture Notes in Electrical Engineering, Springer, Singapore, Vol 693.
8. Biswajit Karan, Sitanshu Sekhar Sahu, Kartik Mahto (2020), "Stacked auto-encoder based Time-frequency features of Speech signal for Parkinson disease prediction" IEEE International Conference on Artificial Intelligence and Signal Processing, pp: 1-4.
9. KM Neeshu and Anjini Kumar Tiwary (2020), "Gain Enhancement for Metamaterial Loaded UWB Antenna using TSCCR AMC", Virtual International Conference on Futuristic Communication and Network Technologies (VICFCNT 2020), Nov 6-7.

4.3 Book:

1. Digital Twin – Fundamental Concepts to Applications in Advanced Manufacturing, Authors: Pal, S.K., Mishra, D., Pal, A., Dutta, S., Chakravarty, D., Pal, S., Publisher: Springer, ISBN 978-3-030-81815-9, link: <https://www.springer.com/gp/book/9783030818142> (under

print)

2. Book Title: Nanoelectronics, Circuits & Communication Systems (Proceeding of NCCS-2019) Editors: Vijay Nath & J.K. Mandal, Series Title: Lecture Notes in Electrical Engineering Publisher: Springer Singapore Copyright Holder: Springer Nature Singapore Pte Ltd. Year of Publication: 2021, DOI: 10.1007/978-981-15-7486-3; e-Book ISBN 978-981-15-7486-3 Link: <https://www.springer.com/gp/book/9789811574856>; Indexed: Scopus
3. Book Title: Microelectronics, Computing & Communication Systems (Proceedings of MCCS-2019), Editors: Vijay Nath & J.K. Mandal Series, Title: Lecture Notes in Electrical Engineering Publisher: Springer Singapore Copyright Holder: Springer Nature Singapore Pte Ltd., Year of Publication: 2021, DOI: 10.1007/978-981-15-5546-6, e-Book ISBN 978-981-15-5546-6, Link: <https://www.springer.com/us/book/9789811555459>, Indexed: Scopus

4.3.1 Co-Authored: NA

4.3.2 Chapter(s) in Edited Book

1. A. Biswas, V.R. Gupta (2020), "Novel Compact Planar Four-Element MIMO Antenna for 4G/5G Applications", Springer Book Chapter of Nanoelectronics, Circuits and Communication Systems, Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_12 ISBN: 978-981-15-7486-3, vol 692, pp.-109-117.
2. S. Kumari, V. R. Gupta, S. Srivastava (2020), "Propagation Characteristics of SIW and Waveguide: A Comparison", Springer Book Chapter of Nanoelectronics, Circuits and Communication Systems, Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_50 ISBN: 978-981-15-7486-3, vol 692, pp.-551-559.
3. T K Dash, Solanki, S. S. (2020), "Performance Improvement of Multi-Channel Speech Enhancement using Modified Intelligent Kalman Filtering Algorithm" Book Chapter Springer - New Trends in Computational Vision and Bio-inspired Computing, pp.979-983.
4. R. Mohanty, B. K. Mallik, S. S. Solanki (2020), "Automatic Bird Species Recognition based on Spiking Neural Network", Springer Book Chapter of Lecture notes in Electrical Engineering), vol.



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 6. Bhardwaj M., Aradhana, Kumar A., Kumar P., Nath V. (2021), "Digital Implementation of Sigmoid Function in Artificial Neural Network Using VHDL", In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_6 Scopus Book Chapter
 7. Sateesh V.A., Surshetty S.K., Goel V., Prasad D., Nath V., Pal S. (2021), "Designing of Low-Noise Amplifier and Voltage-Controlled Oscillator for Satellite Receiver in Ku Band", In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_58 Scopus Book Chapter
 8. Arya A., Shekhar S., Priyam A., Nath V. (2021), "Design of Energy Harvester Using Piezoelectric Material", In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_60 Scopus Book Chapter
 9. Sarkar S., Kerketta A., Nath V. (2021), "KisaanSeva—A Web site for Serving the Farmers", In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_61 Scopus Book Chapter
 10. Datta K., Pal S., Nath V. (2021), "Design of a 2–30 GHz Low-Noise Amplifier: A Review", In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_64 Scopus Book Chapter
 11. Sahoo S., Gupta Y., Nath V., Pal S. (2021), "Ad Hoc Network Using UAVs in Indian Farms: A Review" In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_65 Scopus Book Chapter
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 13. Asati P., Koushik S., Nath V. (2021), "Website Development for Trading Between Farmers and Government", In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_69 Scopus Book Chapter
 14. Jahagirdar S., Manglani N., Rai S., Nath V. (2021), "Telemetry-Based System for Data Acquisition of Agricultural Practices in Rural Areas" In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_70 Scopus Book Chapter
 15. Prakash O., Ankit K., Kumar R., Nath V. (2021), "Design and Characterization of DC-to-DC Converters Using Active Inductor", In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_73 Scopus Book Chapter
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17. Ray M.K., Surshetty S.K., Goel V., Prasad D., Nath V. (2021), "Design of 4-Bit Multiplexer-Based Encoder for Analog to Digital Converter", In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_79 Scopus Book Chapter
18. Datta K., Prasad D., Surshetty S.K., Goel V., Nath V. (2021), "Design of a 4-Bit Wallace Tree Encoder for Flash ADC in 90 Nm CMOS Technology", In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_80 Scopus Book Chapter
19. Sateesh V.A., Kumar A., Priyadarshi R., Nath V. (2021), "A Novel Deployment Scheme to Enhance the Coverage in Wireless Sensor Network", In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_82 Scopus Book Chapter
20. Sateesh V.A., Dutta I., Priyadarshi R., Nath V. (2021), "Fractional Frequency Reuse Scheme for Noise-Limited Cellular Networks", In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_83 Scopus Book Chapter
21. Anand J., Chowdhury S., Prasad D., Nath V. (2021), "Smart Communication in Coal Mines", In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_86 Scopus Book Chapter
22. Ray M.K., Oraon A., Kumari R., Shreya S., Prasad D., Nath V. (2021), "FPGA-Based Smart Irrigation System", In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_87 Scopus Book Chapter
23. Patel R., Sinha N., Raj K., Prasad D., Pandey A., Nath V. (2021), "Smart Healthcare System Using IoT" In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_88 Scopus Book Chapter
24. Shashank Kumar Dubey and Aminul Islam (2021), "Effect of Source, Drain and Channel Spacing from Gate of HEMT," book series: Lecture Notes in Electrical Engineering (LNEE), vol. 664, pp. 81 – 90, title of the book: Energy Systems, Drives and Automations, edited by Afzal Sikander, DulalAcharjee, Chandan Kumar Chanda, Pranab Kumar Mondal, Piyush Verma, Print 978-981-15-5088-1, Online: ISBN 978-981-15-5089-8, publisher: Springer Nature Singapore Pte Ltd. 2020, https://doi.org/10.1007/978-981-15-5089-8_8
25. Vikash Kumar, Vidya Shree, D. Tejaswini, Shahid Afridi Qureshi, and Aminul Islam (2020), "Active Multifunctional Filter Design Using Carbon Nanotube Transistors," book series: Lecture Notes in Electrical Engineering (LNEE), vol. 664, pp. 103 – 111, title of the book: Energy Systems, Drives and Automations, edited by Afzal Sikander, DulalAcharjee, Chandan Kumar Chanda, Pranab Kumar Mondal, Piyush Verma, Print 978-981-15-5088-1, Online: ISBN 978-981-15-5089-8, publisher: Springer Nature Singapore Pte Ltd. 2020, https://doi.org/10.1007/978-981-15-5089-8_10
26. Shashank Kumar Dubey and Aminul Islam (2020), "Indium Phosphide Based Dual Gate High Electron Mobility Transistor," book series: Lecture Notes in Electrical Engineering (LNEE), vol. 664, pp. 255 – 264, title of the book: Energy Systems, Drives and Automations, edited by Afzal Sikander, DulalAcharjee, Chandan Kumar Chanda, Pranab Kumar Mondal, Piyush Verma, Print 978-981-15-5088-1, Online: ISBN 978-981-15-5089-8, publisher: Springer Nature Singapore Pte Ltd. 2020, https://doi.org/10.1007/978-981-15-5089-8_24



27. Vikash Kumar, Shashank Kumar Dubey and Aminul Islam (2020), "Comparative Study of Active Inductor-Based Low-Noise Amplifiers," book series: Lecture Notes in Electrical Engineering (LNEE), vol. 664, pp. 411 – 418, title of the book: Energy Systems, Drives and Automations, edited by Afzal Sikander, DulalAcharjee, Chandan Kumar Chanda, Pranab Kumar Mondal, Piyush Verma, Print 978-981-15-5088-1, Online: ISBN 978-981-15-5089-8, publisher: Springer Nature Singapore Pte Ltd. 2020, https://doi.org/10.1007/978-981-15-5089-8_40
28. Divya Sri Dodla, Sayonee Mohapatra, YashasviVijayvargiya, Shashank Kumar Dubey, Vikash Kumar, and Aminul Islam (2020), "Design of Robust Ratioed CMOS SR Latch," book series: Lecture Notes in Electrical Engineering (LNEE), vol. 664, pp. 429 – 441, title of the book: Energy Systems, Drives and Automations, edited by Afzal Sikander, DulalAcharjee, Chandan Kumar Chanda, Pranab Kumar Mondal, Piyush Verma, Print 978-981-15-5088-1, Online: ISBN 978-981-15-5089-8, publisher: Springer Nature Singapore Pte Ltd. 2020, https://doi.org/10.1007/978-981-15-5089-8_42
29. Shashank Kumar Dubey and Aminul Islam (2020), "Study and Analysis of AlInN/GaN Based High Electron Mobility Transistor," book series: Lecture Notes in Electrical Engineering (LNEE), vol. 664, pp. 449 – 459, title of the book: Energy Systems, Drives and Automations, edited by Afzal Sikander, Dulal Acharjee, Chandan Kumar Chanda, Pranab Kumar Mondal, Piyush Verma, Print 978-981-15-5088-1, Online: ISBN 978-981-15-5089-8, publisher: Springer Nature Singapore Pte Ltd. 2020, https://doi.org/10.1007/978-981-15-5089-8_44
30. Abhinit Saurabh, Amresh Kumar, Shashank Kumar Dubey, and Aminul Islam (2020), "A Technique to Design Robust Single-Stage Operational Amplifier," book series: Lecture Notes in Electrical Engineering (LNEE), vol. 664, pp. 469 – 478, title of the book: Energy Systems, Drives and Automations, edited by Afzal Sikander, Dulal Acharjee, Chandan Kumar Chanda, Pranab Kumar Mondal, Piyush Verma, Print 978-981-15-5088-1, Online: ISBN 978-981-15-5089-8, publisher: Springer Nature Singapore Pte Ltd. 2020, https://doi.org/10.1007/978-981-15-5089-8_46
31. Vikash Kumar, Shashank Kumar Dubey and Aminul Islam (2020), "A Current-Mode Memristor Emulator Circuit," book series: Lecture Notes in Electrical Engineering (LNEE), vol. 664, pp. 493 – 501, title of the book: Energy Systems, Drives and Automations, edited by Afzal Sikander, Dulal Acharjee, Chandan Kumar Chanda, Pranab Kumar Mondal, Piyush Verma, Print 978-981-15-5088-1, Online: ISBN 978-981-15-5089-8, publisher: Springer Nature Singapore Pte Ltd. 2020, https://doi.org/10.1007/978-981-15-5089-8_48
32. Vikash Kumar and Aminul Islam (2020), "Design of Fractional-Order Low-Pass and High-Pass Filter," book series: Lecture Notes in Electrical Engineering (LNEE), vol. 664, pp. 535 – 542, title of the book: Energy Systems, Drives and Automations, edited by Afzal Sikander, Dulal Acharjee, Chandan Kumar Chanda, Pranab Kumar Mondal, Piyush Verma, Print 978-981-15-5088-1, Online: ISBN 978-981-15-5089-8, publisher: Springer Nature Singapore Pte Ltd. 2020, https://doi.org/10.1007/978-981-15-5089-8_52
33. Vikash Kumar, Indrajit Pal and Aminul Islam (2020), "A Fully Integrated Tunable Memristor Emulator Circuit," book series: Lecture Notes in Electrical Engineering (LNEE), vol. 664, pp. 553 – 560, title of the book: Energy Systems, Drives and Automations, edited by Afzal Sikander, Dulal Acharjee, Chandan Kumar Chanda, Pranab Kumar Mondal, Piyush Verma, Print 978-981-15-5088-1, Online: ISBN 978-981-15-5089-8, publisher: Springer Nature Singapore Pte Ltd. 2020, https://doi.org/10.1007/978-981-15-5089-8_54
34. Rajeev Sharma, Sitanshu Sekhar Sahu, Abhay Upadhyay, Rishi Raj Sharma, and Ajit Kumar Sahoo (2021), "Sleep Stage Classification Using DWT and Dispersion Entropy Applied on EEG Signals" Computer-Aided Design for Biomedical Applications, CRC Press, Taylor & Francis Group, pp:35-56, ISBN: 978-0-367-63883-2
35. Sweta Kumari, Sitanshu Sekhar Sahu, Bharat Gupta, Sudhansu Kumar Mishra (2020), "Energy harvesting via human body activities" Smart Biosensors in Medical Care, Academic Press, pp: 87-106, ISBN: 978-0-12-820781-9
36. Bharati R., Sahay J. (2021), "Rectenna for Wireless Power Transmission" In: Nath V.,



Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, Springer, Singapore. vol 673. pp 413-421

37. Singh P.K., Patjoshi R.K., Tiwary A.K. (2021), "RF Front-End Band-Pass Filters for GPS Receiver" In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer,

Singapore. https://doi.org/10.1007/978-981-15-5546-6_58

38. Jha N., Sidhishwari S. (2021), "Analysis of Dispersion Compensation Techniques Used in Optical Fiber Communication" In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_74.

SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Dr. Vijay Nath	Certificate of Appreciation TI Embedded System Design using MSP430TM MCU MOOC. This certificate of appreciation is proudly presented to Dr. Vijay Nath in appreciation for fostering the ecosystem bridging Government, Academia and Industry	Texas Instrumentation & AICTE New Delhi	National	19th Jan 2021
2.	Dr. Aminul Islam	IET Premium Best Paper Awards 2020	IET	International	2020
3.	Mr. Vishal H Shah	RAWA Ikon International Award 2021, Category: International Sevashree Award (Social Work)	RU Renaissance Universal RAWA	International	January 2021

SECTION 6

ACTIVITIES/ FACULTY MEMBERS / BOS / DAS

6.1 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. Sandeep Singh Solanki	Professor and Head	No
2.	Dr. S K Ghorai	Professor	No
3.	Dr. Nisha Gupta	Professor and Dean	No



Sr. No.	Name	Designation	TEQIP Sponsored
4.	Dr. Vibha Rani Gupta	Professor and Dean	No
5.	Dr. Srikanta Pal	Professor	No
6.	Dr. Neela Chatteraj	Associate Professor	No
7.	Dr. Vijay Nath	Associate Professor	No
8.	Dr. Aminul Islam	Associate Professor	No
9.	Dr. Kartik Mahto	Assistant Professor	No
10.	Mr. Vishal H. Shah	Assistant Professor	No
11.	Dr. Janardan Sahay	Assistant Professor	No
12.	Dr. Sanjeet Kumar	Assistant Professor	No
13.	Dr. Sanjaya Shankar Tripathy	Assistant Professor	No
14.	Mr. Sukanta Kumar Dash	Assistant Professor	No
15.	Dr. Sitanshu Sekhar Sahu	Assistant Professor	No
16.	Dr. Manoj Kumar Mukul	Assistant Professor	No
17.	Dr. Gajendra Kant Mishra	Assistant Professor	No
18.	Dr. Somnath Sengupta	Assistant Professor	No
19.	Dr. Priyank Saxena	Assistant Professor	No
20.	Dr. Swati Prasad	Assistant Professor	No
21.	Dr. Dileep Kumar Upadhyay	Assistant Professor	No
22.	Dr. Anjini Kumar Tiwary	Assistant Professor	No
23.	Dr. Prajna Parimita Dash	Assistant Professor	No
24.	Mr. Santashraya Prasad	Assistant Professor	No
25.	Dr. Soumya Sidhishwari	Assistant Professor	No
26.	Dr. Rupesh Kumar Sinha	Associate Lecturer	No

6.2 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. S. S. Solanki	Professor	HOD, ECE, Chairman (Ex-Officio)
2.	Dr. S. K. Ghorai	Professor	Internal member
3.	Dr. N. Gupta	Professor	Internal member
4.	Dr. V. R. Gupta	Professor	Internal member
5.	Dr. S. Pal	Professor	Internal member
6.	Dr. V. Nath	Associate Professor	Internal member
7.	Dr. Kartik Mahto	Assistant Professor	Internal member



वार्षिक प्रतिवेदन 2020-2021

Sr. No.	Name of the Member	Designation	Role
8.	Dr. S. K. Rout	Professor	Dept. of Physics, Internal member
9.	Dr. T. Ghosh	Professor	Dept. of EEE, Internal member
10.	Dr. Umesh Chandra Pati	Professor	NIT, Rourkela (External member)
11.	Dr. Bratin Ghosh	Professor	IIT, Kharagpur (External member)
12.	Dr. Goutam Saha	Professor	IIT, Kharagpur (External member)
13.	Dr. Brajesh Kumar Kaushik	Professor	IIT, Roorkee (External member)
14.	Dr. Nandita Dasgupta	Professor	IIT, Madras (External member)
15.	Dr. Suvra Sekhar Das	Associate Professor	G.S Sanyal School of Telecommunication, IIT, Kharagpur (External member)
16.	Mr. Sanjaya Nayak	CEO & MD	Tejas Network (External member)
17.	Mr. Subhas Basu	CEO	Silicon Interfaces Pvt. Ltd. (External member)
18.	Parikhit Dutta	Sr. RF Engineer	Knowles Corporation, Bengaluru
19.	Dr. Shahiruddin	Assistant Professor	In charge, Dept. of ECE, Patna
20.	Dr. Sanjay Kumar	Associate Professor	In charge, Dept. of ECE, Deoghar
21.	Ankur Agarwal	Assistant Professor	In charge, Dept. of ECE, Jaipur
22.	Atharv Kapre	M.Tech 1st Yr. student	Student, Roll no: MT/ EC/10002/20
23.	Shashank Kumar	B.Tech.1st Yr. student	Student, Roll no: BTECH/10056/20
24.	Dr. P. P. Dash	Assistant Professor	Member Secretary



SECTION 7

OTHER INFORMATION

7.1 Publication by students, if any

Publications in Journals :

1. Ashish Raj, and Nisha Gupta (2020) "Radiation characteristics of microstrip antenna on frequency selective surface absorbing layer." International Journal of Microwave and Wireless Technologies, pp. 1-7.
2. Divya Prakash, and Nisha Gupta (2021) "Applications of metamaterial sensors: a review." International Journal of Microwave and Wireless Technologies (2021) pp. 1-15.
3. Atul Kumar Pandey, and Nisha Gupta (2021) "An Energy Efficient Adaptive Wake-Up Radio MAC (EEAWuR-MAC) Protocol for IoT Wireless Body Area Networks." Wireless Personal Communications pp. 1-25.
4. Atul Kumar Pandey, and Nisha Gupta, (2021) "An energy efficient hybrid MAC protocol for smart home networks". Serbian Journal of Electrical Engineering, 18(1), pp.63-73.
5. Sheelu Kumari, Vibha Rani Gupta and Shweta Srivastava, "Analysis of a narrow slot loading on half guided wavelength Folded Substrate Integrated Waveguide", Vol 19, No.2, pp. 174 -181, June 2021, ECTI Transactions on Electrical Engineering, Electronics, and Communications ISSN: 1685-9545. <https://doi.org/10.37936/ecti-eec.2021192.241655>(Scopus)
6. Sheelu Kumari, Vibha Rani Gupta and Shweta Srivastava, "Folded Substrate Integrated Waveguide Based Multiband Filter for Wi-Fi6E Application", Wireless Personal Communications, Vol 119, pp.1607-1618, March 2021, Springer US ISSN 0929-6212 (Print), ISSN 1572-834X (Online). (SCI)<https://doi.org/10.1007/s11277-021-08297-3>
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8. Prasad D, Dutta K, Kumar S., Paul P., Nath V. (2020) A Novel Design of UWB Low Noise Amplifier for 2-10 GHz Wireless Sensor Applications. Sensor International, Elsevier, pp 100041.
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 23. Saurabh Srivastava, PrajnaParimita Dash, and Sanjay Kumar, "Capacity Analysis of Non-Orthogonal Multiple Access for Uplink and Downlink," *Journal of Mobile Multimedia*, 171(3), pp.385-406, February 2021.
- Publications in Proceedings:**
1. Ashish Raj, and Nisha Gupta (2020) "Electromagnetic Characteristics of Carbon Fiber Based Microwave Absorber for Fixed Mobile FSS Band." in 2020 IEEE International Women in Engineering (WIE) Conference on Electrical and Computer Engineering (WIECON-ECE), pp. 170-172. IEEE.
 2. Bhardwaj M., Aradhana, Kumar A., Kumar P., Nath V. (2021) Digital Implementation of Sigmoid Function in Artificial Neural Network Using VHDL. In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_6 Scopus Book Chapter
 3. Sateesh V.A., Surshetty S.K., Goel V., Prasad D., Nath V., Pal S. (2021) Designing of Low-Noise Amplifier and Voltage-Controlled Oscillator for Satellite Receiver in Ku Band. In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_58 Scopus Book Chapter
 4. Arya A., Shekhar S., Priyam A., Nath V. (2021) Design of Energy Harvester Using Piezoelectric Material. In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_60 Scopus



Book Chapter

5. Sarkar S., Kerketta A., Nath V. (2021) KisaanSeva—A Web site for Serving the Farmers. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_61 Scopus Book Chapter
6. Datta K., Pal S., Nath V. (2021) Design of a 2–30 GHz Low-Noise Amplifier: A Review. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_64 Scopus Book Chapter
7. Sahoo S., Gupta Y., Nath V., Pal S. (2021) Ad Hoc Network Using UAVs in Indian Farms: A Review. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_65 Scopus Book Chapter
8. Ponugoti J.S., Karuturi S.S.T., Nath V. (2021) Web Application Based on PHP for Farmers. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_66 Scopus Book Chapter
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10. Jahagirdar S., Manglani N., Rai S., Nath V. (2021) Telemetry-Based System for Data Acquisition of Agricultural Practices in Rural Areas. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_70 Scopus Book Chapter
11. Prakash O., Ankit K., Kumar R., Nath V. (2021) Design and Characterization of DC-to-DC Converters Using Active Inductor. In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_73 Scopus Book Chapter
12. Sanjay Kumar S., Goel V., Prasad D., Nath V. (2021) A 0.48 mW High Performance 4-Bit Flash ADC for System-on-Chip Applications in 90 nm CMOS Technology. In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_78 Scopus Book Chapter
13. Ray M.K., Surshetty S.K., Goel V., Prasad D., Nath V. (2021) Design of 4-Bit Multiplexer-Based Encoder for Analog to Digital Converter. In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_79 Scopus Book Chapter
14. Datta K., Prasad D., Surshetty S.K., Goel V., Nath V. (2021) Design of a 4-Bit Wallace Tree Encoder for Flash ADC in 90 Nm CMOS Technology. In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_80 Scopus Book Chapter
15. Sateesh V.A., Kumar A., Priyadarshi R., Nath V. (2021) A Novel Deployment Scheme to Enhance the Coverage in Wireless Sensor Network. In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_82 Scopus Book Chapter
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17. Anand J., Chowdhury S., Prasad D., Nath V. (2021) Smart Communication in Coal Mines. In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_86 Scopus Book Chapter
18. Ray M.K., Oraon A., Kumari R., Shreya S., Prasad D., Nath V. (2021) FPGA-Based Smart Irrigation System. In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_87 Scopus Book Chapter
19. Patel R., Sinha N., Raj K., Prasad D., Pandey A., Nath V. (2021) Smart Healthcare System

Using IoT. In: Nath V., Mandal J.K. (eds) Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore. https://doi.org/10.1007/978-981-15-5546-6_88 Scopus Book Chapter

20. S. R. Nayini, K. Sai Kushal Gella, S. K. Dubey, M. Guduri and A. Islam, "Robust Design of Noise Tolerant 2-Phase Non Overlapping Clock Generating Circuit," 2021 Devices for Integrated Circuit (DevIC), 19-20 May 2021, pp. 211-215, doi: 10.1109/DevIC50843.2021.9455843. <https://doi.org/10.1109/DevIC50843.2021.9455843>
21. J. P. Kotni, M. Pandey, S. Prasad and A. Islam, "Radiation-Hardened Low Read Delay 12T-SRAM Cell for Space Applications," 2021 Devices for Integrated Circuit (DevIC), 19-20 May 2021, pp. 512-516, doi: 10.1109/DevIC50843.2021.9455796. <https://doi.org/10.1109/DevIC50843.2021.9455796>

7.2 Achievements of Students :

Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
1.	Subhankar Bose (B.E.)	Admission to the PhD with Full Scholarship	Washington University, USA	Starting Fall 2020.

7.3 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Abhishek Sinha, 1999, Eko India Financial Services	Co-founder & CEO
2.	Ashutosh Pande, 1987, Arogya mHealth Pvt. Ltd.	Founder
3.	Niraj Sharan, 1980, Aura Inc	Chairman & CEO
4.	Rohit Prasad, 1997, Amazon Inc.	Senior Vice President and Head Scientist for Alexa
5.	Subhas Basu, 1985, Silicon Interfaces	CEO
6.	Akshay Jalan, 2013, Brainsmith	Co-founder

8. Any other relevant information

Infrastructure / Equipment added during the year:

Many equipments are added to the various laboratories of the department like DSP Kit, Digital Voltmeter, Digital Multimeter, Discrete Components, Solar Cell Charac. Trainer, Current Meter /Ammeter, LVDT trainer module, Calibration test bench, AC bridge Setup, Torque Measurement, Thermocouple, Decade Capacitor Bank Box, Decoder Resistors Box, DSO, Modulation & Demodulation Kit.

Apart from this some infrastructure is enhanced with inclusion of Air Conditioner, Projector, Portable Projector, Chair, Almira, Xerox Machine High Speed-1, Scanner Multipurpose High Speed-1, Table(1-Office



table+Computer table), Lab Tables (2.5 x 8 feet), Almirah big (Glass display to file). Recently department has renovated the seminar room with all modern amenities.

9. Special Covid Initiatives, if any

Institute has been issuing covid -19 related guidelines time to time and those are followed by the department. Online support is given to all students in general and particularly PhD scholar are benefited by the online support for registration, pre PhD presentations, thesis submission and final viva voice examination.

Faculty members are allowed to take online classes as per the guideline issued by the institute.

Department of Hotel Management and Catering Technology

SECTION 1

DEPARTMENTAL PROFILE



1. About the Department :

Department of Hotel Management & Catering Technology of BIT MESRA was established in January-2003. Department offers 4 years (8 Semester) Bachelor's Degree in Hotel Management & Catering Technology (BHMCT). The program lays emphasis on practical application of theoretical lessons through training, laboratory work, hands on workshops, theme parties, project and study tour. The department has a well-qualified team of faculty members with a blend of sound industry experience in India and overseas, and academic excellence, who are consistently involved in various training, consultancy and research activities. The faculty members put in immense effort for both academic and practical training of the students.

Department is well equipped with training kitchen and bakery, training restaurant, housekeeping laboratory, laundry laboratory, front office laboratory etc. which ensure practical training in

a professional environment to students.

Department has biannual double blind refereed, research journal JOHAR- Journal of Hospitality Application and Research published in association with Publishing India Group which is indexed in ProQuest, i-scholar and Sci-Archives.

Department has its own departmental club 'Hospitality Club' solely managed by students which hones their managerial and entrepreneurial skills required in the hospitality industry. As a regular feature department organizes various workshops, theme parties, food festivals and outdoor caterings to cultivate skill among the students.

Among the branded and luxurious hotels in India our department has gained a very good image and students go on "Industrial Exposure Training" in India and abroad for 18 weeks in various star Hotels such as Taj group of hotels, Oberoi group of hotels, ITC group of hotels, The Park hotels, Marriott group of hotels, etc.

SECTION 2

SEMINAR / CONFERENCE

2.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	FDP on Outcome Based Education and Online Learning Teaching	Praveen Srivastava, Nishikant Kumar (Co-convenor)	BIT Mesra, Ranchi.	29.06.2020 – 03.07.2020



2.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Praveen Srivastava	Inculcating Universal Human Values in Technical Education	N/A	AICTE	Online	19.04.2021 – 23.04.2021
2.	Praveen Srivastava	3rd International Conference on Digital Economy & 14th Annual Indian Subcontinent Institute of Decision Sciences Conference (Building New Digital Ecosystems)	BIT Mesra	Centre for Digital Economy, Indian Institute of Management (IIM) Raipur.	Online	27.12.2020 – 29.12.2020
3.	Praveen Srivastava	Discovering Structural Equation Modelling Through IBM SPSS AMOS	Self	JVA Eductech	Online	14.7.2020 – 16.7. 2020
4.	Abhinav Kumar Shandilya	Workplace Communication	Self	IIT BombayX	Online	15.07.20 – 15.12.20
5.	Abhinav Kumar Shandilya	Inculcating Universal Human Values in Technical Education	N/A	AICTE	Online	28.06.21 – 02.07.21
6.	Nishikant Kumar	Inculcating Universal Human Values in Technical Education	AICTE	AICTE	Online	07.06.21 – 11.06.21
7.	Abhisek Jana	Inculcating Universal Human Values in Technical Education	AICTE	AICTE	Online	7.6.2021- 11.6.2021
8.	Abhisek Jana	Outcome Based Education and Online Learning Teaching		Dept. of Management and Dept. of HMCT, BIT, Mesra	Online	29.06.2020 – 03.07.2020
9.	Gautam Shandilya	Use of LMS, virtual teaching and OBE software for Engineering Colleges	-	VMEdulife software Services	Webinar	13.08.2020
10.	Gautam Shandilya	Outcome Based Education and Online Learning Teaching	-	Deptt. Of Management and Deptt of HMCT	FDP	29.06.2020 – 03.07.2020
11.	Gautam Shandilya	National Education Policy 2020	TEQIP	BIT Mesra, Off Campus, Deoghar and Deptt. of ECE, BIT Mesra	Webinar	24.03.2021



SECTION 3

RESEARCH PUBLICATIONS

3.1 Publications in Journals :

1. Sinha, A.P., Srivastava, P., Pandey, R.K. & Asthana, A.K. (2020), The impact of Human Capital (Talent) on Organisational Performance: A study related to service sector in India. Journal of Critical Review 7(19), 6517-6525.
2. Pranjal Kumar, Sanjiv Kr. Srivastava, Gautam Shandilya (2021). A Strategy of Using Facebook for Digital Advertising in All of the Hotels across India. Psychology and education. 58(5), ISSN 1553 -6939. pp. 2454-2461.

3. Ekka, P. & Sinha, A.K. (2020). The Economic Impacts of the Indian hospitality industry: A Mini-Review. International Journal of Latest Engineering and Management Research (IJLEMR) Vol (5)7,26-34.

3.2 Book

3.2.1 Co-Authored

1. Md. Laraib Ahsan, Gautam Shandilya (2021). Biryani: Origins and Variations. Kindle Edition. Pages-94.

SECTION 4

AWARD / PATENT / COLLABORATIONS

4.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Praveen Srivastava	Course Staff for IIT BombayX course LaTeX 101x "Latex for Students, Engineers, and Scientist"	IIT Bombay	National	Jan to May 2021
2.	Praveen Srivastava	Resource Person in one week FDP on Outcome Based Education and Online Learning Teaching	Department of HMCT and Department of Management, BIT Mesra	National	29th June2020 to 3rd July2021

SECTION 5

ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

5.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
1.	Recontre des Seniors (Golden Seniors Meet)	N/A	Dr. Nishikant Kumar, Dr. Abhisek Jana	12th July 2020, 03:00 PM to 06:00 PM
2.	Webinar- World Tourism Day Celebration	N/A	Dr. Nishikant Kumar, Dr. Abhisek Jana	29th September 2020, 11:00 AM to 12:00 PM
3.	Webinar on New Role of Housekeeping Post Covid-19, Challenges and Opportunities in Hotels	N/A	Dr. Nishikant Kumar, Dr. Abhisek Jana	6th February 2021, 11:00 AM to 12:00 PM



5.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored (Yes / No)
1.	Dr. Praveen Srivastava	Assistant Professor	No
2.	Dr. Abhinav Kr. Shandilya	Assistant Professor	No
3.	Dr. Nishikant Kumar	Assistant Professor	No
4.	Dr. Abhisek Jana	Assistant Professor	No
5.	Dr. Rajeshwari Chateerjee	Assistant Professor	No
6.	Mr. Sanjiv Kr. Srivastava	Assistant Professor	No
7.	Dr. Amit Saran	Assistant Professor	No
8.	Mr. Gautam Shandilya	Assistant Professor	No
9.	Ms. Pratima Ekka	Assistant Professor	No
10.	Dr. Pranjal Kumar	Assistant Professor	No

5.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Nishikant Kumar	HOD (I/c) - (Ex-Officio)	Chairman
2.	Dr. Praveen Srivastava	Asst. Professor, Dept. of HMCT	Internal Member
3.	Dr. Abhinav Kr. Shandilya	Asst. Professor, Dept. of HMCT	Internal Member
4.	Dr. Nishikant Kumar	Asst. Professor, Dept. of HMCT	Internal Member
5.	Dr. Abhisek Jana	Asst. Professor, Dept. of HMCT	Internal Member
6.	Mr. Sanjiv Kr. Srivastava	Asst. Professor, Dept. of HMCT	Internal Member
7.	Dr. Amit Saran	Asst. Professor, Dept. of HMCT	Internal Member
8.	Mr. Gautam Shandilya	Asst. Professor, Dept. of HMCT	Internal Member
9.	Dr. Rajeshwari Chateerjee	Asst. Professor, Dept. of HMCT	Internal Member
10.	Dr. B. N. Sinha	Professor, Dept. of Pharmaceutical Sciences and Technology	Internal Member
11.	Prof. Shradha Shivani	Professor, Dept. of Management	Internal Member
12.	Dr. Saswati Ghosh Sachen	Asst. Professor, Dept. of Bioengineering	Internal Member
13.	General Manager, Hotel Radisson Blu, Ranchi	(Ex-Officio)	External Member
14.	General Manager, JTDC, Ranchi	(Ex-Officio)	External Member



SECTION 6

OTHER INFORMATION

6.1 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1	Manas Pandey Batch: 2K4 Affiliation: National General Insurance Co., Dubai, UAE	Sr. Business development manger. Responsible to develop new corporate account.
2	Govind Mishra Batch: 2K5 Affiliation: Nour Arjaan by Rotana, UAE	Manager – Sales & Marketing.
3	Subhadra Saxena Batch: 2K5 Affiliation: Banl of New York, Pune	People analyst, Operations and Technical.
4	Anik Anand Batch: 2K6 Affiliation: Sheraton Hotels, Ethopia (East Africa)	Director of room operation in Sheraton by Luxury collection.
5	Parth Chopra Batch: 2K8 Affiliation: Carnival Cruise Line, USA	Demi Chef.

6.2 Any other relevant information

Infrastructure / Equipment added during the year:

- (i) Developed Finishing Kitchen Lab: Area 45.41 Sq. meter
Euiipment added: Electrical Oven, Bratt Pan, Salamander, Toaster Oven, Food Processor, Mixer Grinder, Tea Brewer etc.
- (ii) Developed Training Bar lab: Area 45.41 Sq. meter
- (iii) Developed Reception and Simulation Lab + Executive waiting Lounge in Front Office Lab: Area 90.82 Sq. meter.
Euiipment added: Executive Sofa for seating with centre table, Smart Television.

DEPARTMENT OF MANAGEMENT

SECTION 1

DEPARTMENTAL PROFILE

1. About the Department :

The Department of Management was established in the year 1979 with the aim of serving the growing need for qualified professionals who could harness the resources of the country to achieve its development goals. The department has continuously strived to achieve this aim by maintaining the highest standards in the Post Graduate (MBA) and Doctoral Programmes offered by it since its inception. The vision of the department today is to be recognized as a front runner in Management education in the country in consonance with the social, economic and ecological environment while striving to contribute to nation building through excellence in research and development activities. The department follows the philosophy of Outcome Based Education. Therefore, the teaching-learning process is student centric. The pedagogy is practical, hands on and real time. Case studies, Problem Solving Exercises, Role-Plays, Management Games and Presentations are extensively used. The curriculum is planned to facilitate learning in theory and practice of

all aspects of the discipline of management ensuring the achievement of predefined learning outcomes.

Vision

To be recognized as a front runner in Management education in the country in consonance with the social, economic and ecological environment while striving to contribute to nation building through excellence in research and development activities.

Mission

- To educate students at Postgraduate and Doctoral level to perform better in challenging environment.
- To nurture first generation entrepreneurs with innovative mindset.
- To provide excellent Consulting, and Research & Development facilities for faculty and students.
- To uphold the values of Personal Integrity and Social Responsibility

SECTION 2

SEMINAR / CONFERENCE

2.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	"Women Leadership in The Corporate World"	Dr. Shradha Shivani & Dr. Sraboni Dutta	Department of Management, BIT Mesra	6th, February 2021.
2	Doctoral Colloquium	Dr. Sraboni Dutta & Dr Rohini Jha	Department of Management, BIT Mesra	January 30th, 2021
3	Outcome Based Education (OBE) & Online Learning-Teaching	Dr. Shradha Shivani	Department of Management, BIT Mesra & Department of Hotel Management & Catering Technology	29th June – 3rd July 2020



2.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Anand Prasad Sinha	"The Art and Science of choosing an Effective Research Design and Quantitative Methods"		Presidency University, School of Commerce	Online	6th February 2021.
2.	Dr. Anand Prasad Sinha	National Education Policy 2020		BIT Off-Campus Deoghar	Online	24th March, 2021
3.	Dr. Anand Prasad Sinha	R Crash Course for Absolute Beginners		JVA Eductech, Lucknow	Online	21-23 May 21
4.	Dr. Anand Prasad Sinha	National Faculty Development Program on Advanced Research Methods and Quantitative Data Analysis		JVA Eductech, Lucknow	Online	21-27 Sep 20
5	Dr. Anand Prasad Sinha	Faculty Development Programme on Outcome Based Education (OBE) & Online Learning-Teaching.	BIT Mesra	Department of Management in collaboration with the Department of Hotel Management & Catering Technology		29th June – 3rd July 2020.
6	Mrs. Shelly Srivastava	International Conference on Drivers of Global Economic Recovery	-----	Maharaja Agrasen Institute of Management Studies	Online	23rd April'21
7	Mrs. Shelly Srivastava & Dr. Supriyo Roy	3rd International Conference on Digital Economy & 14th Annual Indian Subcontinent Institute of Decision Sciences Conference (Building New Digital Ecosystems)	BIT Mesra	Centre for Digital Economy, Indian Institute of Management (IIM) Raipur.	Online	27th-29th Dec. '20
8	Sujata Priyambada Dash	23rd NHRDN National Conference on 'Transforming HR: Agility. Resilience. Digital	BIT Mesra	Delhi & NCR Chapter	Online	February 26-27, 2021
9	Sujata Priyambada Dash	Faculty Development Program on Deep Learning	AICTE-ISTE	BIT Mesra, Ranchi	Online Mode	29.04.2021 to 05.05.2021 (1 week)
10	Sujata Priyambada Dash	Webinar on Digital Campus on the Cloud for Education (East + Central India)	ASMA	Collpoll	Online mode	18.12.2020 (1DAY)



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
11	Sujata Priyambada Dash	International Webinar on 'Guide to planning and publishing your book and author perspective'.	Emerald	Emerald Publishing, UK	Online mode	10.12.2020 (1DAY)
12	Sujata Priyambada Dash	Webinar on Digital Campus on the Cloud for Education on 'Digital Transformation of Educational Institutions for New Age Education in the Post-COVID Era (SOUTH INDIA)	ASMA	Collpoll	Online mode	30.11.2020 (1 DAY)
13	Sujata Priyambada Dash	Webinar on Education Leadership Conclave-School Leadership Conclave (IB & Boarding)	ASMA	Collpoll	Online mode	30.10.2020 (1 DAY)
14	Sujata Priyambada Dash	Webinar on "Impact of COVID-19 on Mental Health and Well-being"	TEQIP-III	Department of Bioengineering, BIT, Mesra, Ranchi	Online mode	08.08.2020 (1DAY)
15	Sujata Priyambada Dash	International Webinar on "Strategies for Securing Digital Content"	TEQIP-III	Chhattisgarh Swami Vivekanand Technical University, Bhilai and Rungta College of Engineering and Technology, Bhilai	Online mode	25.07.2020 (1DAY)
16	Sujata Priyambada Dash	Webinar on "Learn the Anatomy of a Digital Weapon" by Mr. Vivek Shangari	Rungta Group of Institutions	Rungta Group of Institutions	Online mode	19.07.2020
17	Sujata Priyambada Dash	International Level Webinar on "Managing Business in a Post COVID-19 World: Changes, Challenges and Strategies"	IQAC Cell	Post-Graduate and Research Department of Commerce, St. Xavier's College (Autonomous), Kolkata	Online mode	18.07.2020 to 19.07.2020 (2 DAYS)
18	Sujata Priyambada Dash	Webinar on "Career Along COVID-19- Industry Readiness" by Mr. Krithivasan. S	Rungta Group of Institutions	Rungta Group of Institutions	Online mode	18.07.2020 (1 DAY)
19	Sujata Priyambada Dash	Webinar on "Winning Over COVID-Recruitment Initiatives by TCS" by Mr. ManadeepBagchi	Rungta Group of Institutions	Rungta Group of Institutions	Online mode	12.07.2020 (1 DAY)
20	Sujata Priyambada Dash	Live Webinar on "Post COVID- Apna Time Aayega" by Mr. Anurag Basu	Rungta Group of Institutions	Rungta Group of Institutions	Online mode	11.07.2020 (1 DAY)



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
21	Sujata Priyambada Dash	Webinar on "MEGATRENDS AND MEGACHANGES" by Ambassador Dr. Deepak Vohra	Rungta Group of Institutions	Rungta Group of Institutions	Online mode	05.07.2020 (1 DAY)
22	Sujata Priyambada Dash	Webinar on "COVID-19 is an Opportunity" by Mr. N. Raghuraman	Rungta Group of Institutions	Rungta Group of Institutions	Online mode	04.07.2020 (1 DAY)
23	Dr. Rohini Jha	Faculty Development Program on Delivering Online Course using CANVAS LMS (online mode)	TEQIP-III	BIT Mesra, Ranchi	Online Mode	27/7/20 to 5/8/20 (2 weeks)
24	Dr. Rohini Jha	Cyber Security and Investigation Tools	TEQIP-III	BIT Mesra, Ranchi	Online Mode	11/9/20 to 15/9/20. (5 days)
25	Dr. Rohini Jha	Challenges and Opportunities in Cyber Security With Current Tools and Techniques	CMR Engineering College, Hyderabad	Dept of Computer Science	Online Mode	5/7/21 to 9/7/21
26	Srivastava, M., Dutta, S., & Shivani, S.	Revisiting the concept of Triple Helix and Entrepreneurial Orientation. In 3rd ICDE & 14th ISDSI Annual Conference.		IIM Raipur	Online Mode	29-Dec'2020

SECTION 3

RESEARCH PUBLICATIONS

3.1 Publications in Journals :

- S. Srivastava and Supriyo Roy (2021). Impact of Equity Investment Intention Towards Behaviour: An Empirical Analysis. Published in 'VISION - The Journal of Business Perspective', SAGE Publication. April 2021. doi:10.1177/09722629211004374.
- Dash, Sujata Priyambada and Roy, Supriyo. (2021). Performance Evaluation Under Human Capital Perspective: An Empirical Evidence. Published in International Journal of Productivity and Performance Management, Emerald Publishers, UK, Indexed by Non-Paid SCOPUS (3.3), Non-Paid ABDC-B, Quartile 1, ESCI Indexed Journal-Web of Science (ISSN print: 1741-0401), Vol. 70 No.6, pp. 1336-1360, DOI:10.1108/IJPPM-07-2019-0334.
- Dutta, S. and Shivani, S. (2021). Acceptance and Use of E-Commerce Technology among Micro & Small Women Entrepreneurs in India:

Analysis of Determinants in International Journal of Business Innovation and Research (IJBIR) Inderscience publications, Printing in press.

- Bhaskar Sinha, Supriyo Roy, and Kaushik Kumar (2020). Sustainable Reverse Chain: A Case Base Analysis To Bioremediation Of Oily Sludge. Published: Resources, Environment, and Sustainability, Elsevier, ISSN: 2666-9161. Available online 30th Nov. 2020. <https://doi.org/10.1016/j.resenv.2020.100008>.
- Dash, Sujata Priyambada and Roy, Supriyo. (2020). Role of Human Capital in Organisational Performance: A Theoretical Framework. OPUS-HR Journal, SCMHRD and publishingindia.com Publishers, Vol 11 Issue 2, pp. 1-26. India, Indexed by EBSCO, Indian Citation Index, (ISSN Print: 0973-9866)
- Rohini Jha."Review of Data Mining and Data Warehousing Implementation in E-Governance".



International Journal of Innovative Science and Research Technology(IJISRT) Volume 5 - 2020, Issue 10 - October ISSN No :- 2456-2165.

- Anand Pd. Sinha, Praveen Srivastava, Ashok Kumar Asthna, (2021). "Customer Satisfaction and Loyalty for Online Food Services Provider in India-An Empirical Study" Sage Vision – The Journal of Business Perspective Management Development Institute (Printing in press).
- Anand Pd. Sinha, P.K. Chatterjee, Shailendra Kumar Singh, Ashok Kumar Asthana. (2020). Factors in Technology Management and its Performance: A Case Study of Indian Open Cast Coal Mining. International Journal of Policy and Technology Management (Inderscience)printing in press.
- Anand Pd. Sinha., Praveen Srivastava., Rohit Kumar Pandey., Ashok Kumar Asthna. (2020). The impact of human capital (talent) on Organizational performance: A study related to service sectors in India .JOURNAL OF CRITICAL REVIEWS, VOL 7, ISSUE 19, pp.6517-6535.
- Srivastava M., Dutta S., and Shivani S. (2021) Emerging Drivers of Entrepreneurial Intentions: A Review. International Journal of Creative Research Thoughts, 9(2), 5209-5215. IJCRT.
- Malpani, Rashi and Ghosh, Anupam (2020). Can a Startup Be Sustainable and Socially Responsible? A Glimpse of Activities for Sustainability (July22,2020). SSRN,pp.1-43.
- Rohini Jha(2020) .Review of Data Mining and Data Warehousing Implementation in E-Governance. International Journal of Innovative Science and Research Technology(IJISRT) 5(10),pp.18-28.
- Sodhi, S & Ghosh, A. (2020). Sustainability Assessment: A Review of an Integration of Life Cycle Assessment Methodologies–Product, Process and from Companies Perspective, International Journal of Mechanical and Production Engineering Research and Development., Vol : 10 (3), 3639–3658.
- Jha, Rohini. (2020). Analyzing Improved Rank of e-Governance and Acceptance in India. International Journal of Research and Analysis in Science and Engineering, 1(1) pp.1-8.
- Rohini Jha (2020) .Review of Data Mining and Data Warehousing Implementation in E-Governance.

International Journal of Innovative Science and Research Technology(IJISRT) 5(10),pp.18-28

3.2 Publications in Proceedings:

- Dutta, S. and Shivani S. (2020). Modified UTAUT2 to determine Intention and Use of
- E-Commerce Technology among Micro & Small Women Entrepreneurs in Jharkhand, India. Accepted for presentation and publication in IFIP WG8.6 Conference 2020, IIM Trichy, 17-19 Dec 2020.
- Srivastava, M., Dutta, S., & Shivani, S. (2020). Emerging Drivers of Entrepreneurial Intentions: A Literature Review. Accepted for presentation and publication in 22nd Annual Convention of the Strategic Management Forum, IIM Ranchi, 20th-23rd Dec 2020.
- Srivastava, M., Dutta, S., & Shivani, S. (2020). Family Climate and Entrepreneurial Self Efficacy: Moderating Role of Family's Occupation. Accepted for presentation and publication in 2020 Interdisciplinary European Conference on Entrepreneurship Research (18th IECER), University of Beira Interior, Portugal 13-18 October, 2020.
- Srivastava, M., Dutta, S., & Shivani, S. (2021). Do risk-taking propensity and sustainable entrepreneurial intentions go hand in hand? In 13th Managerial Challenges of the Contemporary Society.MCCS Conference, Babes-Bolyai, University, Romania,04-June'2021.

3.3 Book:

3.3.1 Chapter(s) in Edited Book

- Preeti, Roy S. (2020) Performance Modelling on Banking System: A Data Envelopment Analysis-Artificial Neural Network Approach. In: Sharma S.K., Dwivedi Y.K., Metri B., Rana N.P. (eds) Re-imagining Diffusion and Adoption of Information Technology and Systems: A Continuing Conversation. TDIT 2020. IFIP Advances in Information and Communication Technology, Vol. 617, pp 581-597. Springer, Cham. https://doi.org/10.1007/978-3-030-64849-7_52.
- Supriyo Roy and K. Kumar (2020). Strategic best-in-class performance for voice to the customer: is Big data in Logistics a perfect fit?. Published in International book title 'Web



Services: Concepts, Methodologies, Tools, and Applications. Information Resources Management Association, DOI: 10.4018/978-1-5225-7501-6. ch 107, 2086-2098, IGI Global, USA.

- Dash, Sujata Priyambada (2021). 'Post Pandemic: The New Advanced Society' on the title 'Artificial Intelligence and Industrial Internet of Things Paradigm, Publisher: Wiley Scrivener, USA. (Accepted) Indexed in SCOPUS.
- Dash, Sujata Priyambada, Gantayat, P. K. & Mohanty, S. (2021). Employee Churn

Management Using AI' on the title Artificial Intelligence and Machine Learning in Business Management: Concepts, Challenges, and Case Studies, Publisher: CRC Press, Taylor & Francis, USA. (Accepted) Indexed in SCOPUS. (ISBN: 978-1-003-12512-9)

- Jena, A. K & Dash, Sujata Priyambada. (2021). Blockchain Technology: Introduction, Applications, Challenges in Blockchain Technology: Applications and Challenges, Published by Springer, Intelligent Systems Reference Library 203, doi.org/10.1007/978-3-030-69395-4_1. Indexed in SCOPUS.

SECTION 4

AWARD / PATENT / COLLABORATIONS

4.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Dr. Manju Bhagat	Nominated as Member of Jharkhand State Legal Services Authority (JHALSA), Ranchi	BIT Mesra	State Level	8th October, 2020
2.	Dr. Anupam Ghosh	Invited as Key Note Speaker at a two Day International Webinar on 'Managing Business in a Post COVID-19 World: Changes, Challenges and Strategies'	St. Xavier's College, Kolkata	International level	18th -19th July 2020 (2 days)
3.	Dr. Anupam Ghosh	Invited as Speaker at TEQIP sponsored online FDP on 'Artificial Intelligence and Machine Learning in Healthcare	Dept. of Bioengineering and Department of Electronics & Communications Engineering, BIT Mesra.	National level	27th- 31st July 2020 (5 days)
4	Dr S Shivani	Invited for a Talk on New Education Policy	VES Business School, Mumbai	National	17th April 2021

4.2 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	Jharkhand Small Industries Association (JSIA)	Working together to promote the entrepreneurial ecosystem of the state.	20th April 2021

**SECTION 5****ACTIVITIES/ FACULTY MEMBERS / BOS / DAS****5.1 Departmental Students' Activities**

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
1.	AURA'21,	Himnashu Shekhar, Nikita Jha, Vidisha	Dr. S. Dutta, Ms Shelly Shrivastava, Mr Shailendra K Singh, Ms Sujata P Dash, Dr. Anand Pd Sinha	30th May 2021
2	EVOLUTION'21	Sidharth Roshan, Himanshu Shekhar, Ricky Mahato	Mrs. Shelly Srivastava, Sinha, Mrs Sujata Dash	16th May 2021
3	STOCK MIND	Aditya kr. Singh, Diksha	Dr. Anupam Ghosh	7th Apr. 2021
4	KARTAVYA2021	Satyam Shandilya, Summet Raj	Mr. S.K. Singh Ms S P Dash	3rd Apr. 2021
5	BTrix 21	Raj Vardhan, Pramit Basu, Sheowani Kashyap	Dr. S. Dutta, Ms Shelly Shrivastava, Mr Shailendra K Singh, Ms Sujata P Dash, Dr. Anand Pd Sinha	20th - 21st Feb. 2021
6	INTERNICO 2020	Raj Vardhan, Pramit Basu, Sheowani Kashyap	Ms Sujata P Dash, Ms Shelly Shrivastava	16th Nov. 2020
7	DAKSHAM: Build the Change	Satyam Shandilya, Sumeet Raj	Mr. S.K. Singh, Ms Sujata Dash	20th Sept. 2020

5.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. Shradha Shivani	Professor & Head	No
2.	Dr. Utpal Baul	Dean (A&IR) & Professor	No
3.	Dr. Manju Bhagat	Professor	No
4.	Dr. Ravindra Nath Bhagat	Professor	No
5.	Dr. Sraboni Dutta	Associate Professor	No
6.	Dr. Supriyo Roy	Associate Professor	No
7.	Dr. Anupam Ghosh	Assistant Professor	No
8.	Dr. Dharmendra Kumar Chand	Assistant Professor	No
9.	Dr. Praveen Chandra Jha	Assistant Professor	No
10.	Dr. Rohit Kumar Pandey	Assistant Professor	No
11.	Dr. Anand Kumar	Assistant Professor	No
12.	Mr. Shailendra Kumar Singh	Assistant Professor	No
13.	Dr. Mrs Rohini Jha	Assistant Professor	No
14.	Dr. Amitabh Verma	Assistant Professor	No
15.	Mrs. Shelly Srivastava	Assistant Professor	No
16.	Dr. Anand Prasad Sinha	Assistant Professor	No
17.	Mrs. Sujata Priyambada Dash	Assistant Professor	No



5.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. Alok Chaturvedi	Professor of Information Systems	Krannert School of Management, Purdue University, USA
2.	Mr. Pawan Kumar Bhageria	President	Tata Motors Group Strategic Business Unit at Tata Technologies Ltd.
3	Dr. Kripa Shanker	Professor (Retd.)	Industrial and Management Engineering Department, Indian Institute of Technology Kanpur, 208016 (UP), India

5.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1	Dr. Shradha Shivani	HOD/In charge-	Chairman (Ex-Officio)
2	Dr. Utpal Baul	Professor	Internal Member
3	Dr. Manju Bhagat	Professor	Internal Member
4	Dr. R.N. Bhagat	Professor	Internal Member
5	Dr. Supriyo Roy	Associate Professor	Internal Member
6	Dr. Sraboni Dutta	Associate Professor	Internal Member
7	Dr. Rohini Jha	Assistant Professor	Internal Member
8	Dr. Vandana Bhattacharjee	HOD & Professor	Internal Member
9	Dr. Ritesh Kumar Singh	Associate Professor	Internal Member
10	Dr. Tannushri Dutta	Associate Professor	External Member
11	Mr. Shiva Botchu	Executive from Industry	External Member

SECTION 6

OTHER INFORMATION

6.1 Student Entrepreneurship activities/Start-ups if any

Sr. No	Name of Student	Source of Funding	Title of Start up	Short Description
1.	Hinashu Shekhar	Self	Wing your Think. com	Wing your Think.com offers services as a partner to help businesses strengthen their online presence. Starting from making an amazing website, mobile application to measurably improve marketing performance, manage social media presence, and leads generation via overall research & consulting, Wing Your Think has it all.
2	Weesam Fatima	Self	Little_Dreamer	Little dreamer presents a Native American legacy called "Dreamcatcher" with an intention to spread love & positivity through specially designed handicrafts.




Sr. No	Name of Student	Source of Funding	Title of Start up	Short Description
3	Utsav Kumar	Self	Foodies of Patna	Online food reviewing across hotels, restaurants and food outlets across all social platforms.

6.2 Achievements of Students :





Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
1.	Nahid Parveen	GP Birla Scholarship for SP 2021.	BIT Mesra	Feb2021
2.	Vidit Mishra	GP Birla Scholarship for SP 2021.	BIT Mesra	Feb2021
3	Nikita Jha	Winner at Kartavya 2021, A Debate Competition	Department of Management, BIT Mesra	3rd Apr. 2021
4	Nikita Jha	GP Birla Scholarship for SP 2021.	BIT Mesra	Jan 2021
5	Sheetal Shikha	Runners Up at Kartavya 2021, A Debate Competition	Department of Management, BIT Mesra	3rd Apr. 2021
6	Shivani Singh	2nd Runners Up at Kartavya 2021, A Debate Competition	Department of Management, BIT Mesra	3rd Apr. 2021
7	Abhishek Kumar Choudhary	2nd Runners Up, Write For Change, Daksham	Department of Management, BIT Mesra	20th Sept. 2020
8	Akansha	Runners Up, Prachar, BTrix 21, Annual Management Fest.	Department of Management, BIT Mesra	20th - 21st Feb. 2021
9	Ayushi	2nd Runners Up, Draw For Change, Daksham	Department of Management, BIT Mesra	20th Sept. 2020
10	Ayushi	Runners Up, Prachar, BTrix 21, Annual Management Fest	Department of Management, BIT Mesra	20th - 21st Feb. 2021

6.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1	Mr. Raj Vardhan, Independent Director of Mcleod Russel India Ltd.	4th July 2021	



Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
2	Mr. Pulkit Trivedi, the Director of Google Pay, India.	30th June 2021	
3	Mr. Ripudaman Magon, CEO of Natural Support Consultancy Services Private Limited and Director of Conserve Info Tech (P) Ltd.	27th June 2021	
4	Mr. Shiva Botchu, Associate Director, CS & AD, Deloitte Touche Tohmatsu LLC	26th Sep 2020	
5	Ms. Sweta Sinha, Assistant HR Manager, TATA Metaliks Ltd.	12th September, 2020	
6	Mr. Ayush Nigam (Co-Founder and CEO, Distinct Horizon	7th Sept, 2020	
7	Ms. Tuhina David is the Manager employee engagement at Mahindra Finance.	24th October 2020	
8	Mr. Vishal Charan, HR Manager in SAIL Bokaro.	15th September, 2020	

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
9	Mr. Rahul Kashyap, Senior Manager Learning & Development at Godrej & Boyce	9th October 2020	
10	Mr. Nirmal Dayani, Alumnus (1989-1991) and Co-Founder, Expereal India	31st July 2020	
11	Ms. Mridula Sekhar, Chief Marketing Officer at Tata AIA Life Insurance	25th July 2020.	
12	Mr. Rakesh Singh, Alumnus (1988-90) and Faculty, Ghaziabad	11th July 2020	

6.4 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Mr. Alope Singh (1985-87)	CEO Air India Express
2.	Mr. Pranay Mittal (1991-93)	COO, Global SME Business, SAP
3.	Ms. Jayita Sarkar (2004-06)	Human Resources Director, Pay Pal, USA.
4	Dr. Shivesh Singh (2004-06)	Head Business HR, Bandhan Bank
5	Dr. S. Shadab Hassan, (2006-08)	Director, H. H. High School, Brambe



Department of Mathematics

SECTION 1

DEPARTMENTAL PROFILE



1. About the Department:

Mathematics is one of the major foundation subjects in sciences to study qualitative and quantitative relationships in various real world problems.

The Department of Mathematics was founded in 1956, under the name Department of Applied Mathematics. It started with only undergraduate program offering to engineering students. Mathematics play an important role in engineering, which reflects the courses offered in different branches of engineering, management, pharmaceutical sciences, architecture and the University polytechnic.

Currently, Department of Mathematics consists of 11 regular faculty members with expertise in both pure and applied mathematics. In addition to the regular faculty members, the department has some faculty members who have joined through TEQIP. They are all well qualified, highly motivated towards teaching and always attempt to cooperate with students inside and outside the classroom. Faculties are also involved in research activities and have published their

articles in high impact journals. They are skilled in diverse areas of Optimization, Mathematical Modelling, Differential Equations, Operations Research, Discrete Mathematics, Music and Algorithmic Complexity.

The Department runs Ph.D. programme, 2-year M.Sc. programme in Mathematics and 5-year Integrated M.Sc. programme in Mathematics and Computing. It has also been actively engaged in organizing conferences, workshops, summer and winter schools, invited lecture series. The Department is equipped with a modern computer laboratory with latest scientific software such as MATLAB, Mathematica, Mathcad, Minitab, SPSS, LINGO, Systat. etc..

Many students of the Department are pursuing higher studies in a reputed academic institution within India and abroad. The students are also getting selected for an internship and on-campus/off-campus placement at IIT Bombay, Infosys, Wipro, Capital Float, Intutent Incl., Pricewaterhouse coopers, Mu Sigma, Deloitte, TCS, Azim Premji Foundation, SAP Labs, Blackberry, Credence, Hangout Store.



SECTION 2

SEMINAR / CONFERENCE

2.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	Mathematics Seminar on Sciences & Engineering Applications (SEA-2021)	Dr. Peeyush Tewari (Convener) & Pawan Kumar Shaw (Organizing Secretary)	TEQIP	February 12 - 13, 2021
2.	Seminar on Applications of Statistics in Sciences & Engineering (ASSE-2021)	Prof. S. Chakraborty (Convener), Dr. A.P. Ghorai (Organizing Secretary) & Pawan Kumar Shaw (Organizing Secretary)	Department of Mathematics, BIT Mesra, Ranchi	March 05 - 06, 2021
3.	Virtual International Conference on Soft Computing, Optimization Theory and Applications (SCOTA -2021)	Dr. Syeda Darakhshan Jabeen (Convener)	Department of Mathematics, BIT Mesra	March 26-27, 2021
4.	Short term course in Student Training Program on "Data Science and Analytics"	Pawan Kumar Shaw (Organizer)	TEQIP	August 01-31, 2020

2.2 Conferences/Seminars/Workshops/Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Prabjot Kaur	Attended Weekend Online Program on Statistical Machine Learning	---	Centre for Artificial Intelligence and Machine Learning (CAIML), ISI, Kolkata	CAIML, ISI, Kolkata	13 -14th March, 20 -21 March, 2021 and 27-28 March, 2021
2.	Dr. Prabjot Kaur	Invited talk in Webinar on Multicriteria Decision Making (MCDM) Methods for Business & Management	---	National Productivity Council (Under Ministry of Commerce & Industry, Govt. of India)	Dr. Ambedkar Institute of Productivity, Chennai.	19th June 2021, Time: 11a.m.to 1 p.m.
3.	Dr. Prabjot Kaur	Invited talk in Mathematics Seminar on Sciences and Engineering Applications (SEA-2021)	---	Department of Mathematics, BIT, Mesra	Department of Mathematics, BIT, Mesra	12-13 February 2021
4.	Dr. Syeda Darakhshan Jabeen	Attended Optimal Control and its Applications in Economics Environment, and Engineering, OCA'21	---	CIMPA-Rabat RESEARCH SCHOOL	University Mohammed V de Rabat, Morocco	28th June, 2021- 3rd July, 2021



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
5.	Pawan Kumar Shaw	Participated in Virtual International Conference on Soft Computing, Optimization Theory and Applications (SCOTA -2021)	---	Department of Mathematics, BIT, Mesra	Department of Mathematics, BIT, Mesra	March 26-27, 2021

SECTION 3

RESEARCH PUBLICATIONS

3.1 Publications in Journals :

1. N.K. Guru, S.K.Jain (2020). Free axisymmetric vibrations of composite annular sandwich plates by higher- order theory using Chebyshev collocation technique. Thin-Walled Structures,155, 106823.
2. T. Narayan, T. Bhattacharya, S. Chakraborty, S. Konar (2020).Application of Multiple Linear Regression And Geographically Weighted Regression Model for Prediction of PM2.5, Proceedings of the National Academy of Sciences, India Section A: Physical Sciences, DOI: 10.1007/s40010-020-00718-5.
3. S. Tewari, S. Chakraborty (2020). An Improved Method of Raga Content Assessment in Songs with Therapeutic Benefits Journal of Applied Mathematics and Computation, 4(4), 113-117.
4. S. Halder, S. Chakraborty (2021). On the Probability of Real Roots in a Quadratic Equation with Coefficients as i.i.d(- θ , θ) Variates. Journal of Applied Mathematics and Computation, 5(1), 48-55.
5. J. Pradhan, S. Chakraborty (2021). "The Road not taken" statistically taken: Aprobabilistic analysis of Frost's poem, Journal of Statistics and Management Systems, DOI: 10.1080/09720510.2020.1848041
6. A. Lipi, S. Chakraborty (2021). Probabilistic Analysis of Three Ragas of the Bhairavi Thaata, The Journal of Acoustical Society of India: Vol. 48, No. 1-2, pp. 46-55.
7. Princila, S. Chakraborty (2021). Predicting maximum and minimum eigenvalues of a random matrix : A study in simulation for Poisson distribution Journal of Statistics and Management Systems, DOI:10.1080/09720510.2020.1862960.
8. Abhinav Tandon, Kumari Jyotsna, Sankha Banerjee (2021), Forestry biomass and its role in controlling bronchitis in urban areas: a nonlinear modelling study, Modeling Earth Systems and Environment, <https://doi.org/10.1007/s40808-020-01071-7>???????
9. Abhinav Tandon, Arti Mishra, Sankha Banerjee (2021). Transmission dynamics of depression in socially connected population: A nonlinear modeling study, International Journal of Modeling, Simulation and Scientific Computing, <https://doi.org/10.1142/S1793962321500410> .
10. R. Singh, G. Singh, M. Singh (2021). Numerical algorithm for solution of the system of Emden-Fowler type equations, International Journal of Applied and Computational Mathematics, 7, 136.
11. J. Shahni, R. Singh (2021). Numerical solution of system of Emden-Fowler type equations by Bernstein collocation method, Journal of Mathematical Chemistry, 59, 1117–1138
12. J. Shahni, R. Singh (2021). Laguerre wavelet method for solving Thomas--Fermi type equations, Engineering with Computers, <https://doi.org/10.1007/s00366-021-01309-7>
13. R. Singh (2021). An efficient technique based on the HAM with Green's function for a class of nonlocal elliptic boundary value problems, Computational methods for differential equations, 9(3), 722-735. DOI:10.22034/cmde.2020.32673.1519
14. J. Shahni, R. Singh (2020). Numerical results of Emden-Fowler boundary value problems with derivative dependence using the Bernstein collocation method, Engineering with Computers, <https://doi.org/10.1007/s00366-020-01155-z>
15. Shazia Sabir, Vandana Guleria (2021): Multi-layer color image encryption using random



- matrix affine cipher, RP2DFrHT and 2D Arnold map, *Multimedia Tools and Applications*, <https://doi.org/10.1007/s11042-021-11003-x>.
16. Vandana Guleria, D.C. Mishra (2021). Multiple RGB image encryption algorithm with multilayers by Affine Hill Cipher with FrDCT and Arnold Transform, *Fractals*, <https://doi.org/10.1142/S0218348X21501516>.
 17. V. Guleria, D.C. Mishra (2020), New multi-layer RGB image encryption algorithm based on Diffie-Hellman cryptography associated with FrDCT and Arnold Transform, *Multimedia Tools and Applications*, 79(43), 33119–33160.
 18. Anand Joshi, Dhanesh Kumar, D.C. Mishra, and V. Guleria (2020). Color-image encryption based on 2D discrete wavelet transform and 3D logistic chaotic map, *Journal of Modern Optics*, 67(10), 933–949.
 19. V. Guleria, Shazia Sabir, and D.C. Mishra (2020). Security of Multiple RGB Images by RSA Cryptosystem Combined with FrDCT and Arnold Transform, *Journal of Information Security and Applications*, 54, 102524.
 20. Sunil Kumar, Pawan Kumar Shaw, Abdel-Aty A-H, E.E. Mahmoud (2020). A numerical study on fractional differential equation with population growth model, *Numerical Methods for Partial Differential Equation*, <https://doi.org/10.1002/num.22684>.
 3. Nayancy, S. Dutta and S. Chakraborty (2021). IoT-Based Secure Communication to Enhance Blockchain Model, in V. Nath and J. K. Mandal (eds.), *Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems*, *Lecture Notes in Electrical Engineering* 673, p.255-264, https://doi.org/10.1007/978-981-15-5546-6_21, Springer Nature Singapore Pte Ltd.
 4. S. Sarkar, S. S. Solanki and S. Chakraborty (2020). A Scientific Exploration of the Time Theory in Hindustani Ragas, in V. Nath and J. K. Mandal (eds.), *Nanoelectronics, Circuits and Communication Systems*, *Lecture Notes in Electrical Engineering* 642, p.315-321, Springer Nature Singapore Pte Ltd.
 5. P. Kaur (2021). Hybrid Model for Vendors Providing Materials to a Manufacturing Company. In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems*. *Lecture Notes in Electrical Engineering*, vol 692. Springer, Singapore. https://doi.org/10.1007/978-981-15-7486-3_33.
 6. Prabjot Kaur; Maria Jamal, "A Medical Diagnosis of Urethral Stricture Using Intuitionistic Fuzzy Sets," in *Fog, Edge, and Pervasive Computing in Intelligent IoT Driven Applications*, IEEE, 2021, pp.221-235, doi: 10.1002/9781119670087.ch13.

3.2 Publications in Proceedings:

1. P. Shukla and S. Chakraborty (2021). A Simple Statistical Comparison of Bageshree and Bhimpalasi. In: Biswas A., Wennekes E., Hong TP., Wiczorkowska A. (eds) *Advances in Speech and Music Technology. Advances in Intelligent Systems and Computing*, Vol. 1320. Springer, Singapore. https://doi.org/10.1007/978-981-33-6881-1_21.
2. P. Pranav, S. Dutta and S. Chakraborty (2021). An Involution Function-Based Symmetric Stream Cipher, in V. Nath and J. K. Mandal (eds.), *Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems*, *Lecture Notes in Electrical Engineering* 673, p. 61-68, https://doi.org/10.1007/978-981-15-5546-6_5, Springer Nature Singapore Pte Ltd.

3.3 Book:

3.3.1 Co-Authored

1. S. Chakraborty et al. (2021). *Hindustani Classical Music: A Historical and Computational Study*, Sanctum Books, ISBN 978-81-947830-0-8 [book]
2. J. Pradhan and S. Chakraborty (2020). *Statistical Analysis of Some Selected Poems of Robert Frost*, Rathore Academic Research Publications, ISBN 978-81-949375-8-6 [research monograph].

3.3.2 Chapter(s) in Edited Book

1. P. Pranav, S. Dutta and S. Chakraborty (2021). Security Issues for the Semantic Web, in S. Jain, V. Jain and B. E. Balas (Eds.), *Web Semantics: Cutting Edge and Future Directions in Healthcare*, Elsevier Inc., Chapter 18, p.253-267 <https://doi.org/10.1016/B978-0-12-822468-7.00002-X>



SECTION 4

AWARD / PATENT / COLLABORATIONS

4.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Dr. Prabjot Kaur	Session Chair, 6th International Conference on Nanoelectronics Circuits & Communication Systems (NCCS)	IETE & ISVE Ranchi Centre	State level	19-20th December, 2020

SECTION 5

ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

5.1 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. S. K. Jain	Professor	No
2.	Dr. S. Chakraborty	Professor	No
3.	Dr. S. Padhi	Professor	No
4.	Dr. Peeyush Tewari	Associate Professor	No
5.	Dr. A. P. Ghorai	Associate Professor	No
6.	Dr. Prabal Datta	Assistant Professor	No
7.	Dr. P. Kaur	Assistant Professor	No
8.	Dr. Abhinav Tandon	Assistant Professor	No
9.	Dr. Randhir Singh	Assistant Professor	No
10.	Dr. S. D. Jabeen	Assistant Professor	No
11.	Dr. Vandana	Assistant Professor	No
12.	Mr. Pawan Kumar Shaw	Assistant Professor	Yes

5.2 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. Akrur Behera	Adjunct Professor	Retd. Professor, NIT Rourkela
2.	Dr. D.K. Gupta	Adjunct Professor	Retd. Professor, IIT Kharagpur

5.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. S. Padhi	Professor & Head, Ex-Officio	Chairman
2.	Dr. S. K. Jain	Professor	Internal
3.	Dr. S. Konar	Professor, Department of Physics	Internal
4.	Dr. S. Chakraborty	Professor	Internal



Sr. No.	Name of the Member	Designation	Role
5.	Dr. G. K. Panda	Professor, Dept. of Mathematics, NIT, Rourkela	External
6.	Dr. S. B. Singh	Associate Professor, PSM Dept. RIMS, Ranchi	External
7.	Dr. A. P. Ghorai	Associate Professor	Internal
8.	Dr. Abhijit Mustafi	Associate Professor, Dept. of CSE	Internal
9.	Dr. P. Kaur	Assistant Professor	Internal
10.	Dr. Abhinav Tandon	Assistant Professor	Internal
11.	Nishith Mohan	Research Scholar, Department of Mathematics, IIT, Mandi	External (Alumni)
12.	Kumar Shivam	Data Scientist, Flipshope, Bengaluru	External (Alumni)
13.	Swapnil Kant	Student, IMSc. (Maths. & Computing), 4th Year	Internal
14.	Nimish Tiwari	Student, IMSc. (Maths. & Computing), 3rd Year	Internal

SECTION 6

OTHER INFORMATION

6.1 Student Entrepreneurship activities/Start-ups if any

Sr. No	Name of Student	Source of Funding	Title of Start up	Short Description
1.	SAURAV KUMAR (IMH/10050/16)	Self funding and partially supported by BITOSA - Mumbai Chapter	ZOYOZO (www.zoyozo.in)	Zoyozo provides online residential facilities to students and working individuals who come across their city to study or for their professional works. Zoyozo was founded in 2019 but registered as a company on 16th December 2020. The slogan of the company is "NO HOMESICKNESS".

6.2 Publication by students, if any

Publications in Journals :

- V. Guleria, Shazia Sabir, and D.C. Mishra (2020). Security of Multiple RGB Images by RSA Cryptosystem Combined with FrDCT and Arnold Transform, *Journal of Information Security and Applications*, 54, 102524.
- Shazia Sabir, Vandana Guleria(2021): Multi-layer color image encryption using random matrix affine cipher, RP2DFrHT and 2D Arnold map, *Multimedia Tools and Applications*, <https://doi.org/10.1007/s11042-021-11003-x>.
- J. Shahni, R. Singh(2021). Numerical solution of system of Emden-Fowler type equations by Bernstein collocation method, *Journal of Mathematical Chemistry*, Vol. 59, 1117-1138.
- J. Shahni, R. Singh(2021). Laguerre wavelet method for solving Thomas-Fermi type equations, *Engineering with Computers* <https://doi.org/10.1007/s00366-021-01309-7>
- J. Shahni, R. Singh(2020). Numerical results of Emden-Fowler boundary value problems with derivative dependence using the Bernstein collocation method, *Engineering with Computers* <https://doi.org/10.1007/s00366-020-01155-z>

7. Any other relevant information

- Infrastructure / Equipment added during the year: A new Computer LAB is under construction.



Department of Mechanical Engineering

SECTION 1

DEPARTMENTAL PROFILE



1. About the Department :

Since its inception in 1955, the Department of Mechanical Engineering has a wide reputation for the quality of teaching and research it offers. It has been awarded top grades for both teaching and research activities from independent and government bodies. The excellent laboratory facilities, modern computer clusters, systematically designed curriculum, and dedicated faculty members make this department a dynamic place to study.

Programmes Offered

Under Graduate Programme (4 years):

- B. Tech. in Mechanical Engineering
- Post Graduate Programmes: (2 Years)
- M.Tech. Heat Power Engineering
- M.Tech. Design of Mechanical Equipments

- M.Tech. Computer Aided Analysis and Design
- M.Tech. Energy Technology

PhD. Programme:

Laboratory Facilities:

- Drawing Office
- Mechanics of Solids Lab
- Fluid Mechanics and Hydraulic Machines Lab
- Renewable Energy Lab
- Central CAD Lab
- Theory of Machines Lab
- Autonomous Systems Lab
- Computational Lab (For Research)
- Heat Transfer and RAC Lab
- I.C Engines Lab



SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects (Research and Consultancy)

a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Technology Interventions in Rural Areas through Perennial Assistance Award	PI	MoE- IIT Delhi	14.05.2021	Rs.175000	Six Months
2.	Technology Development - Body Sanitising Machine	PI	MoE - IIT Delhi	31.08.2020	Rs.100000	12 Months

b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Establishing Proof of Concept of Project entitled - Development and Optimizatation of Performance and Emission Characteristics of CI, SI and Stirling Engine using Hydrogen Enriched Bio-CNG Produced from Anaerobic Co-digestion with Food Waste, Tannery Waste, Stubble Waste and STP Sludge	Co-PI	DST	12.06.2020	Rs.168300	01.06.2021
2	Cost Effective Building Integrated Photovoltaic Thermal System (BIPVT) with inbuilt Solar water Heating System for Commercial Hotels and Hospitals: A Make in India Concept.	PI	AICTE- NPIU	18.06.2019	Rs.1845000	30.06.2021

SECTION 3

SEMINAR / CONFERENCE

3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members :

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Arkadeb Mukhopadhyay	Inculcating Universal Human Values in Technical Education	AICTE	AICTE	Online	19.04.2021 to 23.04.2021



वार्षिक प्रतिवेदन 2020-2021

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
2.	Dr. Arkadeb Mukhopadhyay	Interdisciplinary Approach of Tribology in Engineering and Biomedical Research	TEQIP - III	NIT Silchar	Online	04.08.2020 to 08.08.2020
3.	Dr. A. K. Roy	Multi Scale Computational Fluid Dynamics: Fundamentals and Applications	TEQIP - III	NIT Jalandhar	Online	21.09.2020 to 25.09.2020
4.	Dr. L.S. Brar	Materials, Mechanics & Modeling (NCMMM-2020)	TEQIP - III	NIT Jamshedpur	Online	29.08.2021 to 30.08.2021
5.	Dr. S. K. Dhiman	International Conference on Advances in Mechanical and Industrial Engineering (ICAMIE 2020)	-	KIIT Bhubaneswar	Online	11-13 December, 2020
6	Dr. S. K Dhiman	International conference on Progressive Research in Industrial & Mechanical Engineering (PRIME-2021)	-	NIT Patna	Online	05.08.2021 to 07.08.2021
7	Dr. Sujeet Kumar Mishra	Mechanical Engineering Solutions to Biomedical Problems	TEQIP – III	IIT (ISM) Dhanbad	Online	24.09.2020 to 27.09. 2020
8	Dr. Sujeet Kumar Mishra	National Seminar on Atmanirbhar Bharat: Environmental Sustainability	TEQIP – III	National Institute of Technical Teachers' Kolkata	Online	16.08. 2020
9	Dr. Sujeet Kumar Mishra	National Seminar on Ancient Indian Education System	TEQIP – III	National Institute of Technical Teachers' Kolkata	Online	11.11.2020 to 12.11.2020
10	Dr. Sujeet Kumar Mishra	Recent Advances in Materials and Manufacturing	AICTE	GVPCE, Vishakapatnam	Online	03.08.2020 to 08.08.2020
11	Dr. Sujeet Kumar Mishra	Artificial Intelligence and Machine Learning in Healthcare	TEQIP – III	BIT Mesra Ranchi	Online	27.07.2020 to 31.07.2020
12	Dr. L.S. Brar	Basics of Computational Fluid Dynamics: Applications and Analysis	TEQIP - III	The National Institute of Engineering, Mysuru	Online	31.08.2020 to 04.09.2020
13	Dr. L.S. Brar	Multi-Scale Computational Fluid Dynamics: Fundamentals and Applications	TEQIP - III	Dr. B.R. Ambedkar National Institute of Technology, Jalandhar	Online	21.06.2020 to 25.06.2020
14	Dr. L.S. Brar	Mechanical Engineering Solutions to Biomedical Problems	TEQIP - III	IIT (ISM), Dhanbad	Online	24.06.2020 to 27.06.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
15	Dr. L.S. Brar	Design of Experiments using Taguchi Technique	TEQIP - III	Regional College for Education, Research & Technology, Jaipur	Online	26.01.2021 to 30.01.2021
16	Dr. L.S. Brar	Recent Trends in Thermo-Fluids	TEQIP - III	N.I.T. Sikkim	Online	22.02.2021 to 26.02.2021
17	Dr. L.S. Brar	Learning CFD/HT through Industry Relevant Problems	AICTE	I.I.T., Bhubaneswar	Online	07.06.2021 to 18.06.2021
18	Dr. Paritosh Mahata	Cyber Security and Investigation Tools"	TEQIP - III	BIT Mesra	Online	11.09.2020 to 15.09.2020
19	Dr. Paritosh Mahata	Atomistic Modelling of Solids: Theory & Applications	TEQIP - III	IIT Indore	Online	21.12.2020 to 25.12.2020
20	Dr. Rajeev Kumar	Inculcating Universal Human Values in Technical Education	AICTE	AICTE	Online	19.04.2021 to 23.04.2021
21	Dr. Om Prakash Pandey	International conference on Progressive Research in Industrial & Mechanical Engineering (PRIME-2021)	-	NIT Patna	Online	05.08.2021 to 07.08.2021
22	Dr. Om Prakash Pandey	Mentoring and Facilitation Skills for Institutional Mentors	PMMMNM Teachers and Training	MHRD	Online	27.05.2020 to 31.05.2020
23	Dr. Om Prakash	1st International Conference on Innovations in Clean Energy Technologies (ICET-2020)	-	NIT Bhopal	Online	27th-28th August, 2020
24	Dr. Om Prakash	2nd International Conference on Recent Advances In Mechanical Engineering	-	DTU Delhi	Online	(18-19th September, 2020)
25	Dr. Om Prakash	1st international conference on "Technology Innovation in Mechanical Engineering (TIME 2021)	-	Sagar Institute of Science and Technology , Bhopal	Online	10-11 May 2021
26	Dr. Mukesh Sharma	Sustainable Energy Technologies: Synthesis of Alternative fuels, Characterization, and Molecular Simulations	MHRD-TEQIP III	IIT Roorkee	Online	7th to 11th December, 2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
27	Dr. Mukesh Sharma	Computational and Experimental Techniques in Heat Transfer and Fluid Flows	TEQIP III	NIT Uttarakhand, Srinagar (Garhwal)	Online	01 – 05 March 2021

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

- Kumar M., Mishra P., Roy A.K.(2021). Analysis of Different Mould Section Sizes to Optimize the Submerged Entry Nozzle to Measure the Meniscus Fluctuation in a Continuous Casting Mould. Crystals 11 (5), 564.(<https://doi.org/10.3390/cryst11050564>).
- Arkadeb Mukhopadhyay, Sarmila Sahoo, (2021). Corrosion Performance of Steel Rebars by Application of Electroless Ni-P-W Coating - An Optimization Approach using Grey Relational Analysis. FME Transactions. 49(2), 445-455.
- Arkadeb Mukhopadhyay, Tapan Kumar Barman, Prasanta Sahoo, (2021). Co-deposition of W and Mo in electroless Ni-B coating and its effect on the surface morphology, structure, and tribological behavior. Proc IMechE Part L: J Materials: Design and Applications. 235(1), 149-161.
- Sujeet Kumar Mishra, Divyang Gupta, Mudit Nagar, Ayush Kumar "Crash analysis of Roll-Cage of an All-Terrain Vehicle" International Research Journal of Engineering and Technology Vol 8 Issue 5 (2021) 3053-3059. ISSN: 2395-0072
- Aditya Sinha, Abhishek Jakhmola, Shashank Mittal, Sujeet Kumar Mishra "Green energy generation from road traffic using speed breakers" Materials Today 38 (2021) 160-168 doi.org/10.1016/j.matpr.2020.06.248 (Elsevier)
- Sujeet Kumar Mishra, B S V Sreekanta "Designing of anti-vibration rubber mounts for an all-terrain vehicle for BAJA SAE" International Journal of Energy Technology 2(1) (2020) 39-54. <https://doi.org/10.32438/IJET.203012>
- Aditya Sinha, Shashank Mittal, Abhishek Jakhmola, Sujeet Kumar Mishra "Design of power generating speed breakers" International Journal of Advanced Science and Technology Vol. 29 (2020) No. 7, pp. 11790-11799
- Sujeet Kumar Mishra, Ashok Misra "Effect of shape geometry on electromagnetic radiation under quasi-static compression in sintered aluminium Preforms" International Journal of Energy Technology 2(1) (2020) 12-25. <https://doi.org/10.32438/IJET.203008>
- Wasilewski M., Brar L.S., Ligus G. (2021) Effect of the central rod dimensions on the performance of cyclone separators - optimization study, Separation and Purification Technology, 274: 119020. (<https://doi.org/10.1016/j.seppur.2021.119020>)
- Shastri R., Sharma R.P., Brar L.S. (2021) Numerical investigations of cyclone separators with different cylinder-to-cone ratios, Particulate Science and Technology (<https://doi.org/10.1080/02726351.2021.1905123>)
- Sarangi S.K., Mishra D.P., Ramachandran H., Anand N., Masih V., Brar L.S. (2021) Analysis and optimization of the curved trapezoidal winglet geometry in a high-efficiency compact heat exchanger, International Journal of Thermal Sciences, 164: 106872. (<https://doi.org/10.1016/j.ijthermalsci.2021.106872>)
- Sarangi S.K., Mishra D.P., Ramachandran H., Anand N., Masih V., Brar L.S. (2021) Analysis and optimization of the curved trapezoidal winglet geometry in a compact heat exchanger, Applied Thermal Engineering, 182: 1-14. (<https://doi.org/10.1016/j.applthermaleng.2020.116088>)
- Shastri R., Brar L.S. (2020) Numerical investigations of the flow-field inside cyclone separators with different cylinder-to-cone ratios using large-eddy simulation, Separation and Purification Technology, 249: 1-17. (<https://doi.org/10.1016/j.seppur.2020.117149>)
- Brar L.S., Derksen J.J. (2020) Revealing the details of vortex core precession in cyclones by means of large-eddy simulation, Chemical Engineering Research and Design, 159: 339-352.



- (<https://doi.org/10.1016/j.cherd.2020.04.030>).
15. Kumar M., Mishra P., Roy A.K. (2021). Experimental optimization of submerged entry nozzle submergence depth to reduce meniscus fluctuations: A water model study. *Materials Today: Proceedings* 41, 426-430. (<https://doi.org/10.1016/j.matpr.2020.10.070>).
 16. Prafull Hishikar, S. K. Dhiman, Anil Kumar Tiwari, Vivek Kumar Gaba, Analysis of flow characteristics of two circular cylinders in cross flow with varying Reynolds number: a review, *Journal of Thermal Analysis and Calorimetry*, (online 2021) <https://doi.org/10.1007/s10973-021-10933-w> [SPRINGER]
 17. Chetpelly Akshay, Palash Soni, S. K. Dhiman, Shubhankar Bhowmick and Vivek Kumar Gaba, Thermal modelling of single and double slope passive solar stills for different climatic zones in India, *Journal of Ambient Energy*, (online 2021) <https://doi.org/10.1080/01430750.2021.1946147> [Taylor & Francis]
 18. Y.K. Jayaswal, Sunil Patidar, S.K. Mahajan, S.K. Dhiman, Ghizal F. Ansari, Synthesis and optical properties of Er/Yb/Ag modified bismuth-tellurite based glasses, *Journal of Physics*, 1921 (2021) 012111, doi:10.1088/1742-6596/1921/1/012111
 19. P. Mahata and Laxminarsimharao V., Deformation of an elastic membrane interacting electrostatically with a rigid curved domain: implications to biosystems, *Archive of Applied Mechanics* 91, 509 - 525 (2021).
 20. S. Mukherjee and P. Mahata, Computational investigation for endocytosis of CoVID-19 virus SARS-CoV-2 in cell membrane, Accepted in *Journal of Mechanical Engineering Science*.
 21. Anand S., Mishra D.P. & Sarangi S.K., (2020), CFD Supported Performance Analysis of an Innovative Biomass Dryer, *Renewable Energy*, 159, 860-872, ISSN: 0960-1481.
 22. Sarangi S. K. & Mishra D. P. (2021), Effect Tube Shape on Thermo-fluid Performance of a Winglet Supported Fin-and-tube Heat Exchanger Having Staggered Tubes, *Materials Today: Proceedings*, 41, 228-232, 2021, ISSN:2214-7853.
 23. Om Prakash, Ishan Kashyap, Ayush Kumar, Anil Kumar, Prashant Singh Chouhan, Bharath Bhushan. Automobile based heat energy recovery systems. *WEENTECH Proceedings in Energy* 7 (1) (2021) 11-23.
 24. Ankish Aman, Om Prakash, Bharath Bhushan, Akash Kumar Critical study of energy efficient industrial waste-paper recycling process *WEENTECH Proceedings in Energy* 7 (1) (2021) 39-48 .
 25. Ahmad, Asim, and Om Prakash. "Development of mathematical model for drying of crops under passive greenhouse solar dryer." *Materials Today: Proceedings* (2021). <https://doi.org/10.1016/j.matpr.2021.05.180>
 26. Ankish Aman, Bharat Bhushan, Om Prakash. (2020) Energy Audit of a small commercial hospital building in Ranchi-A case study. *International Journal of Energy Technology*, 2 (1), 1-11, <https://doi.org/10.32438/IJET.203007>.
 27. Asim Ahmad, Anil Kumar, Om Prakash, Ankish Aman. (2020). Daylight availability assessment and application of energy simulation software-A literature review. *Material Science and Energy Technology*. Elsevier, Volume 3, 2020, Pages 679-689, <https://doi.org/10.1016/j.mset.2020.07.002>.
 28. Asim Ahmad and Om Prakash (2020). Performance evaluation of a solar greenhouse dryer at different bed conditions operating under passive mode. *Journal of Solar Energy Engineering: Including Wind Energy and Building Energy Conservation*, ASME Publication SCI listed Journal, Vol 142, Page No-011006-1_6, <https://doi.org/10.1115/1.4044194>.
 29. Prakash, Om, Bharath Bhushan, Anil Kumar, and Asim Ahmed. "Thermal analysis of domestic type single Slope-Basin solar still under two different water depths." *Materials Today: Proceedings* (2020). <https://doi.org/10.1016/j.matpr.2020.09.239>.
 30. Ravi Shastri, R P Sharma and Lakhbir Singh Brar "Numerical investigations of cyclone separators with different cylinder-to-cone ratios" *PARTICULATE SCIENCE AND TECHNOLOGY*, <https://doi.org/10.1080/02726351.2021.1905123>
- #### 4.2 Publications in Proceedings:
1. Sarangi S.K., Anand N., Srivastava K., Chamoli P., Mishra D.P., Brar L.S. (2021) Heat Transfer and Pressure Drop Assessment of a Vortex Generator Supported Fin-And-Tube Heat



Exchanger, Advances in Mechanical Processing and Design, Springer, Singapore. (https://doi.org/10.1007/978-981-15-7779-6_13)

2. Pandey S. and Brar L.S. (2021) Large-Eddy Simulations of Cyclone Separator Based on the Lattice-Boltzmann Method, AIP Conference Proceedings 2341, 030020. (<https://doi.org/10.1063/5.0050107>)
3. Om Prakash, Bharath Bhushan, Anil Kumar, Ankish Aman (2020). Commissioning process and energy analysis in the building: A case study for Ranchi city. Lecture notes in Mechanical Engineering. Springer Press. SCCOPUS INDEX.
4. Asim Ahmad, Om Prakash & Anil Kumar (2020). CFD Analysis of an Airfoil due to the influence of Active Airflow. Lecture notes in Mechanical Engineering. Springer Press. SCCOPUS INDEX.

4.3 Book:

4.3.1 Co-Authored

1. Anil Kumar, Om Prakash, Prashant Singh Chowhan, Samsher. Energy Management: Conservation and Audits published by CRC Press 2020 ISBN-13: 978-0367343835 and ISBN-10: 0367343835. <https://doi.org/10.1201/9780429325458>
2. Om Prakash, Anil Kumar. Solar Drying System, published by by CRC Press 2020. and ISBN: 9780367280437
3. S.K. Acharya & D.P. Mishra, (2021) Current Advances in Mechanical Engineering,, Lecturer Notes in Mechanical Engineering, Springer Nature Switzerland, 2021, doi.

[org/10.1007/978-981-33-4795-3](https://doi.org/10.1007/978-981-33-4795-3).

4.3.2 Chapter(s) in Edited Book

1. Arkadeb Mukhopadhyay, Tapan Kumar Barman, Prasanta Sahoo. (2021). High Temperature Tribology of Surface Coatings. In S. Sahoo (Eds.), Recent Advances in Layered Materials and Structures, Materials Horizons: From Nature to Nanomaterials, Springer Nature Singapore Pte Ltd. doi: https://doi.org/10.1007/978-981-33-4550-8_2.
2. Shivam Mahajan, Neeraj Dokania, Akshay Kumar, Sujeet Kumar Mishra "Design and fabrication of an impact attenuator for formula type race car" in Advanced Manufacturing Systems and Innovative Product Design, Lecture Notes in Mechanical Engineering, <https://doi.org/10.1007/978-981-15-9853-1>, (2021) 131-145 (Springer)
3. Asim Ahmad, Om Prakash*, Anil Kumar and Anukul Pandey. A Review of Solar Air Heater. Low Carbon Energy Supply Technologies and System, CRC Press. 2020. eBook ISBN: 9780429353192. DOI: <https://doi.org/10.1201/9780429353192>: Edited By: Atul Sharma, Amritanshu Shukla, Renu Singh, Chapter 1, Page 1-10.
4. S.K Sarangi, and D.P.Mishra, (2021) Thermo-Fluid Performance Evaluation of an Elliptical Tube Type Fin-and-Tube Heat Exchanger Supported with Winglets,, Theoretical, Computational, and Experimental Solutions to Thermo-Fluid Systems, Lecture Notes in Mechanical Engineering, Springer Nature Singapore Pte Ltd. pp. 23-33, ISBN: 978-981-33-4164-7.

SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Dr. Rajeev Kumar	Perennial Assistance Award	IIT Delhi	National	15.08.2020

**SECTION 6****ACTIVITIES/ FACULTY MEMBERS / BOS /DAS****6.1 List of Faculties**

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Prof. R. P. Sharma	Professor	No
2.	Prof. Dipti Prasad Mishra	Professor	No
3.	Dr. Kaushik Kumar	Associate Professor	No
4.	Dr. Apurba Kumar Roy	Associate Professor	No
5.	Dr. Rajeev Kumar	Associate Professor	No
6.	Praveen James Sanga	Assistant Professor	NO
7.	Dr. Lakhbir Singh Brar	Assistant Professor	No
8.	Dr. Sushil Kumar Dhiman	Assistant Professor	No
9.	Dr. Sujeet Kumar Mishra	Assistant Professor	No
10.	Dr. Praveen Mishra	Assistant Professor	No
11.	Dr. Abhijit Nag	Assistant Professor	No
12.	Dr. Om Prakash Pandey	Assistant Professor	No
13.	Dr. Om Prakash	Assistant Professor	No
14.	Dr. Paritosh Mahata	Assistant Professor	No
15.	Dr. Nirmal Kumar	Assistant Professor	No
16.	Dr. Anil Chandra Mahato	Assistant Professor	No
17.	Dr. Arun Kumar Kadian	Assistant Professor	No
18.	Dr. Arkadeb Mukhopadhyay	Assistant Professor	No
19.	Dr. Mukesh Sharma	Assistant Professor	No
20.	Dr. Anuj Bajpai	Assistant Professor	Yes
21.	Dr. Ratnesh Kumar	Assistant Professor	Yes
22.	Dr. Chandrahas Patel	Assistant Professor	Yes
23.	Dr. Faisal Rahmani	Assistant Professor	Yes
24.	Prof. Shalin	Assistant Professor	Yes
25.	Prof. Shazee Rahmani	Assistant Professor	Yes

6.2 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. D.P.Mishra	Professor	Chairman
2.	Dr. R.P.Sharma	Professor	Internal Member
3.	Dr. Kaushik Kumar	Assoc. Professor	Internal Member



Sr. No.	Name of the Member	Designation	Role
4.	Dr. A.K.Roy	Assoc. Professor	Internal Member
5.	Dr. Rajeev Kumar	Assoc. Professor	Internal Member
6.	Dr. Praveen Mishra	Asst. Professor	Internal Member
7.	Dr. Arun Kumar Kadian	Asst. Professor	Internal Member
8.	Dr. Gautam Sarkhel	Professor	Internal Member (Allied Department)
9.	Dr. Joyjeet Ghose	Assoc. Professor	Internal Member (Allied Department)
10.	Dr. S.K. Dash	Professor, IIT Kharagpur	External Member
11.	Dr. Swarup Kumar Mahapatra	Professor, IIT Bhubaneswar	External Member
12.	Dr. Dayal Ramakrishna Parhi	Professor, NIT Rourkela	External Member
13.	Dr. M.K. Sinha	Professor, NIT Jamshedpur	External Member
14.	Mr. Deepak Mishra	Head – Project Procurement Tata Steel Limited, Jamshedpur	External Member
15.	Mr. Amit Kumar Pandey	G.M., Usha Martin Tati Silawai, Ranchi	External Member
16.	Dr. Bharat Bhushan	Chief Digital Officer, GM- Project IT, Tata Metaliks Ltd.	External Member
17.	Mr. Prabhas Kumar	DGM (HOD, Energy Conservation), RDCIS, SAIL, Ranchi	External Member

SECTION 7

OTHER INFORMATION

7.1 Publication by students

Publications in Journals:

1. Sujeet Kumar Mishra, Divyang Gupta, Mudit Nagar, Ayush Kumar "Crash analysis of Roll-Cage of an All-Terrain Vehicle" International Research Journal of Engineering and Technology Vol 8 Issue 5 (2021) 3053-3059. ISSN: 2395-0072
2. Shivam Mahajan, Neeraj Dokania, Akshay Kumar, Sujeet Kumar Mishra "Design and fabrication of an impact attenuator for formula type race car" in Advanced Manufacturing

- Systems and Innovative Product Design, Lecture Notes in Mechanical Engineering, <https://doi.org/10.1007/978-981-15-9853-1>, (2021) 131-145 (Springer)
3. Aditya Sinha, Abhishek Jakhmola, Shashank Mittal, Sujeet Kumar Mishra "Green energy generation from road traffic using speed breakers" Materials Today 38 (2021) 160-168 doi.org/10.1016/j.matpr.2020.06.248 (Elsevier)
4. Sujeet Kumar Mishra, B S V Sreekantha "Designing of anti-vibration rubber mounts for an all-terrain vehicle for BAJA SAE" International Journal of



- Energy Technology 2(1) (2020) 39-54. <https://doi.org/10.32438/IJET.203012>
5. Aditya Sinha, Shashank Mittal, Abhishek Jakhmola, Sujeet Kumar Mishra "Design of power generating speed breakers" International Journal of Advanced Science and Technology Vol. 29 (2020) No. 7, pp. 11790-11799
 6. Sarangi S.K., Mishra D.P., Ramachandran H., Anand N., Masih V., Brar L.S. (2021) Analysis and optimization of the curved trapezoidal winglet geometry in a high-efficiency compact heat exchanger, International Journal of Thermal Sciences, 164: 106872. (<https://doi.org/10.1016/j.ijthermalsci.2021.106872>)
 7. Sarangi S.K., Mishra D.P., Ramachandran H., Anand N., Masih V., Brar L.S. (2021) Analysis and optimization of the curved trapezoidal winglet geometry in a compact heat exchanger, Applied Thermal Engineering, 182: 1-14. (<https://doi.org/10.1016/j.applthermaleng.2020.116088>)
 8. Kumar M., Mishra P. , Roy A.K.(2021). Analysis of Different Mould Section Sizes to Optimize the Submerged Entry Nozzle to Measure the Meniscus Fluctuation in a Continuous Casting Mould. Crystals 11 (5), 564.(<https://doi.org/10.3390/cryst11050564>).
 9. Kumar M., Mishra P. , Roy A.K.(2021). Experimental optimization of submerged entry nozzle submergence depth to reduce meniscus fluctuations: A water model study. Materials Today: Proceedings 41, 426-430.(<https://doi.org/10.1016/j.matpr.2020.10.070>).
 10. Anand S., Mishra D.P. & Sarangi S.K.,(2020), CFD Supported Performance Analysis of an Innovative Biomass Dryer,, Renewable Energy, 159, 860-872, ISSN: 0960-1481.
 11. Sarangi S. K. & Mishra D. P. (2021), Effect Tube Shape on Thermo-fluid Performance of a Winglet Supported Fin-and-tube Heat Exchanger Having Staggered Tubes, Materials Today: Proceedings, 41, 228-232, 2021, ISSN:2214-7853.

Publications in Proceedings:

1. Sarangi S.K., Anand N., Srivastava K., Chamoli P., Mishra D.P., Brar L.S. (2021) Heat Transfer and Pressure Drop Assessment of a Vortex Generator Supported Fin-And-Tube Heat Exchanger, Advances in Mechanical Processing and Design, Springer, Singapore. (https://doi.org/10.1007/978-981-15-7779-6_13)

7.2 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Mr. Derek Michael Shah, 1986, BIT Mesra	Executive Vice President & Head – Power Plant Business

8. Any other relevant information

Infrastructure / Equipment added during the year:

1. Drive unit for tribological investigations, frictional vibrations and pressure distribution in journal bearings.

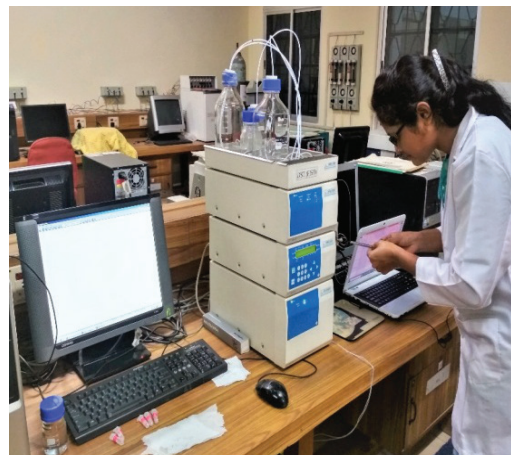
9. **Special Covid Initiatives**, if any - Body Sanitising Machine is under Development for Sanitising the full body under Covid Situation



Department of Pharmaceutical Sciences & Technology

SECTION 1

DEPARTMENTAL PROFILE



1. About the Department :

The Department of Pharmaceutical Sciences and Technology was established in 1972. It boasts of a robust scientific community comprising of qualified and competent faculties, technical staffs, undergraduate & postgraduate students and research fellows.

❖ Highlights of the Department:

- B. Pharm. and M. Pharm. courses are recognized by both Pharmacy Council of India and AICTE.
- Ranked 16th in Overall by National Institutional Ranking Framework (NIRF) 2019, Ministry of HRD, GOI in category of Pharmacy.
- B. Pharm. Programme is accredited by NBA for Five Years (2017-2022).
- Recognized amongst the 10 centres in the country for AICTE- Quality Improvement Program (QIP) in Pharmacy, since 2007.
- One of the Nodal Centre for the award of prestigious AICTE- National Doctoral Fellowship.
- Average Teaching Experience of the faculty is 18 Years

❖ Facilities:

Total Built up area	: 36000 Sq. ft.
Total number of Labs	: 17
Central Instrumentation Laboratory	: 02
Library/ Reading room	: 01

Animal House : 01

Medicinal Plant Garden : 01

❖ Academics: The department offers following UG, PG courses:

- B. Pharm (Seats: 60; Duration: 4-year; 8-semester)
- M. Pharm (Seats: 15/ Specialization; Duration: 2-year, 4-semester)
 - Pharmaceutical Chemistry
 - Pharmaceutics
 - Pharmacology
 - Pharmaceutical Quality Assurance
 - Pharmacognosy
- M. Pharm. Programme under AICTE Q.I.P (offered to academia sponsored candidates only).
- Ph. D. (in Pharmaceutical Sciences and allied research applications).

❖ Research:

- An array of research strategies is being encouraged in the field of:
 - Novel Drug Delivery Systems
 - Natural Products Chemistry
 - Development of Synthetic Medicinal Agents
 - Biochemical Pharmacology & Toxicology
 - Computer Aided Drug Design



2. Total Research Grants of 384.19 Lacs during 2016-2021, from National and International funding agencies like DST-SERB, DBT, UGC, AICTE, DRDO, CSIR, ICAR, ICMR, BMBF (Germany), UGC-UKIERI etc.
3. Contemporary state of the art laboratories for Instrumental Analysis, Molecular Biology

and Molecular Modelling supporting high end research.

❖ **Major recruiters:**

1. Dr. Reddy's Lab, Strides Pharma Ltd., Sun Pharma, Torrent Pharma Ltd., Mylan Labs, MacLeods Pharma Ltd., Leiutis Pharma Ltd., Associated Capsules Group Ltd., Cipla etc.

SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects (Research and Consultancy)

a) Ongoing Projects

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lacs)	Duration of the Project
1.	Development of non-destructive process technology for simultaneous micronutrient fortification and bioavailability enhancement in Dal through selective binding of phytic acid	Dr. Biswatrish Sarkar (Co-PI) Dr. Anupam Roy, Food Tech (PI)	Department of Biotechnology, GOI	4th February, 2021	57.90	3 Years
2.	Aptamer-based Rapid Diagnostic Kit for Detection of Corona Virus Infection (CoVapt)	Dr. Abhimanyu Dev (PI) Dr. Venkatesan J. (Co-PI)	DST-SERB	17th July 2020	15.74762	1 Year
3.	Development of multi-functional nano-HAP bone substitute for effective bone regeneration in critical defects	Dr. Abhimanyu Dev (Co-PI)	DST-Nanomission	10.7.2019	51.15	3 Years
4.	Packaging design and some clinical study of hair dyes	Dr. K. Jayaram Kumar (PI)	TRIFED, GOI.	4.1.2019	6.3	7 months
5.	To modulate the aqueous solubility of poorly water soluble pharmaceuticals by crystal engineering technique and understand that mechanistic approach of solubilisation	Dr. Animesh Ghosh	AICTE-RPS	4.1.2019	24.12	3 Years



Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lacs)	Duration of the Project
6.	Biopolymer based nano-layer fortification of self-assembled micronutrients over pre-conditioned rice – Retention of fortified nutrients and scale-up studies	Dr. Anupam Roy, Chemical Engineering (PI) & Dr. Animesh Ghosh (Co-PI)	ICMR	26.11.2019	39.57	3 Years
7.	Phyto-chemical characterization of polyphenols in Ocimum tenuiflorum and investigation on its protective potentials against oxidative stress and DNA damage	Dr. Biswatrish Sarkar (PI)	DST-SERB	15.03.2018	34.232	3 Years
8.	Design & development of inhibitors of DENV methyl transferase for the treatment of dengue viral infection	Dr. Venkatesan J. (PI)	AICTE-RPS	04.08.2017	17.38	3 Years
9.	Evaluation of Anticancer Potential of few Coumarin Derivatives with Plasmonic up Conversion Luminescent Nanomaterials; A Non-Invasive Theranostic Approach for Breast Cancer	Dr. Shakti Prasad Pattanayak (PI)	AICTE-RPS	04.08.2017	23.47	3 Years
10.	Prophylactic Transdermal Patch Against Neurotoxin Poisoning Biological Warfare Situations	Dr. Animesh Ghosh	BIRAC-SRISTI (PMU) (Society for Research)	11.03.2017	15	2 years

b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lacs)	Duration of the Project
1.	Design and Synthesis of Substrate Based Peptide Inhibitors of DENV Protease for the treatment of dengue viral infection	Dr. B. N. Sinha (PI) Dr. Biswatrish Sarkar (Co PI) Dr. Venkatesan J. (Co PI)	DST-SERB	07.08.2017	45.6	3 Years



Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lacs)	Duration of the Project
2.	Phenyloxazoline Synthetase Inhibitors as Antitubercular Agents (POSIAA)	Dr. Venkatesan J. (PI) Dr. Abhimanyu Dev (Co-PI)	DST-SERB	29.11.2016	53.73	3 years

SECTION 3

SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses Conducted

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	Bioanalytical Techniques and Tools for Drug Discovery Process	Dr. Biswatrish Sarkar	AICTE-QIP	21.06.2021-26.06.2021
2.	In Silico Approaches in Drug Delivery	Dr. Sandeep Kumar Singh	AICTE-QIP	11.06.2021-17.06.2021
3.	Applications of Machine Learning in Drug Discovery & Development	Dr. Kishanta Kumar Pradhan	AICTE-QIP	31.05.2021-05.06.2021
4.	Recent advances in Therapeutic research with special emphasis on nanomedicine	Dr. Neelima Sharma	AICTE-QIP	24.05.2021-29.05.2021
5.	Role of Pharmacy in Women's Healthcare	Dr. Swastika Ganguly & Dr. Papiya Mitra Mazumder	APTI Women's Forum, (East Zone) and Indian Pharmacological Society	08.03.2021

3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
	Dr. Anima Pandey	Webinar on Impact Of COVID-19 On Mental Health And Well Being	TEQIP-III	Dept. of Bioengineering B.I.T., Mesra	Online	08.08.20
	Dr. Abhimanyu Dev	ML & AI Using Covid-19 Virus Data Analysis	Self-funded	Finland Labs (A Unit of Revert Technology Pvt. Ltd.) In Association with National Social Summit, IIT Roorkee	Online	17.10.20-18.10.20
	Dr. Abhimanyu Dev	Python with COVID-19 Data Web Scraping and MySQL	Self sponsored	Finland Labs (A Unit of Revert Technology Pvt. Ltd.) In Association with National Social Summit, IIT Roorkee	Online	10.10.20-11.10.20



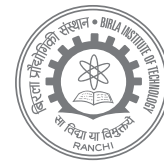
Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
	Dr. Abhimanyu Dev	Nanostructured Materials for Energy, Environment, and Healthcare Application	TEQIP-III	IIT Delhi	Online	09.11.20-13.10.20
	Dr. Trishna Bal	FDP	AICTE	IIT ROORKEE	Online	29.11.20-04.12.20
	Dr. Anima Pandey	Bioanalytical Techniques and Tools for Drug Discovery Process	AICTE	Dept. of Pharm. Sci. & Tech, B.I.T., Mesra	Online	21.06.21-26.06.21
	Dr. Anima Pandey	Applications of Machine Learning in Drug Discovery and Development	AICTE	Dept. of Pharm. Sci. & Tech, B.I.T., Mesra	Online	31.05.21-05.06.21
	Dr. Anima Pandey	QbD in Formulation Development & IPR-Overview	AICTE	Krishna Teja Pharmacy College, Tirupati	Online	15.06.21-17.06.21

SECTION 4

RESEARCH PUBLICATION

4.1 Publications in Journals :

1. Deb, P. K., Khound, P., Bhattacharjee, S., Choudhury, P., Sarma, H., Devi, R., Sarkar, B. (2021). Variation in chemical constituents, in-vitro bioactivity and toxicity profile among different parts of *Clerodendrum glandulosum* Lindl. (*C. colebrookianum* Walp.). *South African Journal of Botany* 140 (2021) 50-61. <https://doi.org/10.1016/j.sajb.2021.03.023>
2. Adhikary, M., Mukhopadhyay, K., Sarkar, B. (2021) Flavonoid-rich wheatgrass (*Triticum aestivum* L.) diet attenuates diabetes by modulating antioxidant genes in streptozotocin- induced diabetic rats. *Journal of Food Biochemistry*. 2021;00:e13643. <https://doi.org/10.1111/jfbc.13643>
3. Ray, A., Samajdar, S., & Kumar, K. J. (2021). Improving delayed-release potential of winged bean starch by acetylation. *Carbohydrate Polymer Technologies and Applications*. 100118. <https://doi.org/10.1016/j.carpta.2021.100118>
4. Chandra, P., Karmakar, S., Ganguly, S. (2021). Comparative Studies of Various NNRTIs in the Active Site of Different HIV-1RT Receptors. *Chemistry Proceedings*. 3,33. <https://doi.org/10.3390/ecsoc-24-08313>
5. Pramodh, B., Lokanath N.K., Naveen, S., Naresh, P., Ganguly, S., Panda J. (2021). Cis and trans isomers of 1-(5-bromothiophen-2-yl) -3-(10-chloroanthracen-9-yl)prop-2-en-1-one : Synthesis and Characterization. *Journal of Molecular Structure*. 1236 (2021) 130228. <https://doi.org/10.1016/j.molstruc.2021.130228>
6. Tripathi, S. and Mitra Mazumder, P. (2021) Comprehensive investigations for a potential natural prophylaxis- A Cellular & Murine model for Apple Cider Vinegar against Hydrogen peroxide and Scopolamine induced Oxidative stress. *Drug Development Research*. pp. 1-14. <https://doi.org/10.1002/ddr.21849>
7. Tripathi, S. and Mitra Mazumder, P. (2021) Neuroprotective efficacy of apple cider vinegar on zinc-high fat diet-induced mono amine oxidase alteration in murine model of AD. *Journal of the American College of Nutrition*. In press. 10.1080/07315724.2021.1948933
8. Chatterjee, A., Sharma, N. and Mitra Mazumder, P. (2021) Evaluation of antioxidant, Immunomodulatory and anticancer properties of methanolic extract of *Neolamarckia cadamba* Linn. *Fruits*. *Indian Journal of*



- Pharmaceutical Education and Research. vol55, issue 2 (Suppl). S601-S609. 10.5530/ijper.55.2s.121
9. Tripathi, S. and Mitra Mazumder, P. (2021) Cellular investigations to uncover curative potentials of polyphenols- An in vitro study of Apple Cider Vinegar (ACV) and Chrysin against Alzheimer's like pathology via Down-Regulation of AChE activity. Indian Journal of Traditional Knowledge. Vol 20(2). <http://nopr.niscair.res.in/handle/123456789/57218>
 10. Bal, T., Singh, P., Rajora, A.D., Garg, S., Ghosh, B.D., Pattnaik, A.K., (2021). Polyacrylamide Grafted Gum Acacia (GA-g-PAM) Graft Copolymer as Efficient Polymeric Scaffold. Indian Journal of Pharmaceutical Education and Research. 55(2), s441-s447. 10.5530/ijper.55.2s.115
 11. Mohanty, S., Pattnaik, A. (2021). Scientific Evaluation of Anti-obesity Potential of Methanolic Leaves extract of Ocimum sanctum (Linn.) in Monosodium Glutamate - High Fat Diet Induced Obese Mice. Indian Journal of Pharmaceutical Education and Research. 55(2), 35-43. 10.5530/ijper.55.2s.125
 12. Garg, S., Bal, T., Panpalia, S. G., Rajora, A. D., Ghosh, B. D. (2021) Preparation and characterization of microwave irradiated pH-sensitive polyacrylamide grafted flax seed mucilage graft copolymeric hydrogel (PFLSM-g-PAM-cl-MBA) and its evaluation as effective polymeric scaffold. Sustainable Chemistry and Pharmacy. 22, 100479. <https://doi.org/10.1016/j.scp.2021.100479>
 13. Mali, N. S. and Pandey, A. (2021). 1,2,5-Thiadiazole Scaffold: A review on recent progress in biological activities. Combinatorial Chemistry & High Throughput Screening. <https://doi.org/10.2174/13862073246662106212162001>
 14. Mali, N. S. and Pandey A. (2021) Molecular Modeling Studies on 2,4-Disubstituted Imidazopyridines as Anti-Malarials: Atom-Based 3D-QSAR, Molecular Docking, Virtual Screening, In-Silico ADMET and Theoretical Analysis. Journal of Computational Biophysics and Chemistry. 20,03,267-282. <https://doi.org/10.1142/S2737416521500125>
 15. Jana, P., Shyam, M., Singh, S., Jayaprakash, V., Dev, A. (2021). Biodegradable polymers in drug delivery and oral vaccination. European Polymer Journal. 142, 110155-110170. 10.1016/j.eurpolymj.2020.110155
 16. Shyam, M., Shilkar, D., Verma, H., Dev, A., Sinha, B. N., Brucoli, F., Bhakta, S., Jayaprakash, V. (2021). The Mycobactin Biosynthesis Pathway: A Prospective Therapeutic Target in the Battle against Tuberculosis. Journal of Medicinal Chemistry. 64(1), 71-100. 10.1021/acs.jmedchem.0c01176
 17. Mahdi, W.A., Hussain, A., Ramzan, M., Faruk, A., Bukhari, S. I., Dev, A., (2021). Pluronic-Coated Biogenic Gold Nanoparticles for Colon Delivery of 5-Fluorouracil: In vitro and Ex vivo Studies. AAPS Pharm Sci Tech. 22,64-82. 10.1208/s12249-021-01922-1
 18. Roy, A., Sarkar, B., Celik, C., Ghosh, A., Basu, U, Jana, M., Jana, A., Gencay, A., Sezgin, G. C., Ildiz, N., Dam, P., Mandal, A. K., Ocsoy, I. (2020). Can concomitant use of zinc and curcumin with other immunity-boosting nutraceuticals be the arsenal against COVID-19? Phytotherapy Research. 1-4. DOI: 10.1002/ptr.6766
 19. Rittà, M., Marengo, A., Civra, A., Lembo, D., Cagliero, C., Kant, K., Lal, U. R., Rubiolo, P., Ghosh, M., Donalisio, M., (2020). Antiviral Activity of a Arisaema Tortuosum Leaf Extract and Some of its Constituents against Herpes Simplex Virus Type 2. Planta Med. 86(04): 267-275. 10.1055/a-1087-8303
 19. Singh, A., & Kumar, K. J., (2020). Enhancing delayed release characteristics of chapparada avare seed starch. International Journal of Biological Macromolecules. 165, 1431-1437. <https://doi.org/10.1016/j.ijbiomac.2020.10.027>
 20. Dey, S., Basak, S., De, A., Parvez, S., Hossain, T., Saha, A., Ghosh, M., Karmakar, T. (2020). Simultaneous Pharmacokinetics Estimation of Nateglinide and Pioglitazone by RP-HPLC: Computational Study to Unlock the Synergism. Journal of Chromatographic Science. 2020, 58(4): 309-322. 58(4): 309-322. <https://doi.org/10.1093/chromsci/bmz116>
 21. Ganguly, S., Dey, R., Sarkar, B., Chandra, P., (2020). Synthesis, antibacterial activities, binding mode analysis and predictive ADME studies of novel 1-(aryl)-2-(1Himidazol-1-yl) methanones. International Journal of Pharmaceutical Education and Research.



- 2(2),39-45. <https://doi.org/10.37021/ijper.v2i2.2>
22. Abdullah S. M. and Mitra Mazumder, P. (2020) Augmentation of Mast Cell Stability, a Therapeutic Strategy for Idiopathic Pulmonary Fibrosis. Indian Journal of Pharmaceutical Sciences. 82(2), pp.193-202. 10.36468/pharmaceuticalsciences.639
23. Das, S., Das, M.K., Das, R., Gehlot, V., Mahant, S., Mitra Mazumder, P., Das, S., Falls, N. and Kumar, V. (2020) Isolation, characterization of Berberine from Berberis aristata DC for eradication of resistant Helicobacter pylori. Biocatalysis and Agricultural Biotechnology. 26, p.101622. <https://doi.org/10.1016/j.bcab.2020.101622>
24. Aggarwal, Y., Das, J., Mitra Mazumder, P., Kumar, R. and Sinha, R.K. (2020) Heart rate variability time domain features in automated prediction of diabetes in rat. Physical and Engineering Sciences in medicine. 44(1), pp.45-52. 10.1007/s13246-020-00950-8
25. Sharma, N., Kispotta, S. and Mitra Mazumder, P. (2020) Immunomodulatory and anticancer activity of Bombax ceiba Linn leaf extract. Asian Pacific Journal of Tropical Biomedicine. Vol 10, Issue 9, 10(9), p.426-432. 10.4103/2221-1691.290134
26. Aggarwal, Y., Das, J., Mitra Mazumder, P., Kumar, R. and Sinha, R.K., (2020). Heart Rate Variability Features from Nonlinear Cardiac Dynamics in Identification of Diabetes Using Artificial Neural Network and Support Vector Machine. Biocybernetics and Biomedical Engineering. Vol40, Issue3, pp1002-1009. <https://doi.org/10.1016/j.bbe.2020.05.001>
27. Tripathi, S., Kumari, M. and Mitra Mazumder, P. (2020) Ameliorative effects of apple cider vinegar on neurological complications via regulation of oxidative stress markers. Journal of Food Biochemistry. 13504. <https://doi.org/10.1111/jfbc.13504>
28. Tripathi, S. and Mitra Mazumder, P. (2020) Apple Cider Vinegar (ACV) and their Pharmacological Approach towards Alzheimer's Disease (AD): A Review. Indian Journal of Pharmaceutical Education and Research. Vol 54, Issue 2 (Suppl), S67 – S74. 10.5530/ijper.54.2s.62
29. Roy Sarkar, S., Mitra Mazumder, P., Chatterjee, K., Sarkar, A., Adhikary, M., Mukhopadhyay, K. and Banerjee, S.,(2020) Saccharomyces boulardii ameliorates gut dysbiosis associated cognitive decline. Physiology & Behavior. 236, p.113411. <https://doi.org/10.1016/j.physbeh.2021.113411>
30. Roy Sarkar, S., Mitra Mazumder, P., Banerjee, S. (2020). Probiotics protect against gut dysbiosis associated decline in learning and memory. Journal of Neuroimmunology. 348, p.577390. <https://doi.org/10.1016/j.jneuroim.2020.577390>
31. Shalu, S., Dasgupta, K., Roy, S., Kar, P., Bal, T., Ghosh, B.D., (2020). Thermal, mechanical, and dielectric properties of low loss PbZr0.3Ti0.7O3/polystyrene composites prepared by hot-press method. Polymer Composite. 1-9. 10.1002/pc.25912
32. Dey, P., Bal, T., Gupta, R.N., (2020). Fabrication and invitro evaluation of electrospun gum ghatti-polyvinyl alcohol polymeric blend green nanofibre mat (GG-PVA NFM) as a novel material for polymeric scaffolds in wound healing. Polymer Testing. 91,106826. <https://doi.org/10.1016/j.polymeresting.2020.106826>
32. Roy, D., Bal, T., Swain, S. (2020). Fabrication and evaluation of pH- sensitive biocompatible microwave irradiated moringa bark gum-carrageenan (MOG-CRG-IPN) interpenetrating isotropic polymeric network for controlled delivery of pharmaceuticals. Sustainable Chemistry and Pharmacy. 18,100325. <https://doi.org/10.1016/j.scp.2020.100325>
33. Alsheri, S., Altamini, M.A., Hussain, A., Imam, S.S., Singh, S.K., Faruk, A. (2020). Morphological transition of M. tuberculosis and modulation of intestinal permeation by food grade cationic nanoemulsion: In vitro-ex vivo-in silico GastroPlus™ studies. Journal of Drug Delivery Science and Technology. 60, 10197. 10.1016/j.jddst.2020.101971
34. Roy, A., Ghosh, A., (2020). Progress on cocrystallization of poorly soluble NME's in the last decade. Cryst Eng Comm. 22,6958-6974. <https://doi.org/10.1039/D0CE01276A>
- ### 4.2 Publications in Proceedings:
1. Priyanka Chandra, Swastika Ganguly and Soikata Karmakar. Comparative studies of various NNRTI's in the active site of different



HIV-1RT receptors, E-paper published in the 24th International Electronic Conference on Synthetic Organic Chemistry, November 2020 (<https://sciforum.net/paper/view/conference/8313>).

4.3 Book

4.3.1 Chapter(s) in Edited Book

1. Trishna, B., Garg, S., Rajora, A. D., Sharma, S. R., Harsh, H. (2020). An Insight into Nanosomes: Potential Nanopharmaceutical Delivery System, in Nanopharmaceutical Advanced Delivery System, Dave V., Gupta N., Sur S., (Eds.), Wiley Online Library, 2021. (In Press) (ISBN No. 9781119711698). <https://doi.org/10.1002/9781119711698.ch12>.
2. Murtuja S., Shilkar D., Sarkar B., Sinha B. N., Jayaprakash V. (2021) Identification of Dengue NS2B-NS3 Protease Inhibitors Through High-Throughput Virtual Screening—Impacts on Drug Development Against the Dengue Virus. In: Ahmad S.I. (eds) Human Viruses: Diseases, Treatments and Vaccines. Springer, Cham. pp-93-120. (ISBN 978-3-030-71164-1) https://doi.org/10.1007/978-3-030-71165-8_5.
3. Sarkar, B., Deb, P. K., Banerjee, S. (2021). Oxidative Stress, Inflammasome, and Cancer: Polyphenols May Be the Answer. In: Handbook of Oxidative Stress in Cancer: Mechanistic Aspects. Chakraborti S., Ray B.K., Roychowdhury S. (eds.) Springer, Singapore. (ISBN 978-981-15-9411-3) https://doi.org/10.1007/978-981-15-4501-6_165-1.

SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Dr. Animesh Ghosh	Elected Fellow	Indian Chemical Society	National	09-05-2021
2.	Dr. Mahendra Pratap Chopra	Vice President	Lions Club of Ranchi International	International Level	18-07-2021
3.	Dr. Mahendra Pratap chopra	Honorary Secretary	Indian Pharmaceutical Association, Jharkhand State Branch	State	01-06-2021

5.2 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	National Institute of Pharmaceutical Education Research, Kolkata	Academic and Research	2021-2026

SECTION 6

ACTIVITIES/ FACULTY MEMBERS / DOS / DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
1.	Global Event of AstraZeneca project iDEA	Pallavi Dixit, Udhisha Shrestha, Lovely Riya, Gourvi Kumari, Kumar Abhishek, Biswa Bhushan Pradhan	Dr. Biswatrish Sarkar	May 13-June 21, 2021



6.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. Subir Samanta	Professor & Head	No
2.	Dr. Barij Nayan Sinha	Professor	No
3.	Dr. Priya Ranjan Prasad Verma	Professor	No
4.	Dr. Sivesh Jha	Professor	No
5.	Dr. Roop Narayan Gupta	Professor	No
6.	Dr. (Ms.) Swastika Ganguly	Professor	No
7.	Dr. (Mrs.) Papiya Mitra Mazumder	Professor	No
8.	Dr. K. Jayaram Kumar	Professor	No
9.	Dr. Saurabh Manaswita Verma	Professor	No
10.	Dr. Venkatesan J.	Associate Professor	No
11.	Dr. Ashok Kumar Pattnaik	Associate Professor	No
12.	Dr. Manik Ghosh	Assistant Professor	No
13.	Dr. Abhimanyu Dev	Assistant Professor	No
14.	Dr. Biswatrish Sarkar	Assistant Professor	No
15.	Dr. Trishna Bal	Assistant Professor	No
16.	Dr. Anima Pandey	Assistant Professor	No
17.	Dr. Neelima Sharma	Assistant Professor	No
18.	Dr. Sandeep Kumar Singh	Assistant Professor	No
19.	Dr. Animesh Ghosh	Assistant Professor	No
20.	Dr. Kishanta Kumar Pradhan	Assistant Professor	No
21.	Dr. Mahendra Pratap Chopra	Assistant Professor	No

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Swastika Ganguly (HOD)	Ex-Officio	Chairman
2.	Dr. P. R. P. Verma	Professor	Internal Member
3.	Dr. B. N. Sinha	Professor	Internal Member
4.	Dr. S. Jha	Professor	Internal Member
5.	Dr. (Mrs.) Papiya Mitra Mazumder	Professor	Internal Member
6.	Dr. K. Jayaram Kumar	Professor	Internal Member
7.	Dr. (Mrs.) S. M. Verma	Professor	Internal Member
8.	Dr. Animesh Ghosh	Associate Professor	Internal Member
9.	Dr. M. P. Chopra	Assistant Professor	Internal Member
10.	Dr. Manik Ghosh	Assistant Professor	Internal Member
11.	Dr. Rakesh Kumar Sinha	Professor & Head (Dept. of Bioengg. & Biotech)	External Member



Sr. No.	Name of the Member	Designation	Role
12.	Dr. Sumit Mishra	Associate Professor (Dept. of Chemistry)	External Member
13.	Dr. S. Murugesan	Associate Professor, Dept. of Pharmacy, BITS Pilani	External Member
14.	Dr. Tarun Jha	Professor, Dept. Pharm. Technology, Jadavpur University	External Member
15.	Dr. Ajay Kumar Handa	Executive Vice President Dr. Reddy's Lab. Ltd., Hyderabad	External Member


SECTION 7**OTHER INFORMATION****7.1 Publication by students**

1. Priyanka Chandra, Swastika Ganguly and Soikata Karmakar. Comparative studies of various NNRTI's in the active site of different HIV-1RT receptors, E-paper published in the 24th International Electronic Conference on Synthetic Organic Chemistry, November 2020 (<https://sciforum.net/paper/view/conference/8313>).

7.2 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Prof. Saranjit Singh Head, Department of Pharmaceutical Analysis of National Institute of Pharmaceutical education and Research, Mohali, Chandigarh	24.06.2021 (Delivered Online Lecture)	
2.	Dr. Thanga Mariappan Director & Head, Pharmaceutical Candidate Optimization (PCO) BBRC-BMS, Bristol Myers Squibb, Bangalore	21.06.2021 (Delivered Online Lecture)	



3.	Dr. Alok Kumar Pandey Principal Scientist Nanomaterial Toxicology CSIR-Indian Institute of Toxicology Research, Lucknow	26.06.2021 (Delivered Online Lecture)	
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7.3 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Dr. C. Veeresham Professor, Kakatiya University, Warrangal (1984 Batch, M. Pharm)	Ex-Principal & Head, Dept. of Pharmacy, Kakatiya University, Warrangal
2.	Ms. Ritu Sahay Drug Controller Jharkhand State (1984 batch B. Pharm)	She is serving as Director, Drugs Control Administration, Ministry of Health, Govt. of Jharkhand since February 2015
3.	Mr. Raweesh Chaudhary, Director of Medical Alignment – AstraZeneca Medical Affairs, USA (1992 batch B. Pharm)	He has 23 years of wide-ranging experience and stellar track record in Medical Affairs, Product management and commercial roles spread across countries like India, Canada and USA
4.	Dr. Dharmendra Singhal Vice President / Global Head Small Molecules CMC Dev at Roche-Genentech Pharma Group (1992 batch B. Pharm)	He is leading a global organization responsible for CMC (API/Chemistry, drug product and analytics) development to advance NCEs from preclinical stage through clinical development to commercial manufacturing and ensuring marketed support/ technical life-cycle management of Roche SM commercial products.
5.	Mr. Naveen Sharma President, Cliantha Research Ltd., Ahmedabad (1989 batch B. Pharm, 1993 batch M. Pharm.)	Expert in Bioavailability and bioequivalence, he has more than 25 years experience in the industry. With his strong business acumen and strategic planning he heads the Cliantha Research Ltd an leading CRO in the country.

Department of Physics

SECTION 1

DEPARTMENTAL PROFILE



1. About the Department :

The Department of Physics was established in 1955. The Department offers Ph.D. in various areas of Physics, M.Sc. in Physics, Integrated M.Sc. in Physics and B.E. Physics course. The Department has a strong pool of highly qualified and motivated faculty members, and excellent laboratory facilities. It is well supported financially through the "Fund for Improvement in Science & Technology Infrastructure" (FIST) Programme of the Department of Science and Technology, New Delhi and "Special Assistance Programme" (SAP) of the UGC. The Department has also received significant funds under TEQIP Phases – I, II & III. At present, the Department has many ongoing research projects sponsored by UGC, DST, BRNS, ARDB, ISRO, DRDO and CSIR. Some faculty members have also participated in several international (Indo-German, Indo-Russian, Indo-Israel) collaborative projects.

Other than BTech Courses, the important thrust of the Department of Physics is the 5-year Integrated M. Sc. Programme which has been offering since 2011. The course aims to train the young students with the following objectives:

- To impart high quality Science education in a vibrant academic ambience.
- To prepare students to take up challenges as a researcher in diverse areas of theoretical and experimental physics.
- Excellent lab, library and internet facilities.
- Opportunity of pursuing high end research as project work.
- During 9th and 10th semester, students may opt special papers for the following areas:
- Theoretical and Computational Physics, Condensed Matter Physics, Electronics, Photonics, and Plasma Sciences.



SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects (Research and Consultancy)

a. Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Study of Stochastic Heat Engines using Active Particles	Sourabh Lahiri (PI)	DST-SERB	October 25, 2018	Rs. 21.49 Lakhs	3 years
2	Nonlinear Rheology of Dense Colloidal Suspensions	Madhu Priya (PI)	DST-SERB	September 14, 2018	Rs. 22.45 Lakhs	3 years
3	Lightning impact on ozone precursor over Indian region and its implications on tropospheric ozone	Swagata Payra (PI)	Ministry of Earth Sciences, Govt of India	09/10/2017	34 Lakh 64 thousand	3 years and now in consideration for extension
4.	Prediction of ground-level particulate matter concentrations from Multi -Satellite AOD over the Indian Subcontinent	Swagata Payra (Co-PI)	Space Application Centre (SAC), ISRO, Govt of India	10th October 2019	22, 08,000/-	September, 2022
5.	AERONET campaign	Collaborator	GSFC, NASA, USA	November, 2009	10 Lakh	October, 2029
6	Development of super-lubricated Nano-crystalline Diamond film on bearing materials for aerospace applications	Rishi Sharma (PI)	AR&DB, DRDO	18.12.2019	26.115 Lakhs	3 Years

b. Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1	Faster and brighter single photons from 2D crystals and their interfacing with plasmonic waveguides.	Dr. Dilip Kumar Singh (PI) Dr. Laxmi Narayan Tripathi (Co-PI) Dr. Rajesh V.	CRS Scheme NPIU_ TEQIP MHRD	18th June, 2019	Rs. 13.69 Lakhs	30th June, 2021
2	Electrical and magnetotransport studies of nano-devices of few/mono-layer transition metal dichalcogenides.	Dr. Sourabh Barua (PI) Dr. Dilip Kumar Singh (Co-PI) Dr. Aveek Bid Dr. Sudip Kundu	CRS Scheme NPIU_ TEQIP MHRD	18th June, 2019	Rs. 19 Lakhs	30th June, 2021



SECTION 3

SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	Webinar on topic "Challenges Involved in Simulating the Complex Systems".	Dr. Nishi Srivastava	TEQIP-III	25 July 2020
2.	Celebration of World Ozone Day (https://www.youtube.com/watch?v=IMDOv59CTaQ&t=2816s)	Dr Swagata Payra and SAMA	South Asian Meteorological Organizatio (SAMA)	16th Sep 2020

3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Nishi Srivastava	One week online FDP on "Artificial intelligence and machine learning in healthcare"	--	Jointly organized by Department of Electronics & Communication Engineering and Department of Bio-engineering, Birla Institute of Technology, Mesra, Ranchi	Online mode	27-31 July 2020
2.	Dr. Nishi Srivastava	21 days Online GIS Training Program using QGIS	--	Department of Geography, School of Earth Sciences, Central University of Karnataka, India, jointly with State Institute of Urban Development, Karnataka, India	Online	September 7th 2020 to September 27th 2020
3.	Dr. Nishi Srivastava	One week on "Research Methodology"		AICTE Training And Learning (ATAL) Academy, IIIT Dharwad	Online FDP	2020-12-7 to 2020-12-11
4.	Dr. Nishi Srivastava	One week on "Internet of Things" from		AICTE Training And Learning (ATAL) Academy at G. H Patel College of Engineering & Technology	Online FDP	2021-1-4 to 2021-1-8
5.	Dr. Nishi Srivastava	One week Online Student and Faculty Development Program on "EARTH SYSTEM SCIENCE FOR SOCIETY		Department of Civil Engineering, PES Institute of Technology & Management, Approved by AICTE	Online FDP	November 30th to December 5th, 2020



वार्षिक प्रतिवेदन 2020-2021

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
6.	Dr. Nishi Srivastava,	International Geographical Union India International Conference (Virtual), 2020,		Department of Geography, UCSSH, Mohanlal Sukhadia University, Udaipur, India on Global to Local Sustainability & Future Earth		December 18-20, 2020
7.	Dr. Nishi Srivastava	International Virtual Conference on Earth's Changing Climate: Past, Present & Future,		Organized by The Society of Earth Scientists,		15-17 October 2020,
8.	Dr. Madhu Priya	FDP on "Cyber Security"	AICTE	AICTE Training And Learning (ATAL) Academy	Online mode	8-12 February, 2021
9.	Dr. Madhu Priya	Guru-Dakshta "4th Faculty Induction Programme"	UGC, HRDC	UGC, HRDC	Online mode	03-30 March, 2021
10.	Dr. Madhu Priya	FDP on "Inculcating Universal Human Values in Technical Education"	AICTE	AICTE	Online mode	7-11 June, 2021
11	Dr. Sourabh Lahiri	FDP on "Cyber Security and Investigation Tools"	TEQIP_III	CSE department, BIT Mesra	Online mode	11-15 September, 2020
12	Dr. Sourabh Lahiri	FDP on "Quantum Computing"	AICTE	AICTE	Online mode	19-23 October, 2020
13	Dr. Sourabh Lahiri	Faculty Induction Programme	Ranchi University	Ranchi University	Online mode	26-11-2020 to 23-12-2020
14	Dr Sanat Kumar Mukherjee	Faculty Development Programme of Delivering Online Course using Canvas LMS	TEQIP III	BIT Mesra	Online mode	27-07-2020 to 05.08.2020
15	Dr Sanat Kumar Mukherjee	National Webinar Modern Trends in Physics [NWMTP]		Department of Physics Ram Krishna College, Madhubani - 847211	Online mode	29-08-2020
16	Dr Sanat Kumar Mukherjee	Indus Synchrotrons Users' Meeting (ISUM-2)		RRCAT, Indore & UGC-DAE CSR, Indore	Online	28.07.2020 - 29.07.2020
17	Swagata Payra	American Geophysical Union Fall Meeting 2020	AGU	American Geophysical Union	Virtual / San Francisco USA	14th December, 2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
18.	Swagata Payra	FDP on "Essential Physics for Engineers"	NITTTR Chandigarh	NITTTR Chandigarh	Online mode	1st to 6th February, 2021
19.	Swagata Payra	Air Pollution and its impact	Rotary Club Jaipur	Rotary Club	Virtual/ Jaipur Rajasthan	19th February, 2021
20	Rishi Sharma	One-day webinar on "Challenges Involved in Simulating Complex System"	BIT Mesra	BIT Mesra	Online	25.07.2020
21	Rishi Sharma	Online Faculty Development Program On "Quest Abound with Radiation Around: A Webinar on Cross Disciplinary Endeavours in Radiation Science"	CUJ Ranchi	CUJ Ranchi	Online	07.12.2020 to 11.12.2020
22	Rishi Sharma	Two week Faculty development program on Delivering Online Course using Canwas LMS	TEQIP-III	BIT Mesra	Online	27.07.2020 to 05.08.2020
23	Dr. Dilip K. Singh	Digital transformation in teaching learning process	IIT Bombay	IIT Bombay	Online	06/04/20 to 22/04/20
24	Dr. Dilip K. Singh	FDP on "Sensor technology"	Tripura University / ATAL Academy	Tripura University / ATAL Academy	Online	21/09/20 to 25/09/20
25	Dr. Dilip K. Singh	FDP on "Photonics"	C.V. Raman Global University	C.V. Raman Global University	Online	28/09/20 to 02/10/20
26	Dr. Dilip K. Singh	FDP on "Photonics"	National Institute of Technology, Karnataka/ ATAL Academy	National Institute of Technology, Karnataka/ ATAL Academy	Online	01/02/21 to 05/02/21



SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

1. Nishi Srivastava, D. Vignesh, N. Saxena, Investigation of artificial neural network performance in the aerosol properties retrieval, Journal of Water and Climate Change jwc2021336. 2021, <https://doi.org/10.2166/wcc.2021.336>
2. T. K. Mishra, A. Kumar, S. K. Sinha, Sliding Wear Behavior of Thermally Sprayed WC-20Cr3C2-7Ni and La2O3 Composite Coatings, Emerging Materials Research Volume 10 Issue 2, June 2021, pp. 1-9, ISSN 2046-0147 | E-ISSN 2046-0155 <https://doi.org/10.1680/jemmr.20.00138>
3. Konar, K., Bose, K. & Paul, R.K. Revisiting cosmic microwave background radiation using blackbody radiation inversion. Sci Rep 11, 1008 (2021).
4. Sourabh Lahiri and A. M. Jayannavar, Stochastic Energetics and Thermodynamics at Small Scales, Resonance 26, 523 (2021).
5. R Chatterjee, Sanat Kumar Mukherjee, B Paul & S Chattopadhyaya, Comparative Spectroscopic analysis, performance and emissions evaluation of Madhuca Longifolia and Jatropha curcas produced biodiesel, Environmental Science and Pollution Research, <https://doi.org/10.1007/s11356-021-15081-0>, (2021).
6. Swagata Payra, P Gupta, R Bhatla, L El Amraoui & S Verma, Temporal and spatial variability in aerosol optical depth (550 nm) over four major cities of India using data from MODIS onboard the Terra and Aqua satellites, Arabian Journal of Geosciences, Springer, Indexing:- SCIE, IF :- 1.827 <https://doi.org/10.1007/s12517-021-07455-y> Published date :- 26th June, 2021
7. S Verma, P K Yadava, P.K., D M Lal, R K Mall, H Kumar, Swagata Payra* (2021) Role of Lightning NOx in Ozone Formation: A Review. Pure and Applied Geophysics, Springer Indexing:-SCI, IF :- 2.335 <https://doi.org/10.1007/s00024-021-02710-5> Published date :- 12th April, 2021
8. M Soni, A S Chandel, S Verma, Swagata Payra*, D Prakash, B Holben (2021). Aerosols properties over desert influenced locations situated in four different continents. Atmospheric Environment, Elsevier Vol 248, Indexing: sci, IF=4.798, DOI:10.1016/j.atmosenv.2021.118232
9. M Soni, S Verma, H Jethava, Swagata Payra, L Lamsal, P Gupta, and J Singh (2020). Impact of COVID-19 on the Air Quality over China and India Using Long-term (2009-2020) Multi-Satellite Data. Aerosol and Air Quality Research ,Vol 21, Issue 3, Indexing:SCIE, IF=3.063, DOI:10.4209/aaqr.2020.06.0295 Published date :- 19th November, 2020
10. J Singh, P Gupta, D Gupta, S Verma, D Prakash and Swagata Payra, Fine particulate pollution and ambient air quality: A case study over an urban site in Delhi, India. Journal of Earth System Science, volume 129, Article number: 226 (2020). Indexing:SCIE, IF :- 1.371, <https://link.springer.com/article/10.1007/s12040-020-01495-w> Published date :- 10th November, 2020
11. Tribhuwan Kishore Mishra, Arbind Kumar, S.K. Sinha, Experimental investigation and study of HVOF sprayed WC-12Co, WC-10Co-4Cr and Cr3C2-25NiCr coating on its sliding wear behaviour, International Journal of Refractory Metals and Hard Materials, (2021) 105404 <https://doi.org/10.1016/j.ijrmhm.2020.105404>
12. Deep Shikha, Md. Shahid, S. K. Sinha, Improvement in adhesion of HAP deposited on alumina after Ar+ ions implantation and its physiochemical properties, Surfaces and Interfaces 19, 100485 (2020) <https://doi.org/10.1016/j.surf.2020.100485>
13. Madhu Priya, Prabhat K. Jaiswal, and Manish Dev Shrimali, Host-parasite coevolution: Role of selection, mutation, and asexual reproduction on evolvability,, Chaos 30, 073103 (2020) <https://doi.org/10.1063/5.0010057>
14. Madhu Priya & Prabhat K. Jaiswal, Enhanced attraction between particles in a bidisperse mixture with random pair-wise interactions, Phase Transitions, 93:9, 895-908 <https://doi.org/10.1080/01411594.2020.1813287> 29 August , 2020
15. Mritunjoy Prasad Ghosh, Subhadeep Datta, Rishi Sharma, Kamar Tanbir, Manoranjan Kar, Samrat Mukherjee, Copper doped nickel ferrite nanoparticles: Jahn-Teller distortion and its effect on microstructural, magnetic and electronic properties, Materials Science & Engineering B, Published date :- 31st January, 2021



Vol 263 (2021) 114864.

16. Abhilash Bajpai and Rishi Sharma, Atmospheric Pressure Plasma Jet: A complete tool for surface enhanced Raman spectroscopy substrates preparation, Vacuum, Vol. 172 (2020) 109033
17. Rakesh K Prasad and Dilip K Singh, Low cost electrical probe station using etched tungsten nanopores: role of cathode geometry, Nano Express (IOP) 1, 2 (2020)
18. Ashish Gaurav, Deepali Sinha, Rakesh K. Prasad, Dilip K. Singh, Single step synthesis of size-controlled carbon quantum dots using electrochemical etching of graphite arXiv:2011.03217v1 [physics.app-ph] (2021)
19. Ravi Kumar, Dilip K. Singh, Prashant Kumar, Cong T. Trinh, K.-G. Lee, Raj Kumar, and S. R. Dhakate, High ensemble concentration of photo-stable NV centers in Type Ib nanodiamonds by thermal assisted migration of native vacancies,

Diamond and Related Materials 114, 108337 (2021)

4.2 Publications in Proceedings:

1. Sonali Biswas, and Sunita Keshri, Large magnetocaloric effect near room temperature in $\text{La}_{0.67}(\text{Sr},\text{K}/\text{Pb})_{0.33}\text{MnO}_3$ manganite nanomaterials, Journal of Materials Science: Materials in Electronics (Springer Publication), 31, 2020, 21896–21912.
2. Parthasarathi Mohanty and Sunita Keshri, Octahedral distortion and oxidation reduction in corundum type $\text{Co}_4\text{Ta}_2\text{O}_9$ and $\text{Co}_4\text{Nb}_2\text{O}_9$ ceramics and their correlated electrical conduction, Physica Scripta (IOP Publications), 95 045802, 2020
3. Madhu Priya, Flow behaviour of a model colloid-polymer mixture using mode-coupling theory, AIP Conference Proceedings 2265, 030233 (2020) . <https://doi.org/10.1063/5.0016578>

SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	Jharkhand State Pollution Control Board and Ranchi Municipal Corporation (Nodal Person: Dr. Nishi Srivastava)	National Clean Air Program	

SECTION 6

ACTIVITIES/ FACULTY MEMBERS / BOS / DAS

6.1 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Prof. S. K. Sinha	Professor and Head	No
2.	Prof. S. Konar	Professor	No
3.	Prof. S. Keshri	Professor	No
4.	Prof. S. K. Rout	Professor	No
5.	Dr. R. K. Paul	Associate Professor	No
6.	Dr. Rajeev Kumar	Asstt. Professor	No
7.	Dr. Ela Sinha	Asstt. Professor	No
8..	Dr. Nishi Srivastava	Asstt. Professor	No
9.	Dr. K. Bose	Asstt. Professor	No
10.	Dr. Rishi Sharma	Asstt. Professor	No
11.	Dr. S. K. Mukherjee	Asstt. Professor	No



Sr. No.	Name	Designation	TEQIP Sponsored
12.	Dr. D. K. Singh	Asstt. Professor	No
13.	Dr. Madhu Priya	Asstt. Professor	No
14.	Dr. Sourabh Lahiri	Asstt. Professor	No
15.	Dr. Sourabh Barua	Asstt. Professor	Yes
16.	Dr. Ravindra Kumar	Asstt. Professor	Yes
17.	Dr. P. K. Tiwari	Asstt. Professor	No
18.	Dr Swagata Payra	Asstt Professor	No

6.2 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. Amitava Mitra	Adjunct Faculty	Department of Physics, IIT Jodhpur

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Prof. S. Konar	H.O.D, Deptt. of Physics, BIT Mesra	Chairman
2.	Prof.A. K. Nirala	Prof. and Head, Dept. of Physics, ISM, Dhanbad	External Member
3.	Prof. S. K. Ghorai	Professor, Deptt. of ECE, BIT Mesra	Member
4.	Prof. S. Konar	Deptt. of Physics, BIT Mesra	Member
5.	Prof. S. Keshri	Deptt. of Physics, BIT Mesra	Member
6.	Prof. S. K. Sinha	Deptt. of Physics, BIT Mesra	Member
7.	Prof. S. K. Rout	Deptt. of Physics, BIT Mesra	Member
8.	Dr. Nishi Srivastava	Deptt. of Physics, BIT Mesra	Member

SECTION 7

OTHER INFORMATION

7.1 Publication by students

Publications in Journals :

- Konar, K., Bose, K. & Paul, R.K. Revisiting cosmic microwave background radiation using blackbody radiation inversion. Sci Rep 11, 1008 (2021).
- Nishi Srivastava, D. Vignesh, N. Saxena, Investigation of artificial neural network

- performance in the aerosol properties retrieval, Journal of Water and Climate Change jwc2021336. 2021, <https://doi.org/10.2166/wcc.2021.336>
- Ashish Gaurav, Deepali Sinha, Rakesh K. Prasad, Dilip K. Singh, Single step synthesis of size-controlled carbon quantum dots using electrochemical etching of graphite arXiv:2011.03217v1 [physics.app-ph] (2021)

Department of Production and Industrial Engineering

SECTION 1

DEPARTMENTAL PROFILE



1. About the Department :

Department of Production Engineering has been renamed as Production and Industrial Engineering. Since its inception in 1964, the department has been trying to impart quality education to undergraduates and train them to meet the demands of the manufacturing industry. The main objective of production engineering is integration of technology with management in planning and controlling the design, development and operation of manufacturing system. The department offers two courses: B.Tech. in Production Engineering and M.Tech. in Automated Manufacturing Systems. Rapid advances in manufacturing technology, e.g., computer controlled processes and management information systems, ERP and new

manufacturing concepts like lean manufacturing, agile manufacturing, sustainable manufacturing etc., are reinforcing the recognition of technological, organizational, economic and human factors. Furthermore, specialized training in manufacturing technology is necessary for industries in India and abroad. Central workshop and laboratories have been established to impart the state of art knowledge to the students in the field of production engineering. number of sophisticated equipment are available in these laboratories/ shops, which not only being utilized for the training of undergraduate and postgraduate students but also utilized for the Research work of the department and giving support to the other research work going in the institute.

SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects (Research and Consultancy)

a) Ongoing Projects :

Sr. No.	Project Title	PI/ Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Additive Manufacturing of Aluminum based alloys	PI	NPIU TEQIP-III	July-2019	12,85,000/-	2019-2021
2.	Experimental investigation on the Micro-EDM characteristics of Aluminium based Composites.	PI	NPIU TEQIP-III	July-2019	594000/-	2019-2021



SECTION 3

SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses Conducted:

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	A Two Weeks Online Faculty Development Program on Delivering Online Course Using Canvas LMS,	Joyjeet Ghose	TEQIP III	27th July 2020 to 5th August 2020
2.	One week Training Program on CNC Lathe and CNC Milling Machine for Technical Staff.	Sanjiv Kumar Tiwari	BIT Mesra, Ranchi	05th - 09th April, 2021

3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1	Dr. Abhishek Kumar Singh	Industry 4.0 and Smart Manufacturing: Opportunities and Challenges	TEQIP-3	Dr. B. R. Ambedkar National Institute of Technology, Jalandhar	Online	20 - 24 July, 2020
2.	Dr. Abhishek Kumar Singh	Reliability, Maintainability and Quality Issues in Process Industries	TEQIP-3	Dr. B. R. Ambedkar National Institute of Technology, Jalandhar	Online	04- 08 August, 2020
3.	Dr. Abhishek Kumar Singh	Green Technology & Sustainability Engineering	AICTE Training And Learning (ATAL) Academy	National Institute of Technology Jamshedpur	Online	14-18 September 2020
4.	Dr. Abhishek Kumar Singh	Energy Engineering	AICTE Training And Learning (ATAL) Academy	Indian Institute of Technology Roorkee	Online	19-23 September 2020
5.	Dr. Abhishek Kumar Singh	Mechanical Engineering- Emerging Technologies	TEQIP	B.I.T Sindri	Online	24-29 May 2021
6	Dr. S .Deepak Kumar	A Two Weeks Online Faculty Development Program on Delivering Online Course Using Canvas LMS,		Department of PIE, B.I.T Mesra	B.I.T Mesra	28June-2021 to 5 July-2021
7	Dr. S. Deepak Kumar	FDP on "3D Printing and Design	TEQIP-III	NPIU TEQIP-III, IIT Hyderabad	IIT Hyderabad	19June-2021 to 26June-2021



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
8	Dr. S. Deepak Kumar	FDP ON "Innovation in Mechanical and Automation Engineering: Issues, Challenges and Solutions (IMAE-2021)	AMITY University	AMITY University	AMITY University Ranchi	21-25 June-2021
9	Dr. Shailesh Kumar Dewangan	e-Workshop on "Emerging Manufacturing Technologies and Strategies (EMTS-2021)"	TEQIP-III	BIT Sindri	Online	05th July to 09th July 2021
10	Dr. Shailesh Kumar Dewangan	A Two Weeks Online Faculty Development Program on Delivering Online Course Using Canvas LMS,	TEQIP-III	Department of PIE, B.I.T Mesra	B.I.T Mesra	28th June-2021 to 5th July-2021
11	Dr. Bappa Acherjee	One-week online AICTE-ISTE refresher program on "Welding Process and Nondestructive Evaluation"	AICTE	ITM sls Baroda University, Vadodara, India	Online	March 1-6, 2021
12	Dr. Bappa Acherjee	Two-week online faculty development program on "Delivering Online Course using CANVAS LMS"	TEQIP - III	BIT Mesra, Ranchi, India	Online	July 27 - August 5, 2020
13.	Dr. Randhir Kumar	One-week online AICTE-ISTE refresher program on "Welding Process and Nondestructive Evaluation"	AICTE	ITM sls Baroda University, Vadodara, India	Online	
14	Dr. Binay Kumar	Two-week online faculty development program on "Delivering Online Course using CANVAS LMS"	TEQIP - III	BIT Mesra, Ranchi, India	Online	July 27 - August 5, 2020
15	Dr. Binay Kumar	One week Induction/ Refresher Course for on the topic Deep Learnings	AICTE-ISTE	BIT Mesra, Ranchi, India	Online	29th April 2021 to 05th May 2021



वार्षिक प्रतिवेदन 2020-2021

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
16	Dr. Sanjiv Kumar Tiwari	One week faculty development programme on "Mechanical Engineering – Emerging Technologies (MEET-2021)".	TEQIP-III	Department of Mechanical Engineering , BIT Sindri	Online	May 44yh to 29th, 2021
17	Dr. Sanjiv Kumar Tiwari	One week Short-term Certificate Course on "Nano-Technology and Its Applications" (An Institution – Industry Partnership programme).	Rajiv Gandhi National Institute of Youth Development (RJNIYD).	Rajiv Gandhi National Institute of Youth Development (RJNIYD), Sriperumbudur, Tamil Nadu, in collaboration with the NIT-Jalandhar, NIT-Tiruchirapalli, Special Centre for Nano Sciences, Jawaharlal Nehru University, Delhi, Seagate Technology, Minnesota, USA and Boston Scientific, Minnesota, USA.	Online	April 26-30, 2021.
18	Dr. Sanjiv Kumar Tiwari	Orientation/ Refresher Programme on "Deep Learning" organized by	AICTE-ISTE	Birla Institute of Technology, Mesra, Ranchi, Jharkhand.	Online	29.04.2021 to 05.05.2021.
19	Dr. Sanjiv Kumar Tiwari	One week short term course on "Reliability, Maintainability and Quality Issues in Process Industries".	TEQIP-3	Department of Industrial and Production Engineering, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar	Online	04-08 August, 2020.
20	Dr. Sanjiv Kumar Tiwari	One week workshop on "Manufacturing Process Simulations".	BIT Mesra, Ranchi.	Department of Production and Industrial Engineering, BIT Mesra, Ranchi	Online	15th to 19th March, 2021

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
21	Dr. Sanjiv Kumar Tiwari	International Conference on Evolution in Manufacturing ICEM - 2020.	Malaviya national Institute of Technology, Jaipur	Department of Mechanical Engineering Malaviya national Institute of Technology Jaipur In association with NIT Uttarakhand & NIT Warangal	Online	December 10-12, 2020.

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

- Debasree Ghosh, Prasoon Kumar, Siddha Sharma, Chandan Guha, Joyjeet Ghose, Numerical investigation on latent heat thermal energy storage in a phase change material using a heat exchanger, Heat Transfer. 2021;1-20, Wiley Periodicals LLC, 26 January 2021, <https://doi.org/10.1002/htj.22075>.
- S. Deepak Kumar, Shailesh Dewangan, Joyjeet Ghose, S.K. Jha, Optimization of EDM Process Parameters of Thixoformed A356-5TiB2 In Situ Composites, Materials Science Forum, ISSN: 1662-9752, Vol. 978, pp 271-276, 2020, Trans Tech Publications Ltd, Switzerland
- L. N. Pattanaik (2021) Simulation Optimization of Manufacturing Takt Time for a Leagile Supply Chain with a De-coupling Point, International Journal of Industrial Engineering and Management, 12 (2), 102-114. (Scopus)
- P. Kumar, L. N. Pattanaik and R. K. Singh (2021) Simultaneous Parametric Optimization of Micro-EDM Process for Brass C360 using Taguchi based Grey Relation Analysis, Engineering Review, 41(1) (online first) (ESCI/Scopus)
- L. N. Pattanaik and Abinash Jena (2020) Selection of optimal assembly strategy at an engine assembly plant using fuzzy multi-criteria decision-making tools, Int. J. Industrial and Systems Engineering, Vol 36, No. 2, 281-299. (Inderscience/Scopus)
- Shailesh Dewangan, S. K. Jha, S. Deepak Kumar, Anand Prakash, "Prediction of Formability of MIG and TIG welded joints by Erichsen cupping test and Fuzzy-Logic Technique", International Journal of Materials Engineering Innovation, Vol. 12(3), pp. 246-258, Feb-2021
- Verma, N., Sharma, V. & Badar, M.A. (2021)" Entropy-Based Lean, Energy and Six Sigma Approach to Achieve Sustainability in Manufacturing System". Arab J Sci Eng (2021). (SCI indexed Journal) <https://doi.org/10.1007/s13369-021-05826-x>
- Neha Verma & Vinay Sharma, (2021) "An I4.0 Review on Lean Green and Six Sigma Based on Energy Parameter," International Journal of Social Ecology and Sustainable Development (IJSESD), IGI Global, vol. 12(3), pages 30-46, July. (Scopus indexed Journal) ISSN: 1947-8402 DOI: 10.4018/IJSESD.2021070103
- Manish Oraon, Soumen Mandal, Vinay Sharma, (25/2/2021)" Predicting the deformation force in the incremental sheet forming of AA3003", Materials Today: Proceedings, Volume 45, Part 6, 2021, Pages 5069-5073, ISSN 2214-7853, (Scopus Indexed) <https://doi.org/10.1016/j.matpr.2021.01.578>.
- Manish Oraon, Vinay Sharma, (2021)" Application of Artificial Neural Network: A Case of Single Point Incremental Forming (SPIF) of Cu67Zn33 Alloy" Management and Production Engineering Review", Volume 12, Number 1, March 2021, pp. 17-23 (Scopus Indexed Q2 Journal) ISSN 2080-8208, eISSN 2082-1344; DOI: 10.24425/mper.2021.136868
- B. Acherjee, Laser transmission welding of polymers - A review on welding parameters, quality attributes, process monitoring, and applications, Journal of Manufacturing Processes, 2021, 64, 421-443.



12. B. Acherjee, State-of-art review of laser irradiation strategies applied to laser transmission welding of polymers, *Optics & Laser Technology*, 2021, 137, 106737.
13. B. Acherjee, Laser transmission welding of dissimilar plastics: 3-D FE modeling and experimental validation, *Welding in the World*, 2021, 65, 1429-1440.
14. B. Acherjee, Laser transmission welding of polymers - A review of process fundamentals, material attributes, weldability, and welding techniques, *Journal of Manufacturing Processes*, 2020, 60, 227-246.
15. B. Acherjee, D. Maity, and A.S. Kuar, Optimization of correlated and conflicting responses of ECM process using flower pollination algorithm, *International Journal of Applied Metaheuristic Computing*, 2020, 11 (4), 1-15.
16. S. Deepak Kumar, S. Dewangan, J. Ghose and S.K. Jha "Optimization of EDM Process Parameters of Thixoformed A356-5TiB2 in Situ Composites" *Materials Science Forum Trans Tech Publications Ltd, Switzerland Vol. 978, 2020, ISSN: 1662-9752, pp 271-276. <https://doi.org/10.4028/www.scientific.net/MSF.978.271> (Scopus)*
17. S. Dewangan, S. Deepak Kumar, S.K. Jha and C K Biswas "Optimization of Micro-EDM drilling parameters of Ti-6Al-4V alloy" *Materials Today: Proceedings*, Vol. 33, 2020, pp 5481-5485. <https://doi.org/10.1016/j.matpr.2020.03.307> (Scopus)
18. P. Kumar, S. Dewangan and C. Pandey, "Analysis of surface integrity and dimensional accuracy in EDM of P91 steels" *Materials Today: Proceedings*, Vol. 33, 2020, pp 5378-5383. <https://doi.org/10.1016/j.matpr.2020.03.119> (Scopus)
19. S. Deepak Kumar, S. Dewangan, S.K. Jha and A. Mandal "Optimization of dry sliding wear parameters of thixoformed A356-5TiB2 in-situ composites using RSM" *Materials Today: Proceedings*, Vol. 33, 2020, pp 5061-5065. <https://doi.org/10.1016/j.matpr.2020.02.844> (Scopus)
20. P. Kumar, A. Kumar, C. Pandey, S. Dewangan, S. K. Jha "Materials for energy harvesting with a nonlinear energy sink: A literature review" *Materials Today: Proceedings*, Vol. 33, 2020, pp 5632-5637. <https://doi.org/10.1016/j.matpr.2020.03.795> (Scopus)

matpr.2020.03.795 (Scopus)

21. S. K. Tiwari, R. K. Singh and S. C. Srivastava, Implementing Lean Paradigm in an Indian Foundry Facility: A Case Study, *International Journal of Services and Operations Management*, 2020, 36(1), 20-41.

4.2 Publications in Proceedings:

1. Subhranil Das, P Arvind, S. Chakraborty, R. Kumari, S. Deepak Kumar, "IoT Based Solar Smart Tackle Free AGVs for Industry 4.0", In: *Internet of Things and Connected Technologies*, In: Proc. ICIOTCT-2020, IIT Patna, 3-5 July-2020, *Advances in Intelligent Systems and Computing*, Vol. 1382, pp.1-7, Springer, May-2021.
2. P. Arvind, S. Chakraborty, S. Das, R. Kumari, S. Deepak Kumar, "Closed-Loop Single-Stage Coordinated Frequency Control of a Stand-Alone Microgrid", In: Proc. of IEMENTech-2020, Kolkata, 2-4 Oct-2020, *IEEE Xplore*, pp.1-5, 2021. DOI: 10.1109/IEMENTech51367.2020.9270078.
3. Subhranil Das, Rashmi Kumari, S. Deepak Kumar, "A Review on Applications of Simultaneous Localization and Mapping Method in Autonomous Vehicles", In: *Advances in Interdisciplinary Engineering. Lecture Notes in Mechanical Engineering*, pp.367-375, Springer, April-2021. ISBN: 978-981-15-9956-9.
4. S. Deepak Kumar, S. Dewangan, S.K. Jha, S. K. Parida and A. Behera, "3D and 4D Printing in Industry 4.0: Trends, Challenges and Opportunities" *Research and Developments in Material Processing, Modelling and Characterization 2020 (RDMPMC20)*. NIT Jamshedpur 26th-27th August, 2020.
5. S. Dewangan, C. K. Biswas, S. Deepak Kumar and Amit Vishvakarma "EDM characteristics of A356-TiB2 Nano In-situ composites" *International Conference on Technological Innovations in Mechanical Engineering (TIME-2021)* Sharda University, Uttar Pradesh, 16-17th April 2021.
6. Tiwari, S. K., & Upadhyay, R. K. Effect of Spiral Pattern of Electrolyte Jet on Material Removal Rate and Surface Roughness During Electrochemical Machining of 100Cr6 in NaCl. *Recent Advances in Smart Manufacturing and Materials: Select Proceedings of ICEM 2020*, 453.



4.3 Book

4.3.2 Chapter(s) in Edited Book

1. S. Deepak Kumar, Joyjeet Ghose, S.K Jha, A. Mandal, Ajit Behera, "Optimization and Simulation of Additive Manufacturing Processes: Challenges and Opportunities-Review"
In: Additive Manufacturing Applications for Metals and Composites, pp. 187-209, IGI Global, July 2020. ISBN: 9781799840558.
2. S. Deepak Kumar, Shailesh Dewangan, S.K Jha, S.K. Parida, Ajit Behera, "3D and 4D Printing in Industry 4.0: Trends, Challenges, and Opportunities", In: Next Generation Materials and Processing Technologies, Vol. 9, pp. 579-587, June-2021, ISBN: 978-981-16-0182-8
3. S. Deepak Kumar, Shailesh Dewangan, S.K. Parida, Ajit Behera, "Modern Trends in Electrical Discharge Machining of Al-MMCs", In: Advanced Materials and Manufacturing, pp.176-192, July-2020, ISBN: 978-93-89988-70-3
4. B. Acherjee, Modern optimization techniques for performance enhancement in welding, (Ch. 10), In: Advanced Welding and Deforming, Editors: K. Gupta Sr. and J.P. Davim, Handbooks in Advanced Manufacturing, Woodhead Publishing (Elsevier), 2021, 265-290, ISBN: 978-0-12-822050-4 (eBook), 978-0-12-822049-8 (print).
5. A. K. Pathak, A. Singh, G. Raj, Millind, B. Acherjee, FE-RSM Modeling of wire drawing of brass-plated steel wire, (Ch. 7), In: Coatings, Materials, Processes, Characterization and Optimmmization, Editors: K. Kumar, B.S. Babu and J.P. Davim, Materials Forming, Machining and Tribology, Springer Nature, 2021, 153-167, ISBN: 978-3-030-62163-6 (eBook), 978-3-030-62162-9 (Print).
6. B. Acherjee, Laser-based fabrication of micro-channels, (Ch. 5), In: Accuracy Enhancement Technologies for Micromachining Processes, Editors: G. Kibria and B. Bhattacharyya, Lecture Notes in Mechanical Engineering, Springer, 2020, 95-107, ISBN: 978-981-15-2117-1 (eBook), 978-981-15-2116-4 (Print). [WoS]
7. Oraon, M., Roy, M. K., & Sharma, V. (2021), "Investigating the Effect of Process Parameters in Incremental Sheet Forming Process" In K. Kalita, R. Ghadai, & X. Gao (Ed.), Data-Driven Optimization of Manufacturing Processes (pp. 24-36). IGI Global. <http://doi:10.4018/978-1-7998-7206-1.ch003>, EISBN13: 9781799872085
8. Manish Oraon, Vinay Sharma, Soumen Mandal, (11/01/2021), "Predicting the Surface Roughness in Single Point Incremental Forming", In: Pandey K., Misra R., Patowari P., Dixit U. (eds) Recent Advances in Mechanical Engineering. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-15-7711-6_25, Online ISBN-978-981-15-7711-6, Print ISBN 978-981-15-7710-9.
9. S. Dewangan, S. K. Jha and S. Deepak Kumar "Analysis of Discharge Characteristics During EDM Process" Innovative Product Design and Intelligent Manufacturing Systems, Lecture Notes in Mechanical Engineering. 2020, ISBN no 978-981-15-2695-4 ISBN 978-981-15-2696-1 (E-Book) pp.521-527, doi.org/10.1007/978-981-15-2696-1_51. (Scopus, Conference Proceeding).



SECTION 5

ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

5.1 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1	Dr. Joyjeet Ghose	Associate Professor, Head	No
2	Dr. Sanjay Kumar Jha	Associate Professor	No
3	Dr. Ritesh Kumar Singh	Associate Professor	No
4	Dr. L.N. Pattanaik	Associate Professor	No
5	Dr. Binay Kumar	Assistant Professor	No
6	Dr. Somak Datta	Assistant Professor	No
7	Dr. Bappa Acharjee	Assistant Professor	No
8	Dr. Abhishek Kumar Singh	Assistant Professor	No
9	Dr. Randhir Kumar	Assistant Professor	No
10	Dr. Sanjiv Kumar Tiwari	Assistant Professor	No
11	Dr. S.V.S.K Deepak Kumar	Assistant Professor	Yes
12	Dr. Shailesh Kumar Dewangan	Assistant Professor	Yes
13	Mr. Vivek Prabhakar	Assistant Professor	Yes

5.2 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Mr. Pawan Kumar Bageria	Adjunct Fellow	President, Tata Motors Group SBU, Tata Technologies, Bangalore

5.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Joyjeet Ghose	Head- Production Engineering (Ex-officio)	Chairman
2.	Dr. R. K. Singh	Associate Professor, Department of Production Engineering	Internal Member
3.	Dr. L. N. Pattanaik	Associate Professor, Department of Production Engineering	Internal Member
4.	Dr. Somak Datta	Assistant Professor, Department of Production Engineering	Internal Member
5.	Dr. Utpal Baul	Dean (A&IR) and Professor, Department of Management	Internal Member
6.	Dr. D.P. Mishra	Professor & Head, Mechanical Engineering	Internal Member
7.	One representative, Faculty	BIT Patna off Campus	Internal Member
8.	One representative, Faculty	BIT Deoghar off Campus	Internal Member
9.	One UG Student Representative		Internal Member



Sr. No.	Name of the Member	Designation	Role
10.	One PG Student Representative		Internal Member
11.	Dr. Govind Sharan Dangayach Professor & Head	Department of Mechanical Engineering, Malaviya National Institute of Technology, J I Nehru Marg, Jaipur - 302017 Mobile: +91-9950344500 Email: dangayach@gmail.com	External Member
12.	Dr. Saroj Kumar Patel Professor	Department of Mechanical Engineering, National Institute of Technology Rourkela, Odisha, India - 769008 Mobile: +91 9437484951 E-mail: skpatel@nitrkl.ac.in	External Member
13.	Dr. Ghanshyam Das Professor	Head, Department of Metallurgy & Materials, National Institute of Foundry & Forge Technology (NIFFT), Hatia - 834003, Ranchi, Jharkhand Mobile: +91-7352060676 Email: drgdas.nifft@gov.in	External Member
14.	Mr. Rohit Saboo President and CEO (Alumni of Prod. Department)	National Engineering Industries Limited, Jaipur - 302006 Mobile: +91-1412222335 Email: rsaboo@nbcbearings.in	External Member
15.	Mr. P. Pathak DGM	Rolling Technology R&D SAIL, Ranchi Mobile: +91-8986880223 Email: ppathak@sail-rdcis.com	External Member
16.	Mr. Rajneesh Kumar, Chief Manager (E&M) (Alumni of Prod. Department)	CMPDIL, Coal India Limited, Ranchi - 834031 Mobile: +91-9431102543 Email: rajneesh.kumar@coalindia.in	External Member
17.	Mr. Prabhakar Kadapa CEO	AVTEC Limited, Delhi. Email: prabhakar.kadapa@avtec.in	External Member
18.	Mr. Vishwajit Kumar Senior Manager	Iron Making Division, MECON Ltd, Doranda, Ranchi-834002 Mobile: 09431186722 Email: vishwajit@mecon.co.in	External Member

SECTION 6

OTHER INFORMATION

6.1 Achievements of Students :

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1.	Shivansh Goyal	won Campus Innovathon 2020 bagged 2nd Place with a cash prize of ₹ 25000 and PPI offers.	Gilbarco Veeder Root India	Sept-Nov, 2020



Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
2.	Utkarsh	won Campus Innovathon 2020 bagged 2nd Place with a cash prize of ₹ 25000 and PPI offers.	Gilbarco Veeder Root India	Sept-Nov, 2020
3	Rumi Bharti	won Campus Innovathon 2020 bagged 2nd Place with a cash prize of ₹ 25000 and PPI offers.	Gilbarco Veeder Root India	Sept-Nov, 2020
4	Shivansh Goyal	In Campus Innovathon 2020 awarded the title of Best Presenter.	Gilbarco Veeder Root India	Sept-Nov, 2020

7. Any other relevant information

Infrastructure / Equipment added during the year:

1. 3 Machines: CNC Lathe, CNC Grinding, Plasma Cutting have been procured.

Department of Remote Sensing



Newly acquired soil moisture meter being demonstrated in the field to our Scholars

SECTION 1

DEPARTMENTAL PROFILE

1. About the Department :

This department has been imparting specialised education of geo-spatial technology in various application areas using advanced tools like remote sensing, geographical information system and global positioning system etc. at the Postgraduate and Doctoral research levels. The department is equipped with latest hardware and software technologies and well-accomplished faculty members with high academic/research credentials. Timely updation of needed infrastructure and research capacities through UGC-SAP, DST-FIST and collaboration with national level apex organisations has kept us motivated to do challenging research and associated outreach. We have been part of many national mission projects of ISRO and other agencies of Govt. of India and through those programs, the department is striving to serve the nation and contribute in building national capabilities in this advancing field of geoinformatics. The Department has developed state-of-the-art capabilities and facilities in research and our experience is shared with students and end-users. Apart from being a leading department

in the country in the field of remote sensing, our department also has International recognition (fulfilling the vision of BIT) which can be seen through our sponsored research activities from the International Centre for Integrated Mountain Development (ICIMOD, Kathmandu, Nepal), International Water Management Institute (IWMI), Sri Lanka, and collaborative research with University of Southampton (UK), University of Lancaster (UK), University of California Santa Barbara (UCSB, USA), Shastri Indo-Canadian Institute/University of Calgary, Canada etc. Strength of our educational quality and outreach can be seen through our students serving in reputed national/international organisations. In addition, they are also opting for higher education by getting selected for Doctoral Research in reputed national level institutions viz. IITs/ NITs/Central Universities as well as Universities abroad such as Durham University, UK, James Cook University, Australia, University of Manitoba, Canada, Western University, Canada, Delft University of Technology, Netherlands, University of Chinese Academy of Sciences etc. Hence, our departmental vision and mission



related activities are coherently in phase with our Institutional vision and mission.

Vision and Mission is being communicated regularly to the stakeholders by prominently

displaying on all walls of the Department, as well as through Institute website, admission brochure, through internet groups and e-mails to various universities and colleges.

SECTION 2

RESEARCH PROJECTS

2. Sponsored Projects (Research and Consultancy)

a) Ongoing Projects

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Modelling Forest Phenological Parameters from Time Series Remote Sensing Data	PI: Dr. C. Jegannathan Co-PI: Dr. A. P. Krishna, Dr. Mili Ghosh Nee Lala, Mr. Nitish Kumar Sinha	Space Application Center, ISRO, Ahmedabad	February 2021	Rs. 30.23 Lakhs	3 Years
2.	Quantifying the Spatio-Temporal rhythm of vegetation growth, health and its vulnerability due to climate change in different forest ecosystem in North-Eastern India using time-series satellite data	PI: Dr. C. Jegannathan	RESPOND, ISRO	October 2019	Rs. 29.50 Lakhs	3 years
3.	National Wetland Inventory and Assessment (NWIA) Phase-II	PI: Dr. C. Jegannathan Co-PI: Dr. A. P. Krishna, Dr. V.S. Rathore, Mr. Nitish Kumar Sinha	Space Application Center, ISRO, Ahmedabad	August 2019	Rs. 20.50 Lakhs	2 years
4.	Use of Geoinformatics in Rural Road Projects under PMGSY	PI: Dr. A. P. Krishna Co-PI: Dr. C. Jegannathan, Dr. V.S. Rathore, Mr. Nitish Kumar Sinha	National Remote Sensing Center (NRSC), ISRO, Hyderabad	August 2019	Rs. 54.30 Lakhs	2 years
5.	Remote Sensing based Hydrologic budget of the Subarnarekha River Basin	PI: Dr. A.P. Krishna Co-PI: Dr. C. Jegannathan, Dr. V.S. Rathore	DST-SERB	January 2020	Rs. 27.39 Lakhs	3 years

**b) Projects Completed**

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	MOM-AO: Estimation of TIS derived Martian Surface temperature and assessment of its inter annual variability in the current Martian climate in accordance with MCC derived morphological units respectively	PI: Dr. Mili Ghosh Nee Lala Co-PI: Dr. A.P. Krishna, Dr. C. Jeganathan	Space Application Center(SAC) Deptt. of Space, ISRO, Ahmedabad	August 2016	Rs 17.43 Lakhs	November 2020
2.	Refinement of existing algorithms for FeO and TiO ₂ mapping using HySI data and a comparative assessment of the HySI generated maps with that of Clementine and Moon Mineralogy Mapper derived FeO and TiO ₂ products.	PI: Dr. Mili Ghosh Nee Lala Co-PI: Dr. A.P. Krishna	Space Application Center(SAC) Deptt. of Space, ISRO, Ahmedabad	August 2016	Rs17.20 Lakhs	October 2020
3.	"Geophysical characterization of subsurface Calcrete deposits in semi arid - arid region of Rajasthan using fully polarimetric L- and S-band SAR data"	PI: Dr. V.S. Rathore Co-PI: Dr. A.P. Krishna, Dr. Gulab Singh (IIT-B)	Space Application Center(SAC) Deptt. of Space, ISRO, Ahmedabad	May 2018	Rs 16.52_ <u>Lakhs</u>	March 2021

SECTION 3**SEMINAR / CONFERENCE****3.1 Seminar / Conferences / Short – Term Courses Conducted**

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinators	Funding / Sponsoring Agency	Date of Event
1.	Virtual Workshop on WebGIS	Dr. Mili Ghosh Nee Lala and Dr. C. Jeganathan	Department Budget	09.04.2021
2.	Aerial Photography and Photogrammetry	Dr. R.N K Sharma (Resource Person)	Saroop Rani Govt College for Women, Amritsar	14.05.21
3.	Invited Lecture on COVID-19: As Science sees it.....	Dr. R.N K Sharma (Resource Person)	Saroop Rani Govt College for Women, Amritsar	28.04..21



3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. C. Jeganathan	ATAL Faculty Development Programme on "Recent Trends in Data Science and its Tools for Researchers"	AICTE	IFET College of Engineering., Tamil Nadu	Online	28th September 2020 to 2nd October, 2020
2.	Dr. C. Jeganathan	Orientation Workshop on Design Thinking	BIT, Mesra	Explorra Education Pvt. Ltd. and Innovation & Research Foundation, Ahmedabad	Online	6 sessions spread over different days From 5th June to 26th June, 2021
3.	Dr. Mili Ghosh Nee Lala (as resource person)	5 Days Online Skill Development Programme in GIS/RS/ GPS	Sponsored under UGC—CPE scheme	Nirmala College, Ranchi in collaboration with BIT Mesra	Online	22nd to 26th July, 2020
4.	Dr. Mili Ghosh Nee Lala	Online ATAL FDP on "GIS & Remote Sensing"	AICTE	IIST, Trivendrum	Online	2-6 Nov, 2020
5.	Dr. Mili Ghosh Nee Lala (as resource person)	One Day National Seminar on Applications of Geographic Information Systems & QGIS	SMIT, Sikkim	Department of Information Technology, SMIT, SIKKIM	Online	4 Dec, 2020
6.	Dr. Mili Ghosh Nee Lala	Advancements in Geospatial Technology	TEQIP sponsored Workshop	IIT Roorkee	Online	14-18 Dec, 2020
7.	Dr. Mili Ghosh Nee Lala	e-training Faculty Development Programme (FDP) on Machine Learning Techniques for Cross-Domain Applications	TEQIP sponsored Workshop	IIT Indore	Online	21-26 Dec, 2020
8.	Dr V. S. Rathore	Inculcating Universal Human Values in Technical Education	-	AICTE	Online	19-23 April, 2021
9.	Dr. R.N.K. Sharma	Inculcating Universal Human Values in Technical Education	-	AICTE	Online	19-23 April, 2021
10.	Dr. R.N.K. Sharma	Basics of Image Interpretation (SDP)	Online	Geological Survey of India, (GoI)	Online	22-24 Feb, 21
11.	Dr. R.N.K. Sharma	Seminar : Applications of Statistics in Sciences and Engineering	Online	Deptt. of Mathematics, BIT Mesra	Online	5 – 6 March, 21



SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

1. Kumar, Akshay, Krishna, A.P. (2021). Groundwater Quality Assessment using Geospatial Technique based Water Quality Index (WQI) Approach in a Coal Mining Region of India, *Arabian Journal of Geosciences*, 14:1126, <https://doi.org/10.1007/s12517-021-07474-9>, Springer.
2. Kumar, P; Krishna, A P; Rasmussen, T.M.; Pal, M.K. (2021). Rapid Evaluation and Validation Method of Above Ground Forest Biomass Estimation Using Optical Remote Sensing in Tundi Reserved Forest Area, India. *ISPRS Int. J. Geo-Inf.*, 10, 29. <https://doi.org/10.3390/ijgi10010029>.
3. Kumar, Praveen, Krishna, A P, (2020). Forest biomass estimation using multi polarisation SAR data coupled with optical data, *Current Science*, 119:8, pp. 1316-1321.
4. Khan, Baddiuzaman, Rathore, V.S., Krishna, A.P. (2020) Identification of Desakota Region and Urban Growth Analysis in Patna City, India Using Remote Sensing Data and GIS. *Jour. Indian Soc. Remote Sensing*. 49, 935-945, Springer.
5. Hazra, Pranata, Krishna A.P. (2019). Spatio-temporal change assessment of glacier extent in Sikkim Himalaya, India using geospatial techniques. *Environmental Earth Sciences*; 78(14) : 1-20. doi:10.1007/s12665-019-8390-1
6. Beependra Singh, Jeganathan, C. and Rathore, V.S. (2020). Improved NDVI based proxy leaf fall indicator to assess rainfall sensitivity of deciduousness in the central Indian forests through remote sensing. *Nature-Scientific Reports*, 10:17638, <https://doi.org/10.1038/s41598-020-74563-2>.
7. Swadhina Koley and Jeganathan C. (2020). Estimation and evaluation of high spatial resolution surface soil moisture using multi-sensor multi-resolution approach. *Geoderma - The Global Journal of Soil Science*, 378, 114618.
8. J. Dash, M.D. Behera, C. Jeganathan, C.S. Jha, S. Sharma, R. Lucas, A.A. Khuroo, A. Harris, P.M. Atkinson, D.S. Boyd, C.P. Singh, M.P. Kale, P. Kumar, S.K. Behera, et al. (2020). India's contribution to mitigating the impacts of climate change through vegetation management, *Tropical Ecology*, 1-4, <https://doi.org/10.1007/s42965-020-00075-9>.

9. Niraj Priyadarshi, V.M. Chowdary, I.C. Das, Jeganathan, C., Y.K. Srivastava, G. Srinivasa Rao, Uday Raj & C.S. Jha (2020). Wavelet and non-parametric statistical based approach for long term land cover trend analysis using time series EVI data, *Geocarto International*, 35(5), 512-534.
10. Kathwas, A.K., Patel, N. (2021) Geomorphic Control on Soil Erosion—a Case Study in the Subarnarekha Basin, India, *Polish Journal of Soil Science* 54 (1), 1-24.
11. Kumari, Pallavi; Sharma, Richa N K and Rathore, V S (2020). Tropospheric NO₂ and Covid-19: A preliminary comparative study between two districts, Sheohar and Begusarai of Bihar State in India, *International Journal of Management, IT & Engineering*, 10 (12).
12. Kumar, Hemant, Sharma, Richa N K, A. P. Krishna (2020). Application of Advanced Remote Sensing Data in Mineral Exploration in the Vicinity of Heavy Dense Forest Cover Area of Jharkhand and Odisha State Mining Area, *International Journal of Environmental and Ecological Engineering*, 14 (9):243-246.

4.2 Publications in Proceedings:

1. Kumar, P, Krishna, A P, Rasmussen, Thorkild M, Pal, Mahendra K, (2020). An Approach for Fraction of Vegetation Cover Estimation in Forest Above-Ground Biomass Assessment Using Sentinel-2 Images, 5th IAPR International Conference on Computer Vision & Image Processing (CVIP 2020), Springer, 4-6 December, 2020, IIIT-Allahabad.
2. Hazra, P and Krishna, A P (2020). Glacial lake outburst flood (GLOF) simulation of Shako Cho, Sikkim Himalaya, ISRS National Symposium on Remote Sensing for Environment Monitoring & Climate Change Assessment: Opportunities and Challenges, 18-19 December, 2020, SAC-ISRO, Ahmedabad.

4.3 Book:

4.3.1 Chapter(s) in Edited Book :

1. Kartar Singh, Mili Ghosh, Shubha Sharma, Retinder Kour (2021). Conservation of Wetlands



- Issues and Potentials: A Case Study of the Sambhar Salt Lake (Rajasthan). In: Perspectives in Natural Resources Management-Watershed-based Approach, P. 466.

2. Kaur, Gurjeet; Jaya, Lakshita; Sharma, Nidhi; Sharma, R. N. K.; Kumari, Pallavi and Rathore,

V.S. (2020), "Covid-19: Health Management and its relationship with Geographic Information System", In: Covid-19 Pandemic in Indian Context (Eds.) Singh, Harvinder; Kaur, Satinder and Ramandeep Singh, C-Writewell Publication, Jalandhar, India (ISBN No. 978- 93-85583-86-5)

SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Dr. C. Jeganathan	INSA Teacher Award	Indian National Science Academy (INSA), New Delhi	National Level	2020
2.	Dr V.S. Rathore	ATAL FDP	AICTE	National	2021
3.	Dr. R.N.K. Sharma	Appointed as 'Observer' for KSET examination conducted by Karnataka State	UGC, New Delhi	National	July 25, 2021
4.	Dr. R.N.K. Sharma	Invited as a Manuscript reviewer.	ISRS -Springer publishing house	International	May 18, 2021
5.	Dr. A.P. Krishna	Invited as a Manuscript reviewer	Geocarto International Journal, Taylor & Francis	International	February 2021
6.	Dr. A.P. Krishna	Invited as a Manuscript reviewer	Journal of Indian Society of Remote Sensing, Springer	International	February 2021
7.	Dr. N. Patel	Associate Editor, Journal of Forestry Research, Springer, SCIE, Scopus		International	
8.	Dr. N. Patel	Associate Editor, Arabian Journal of Geosciences, Springer, SCIE, Scopus		International	
9.	Dr. N. Patel	Editor, Journal of Mountain Science, Springer, SCIE, Scopus		International	
10.	Dr. N. Patel	Editor, International Journal of Sustainable Development and World Ecology, Taylor and Francis, Scopus		International	
11.	Dr. N. Patel	Journal of Ecology and Sustainable Development, Sweden		International	



Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
12.	Dr. N. Patel	Member, Journal of Environmental Geology, Pulsus Journals.		International	
13.	Dr. N. Patel	Member, Advisory Board, Folia Forestalia Polonica (International SCOPUS Indexed Journal).		International	

5.2 MoUs / Collaborations

Sr. No.	Name of the Faculty Member	Name of Organisation/ University	Purpose / Area	Year / Duration
1.	Dr. Mili Ghosh Nee Lala	IIST, Trivendrum	M.Sc. student Project (Hyperspectral analysis)	2021 (6 Months)
2.	Dr. A.P. Krishna	Leads Connect Services Pvt. Ltd.	Development of Land Analytics Model using Machine Learning Algorithms	2020 (3 Years)

SECTION 6

ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. A.P. Krishna	Professor	No
2.	Dr. C. Jeganathan	Professor	No
3.	Dr. N. Patel	Professor	No
4.	Dr. V.S. Rathore	Assistant Professor	No
5.	Dr. Mili Ghosh nee Lala	Assistant Professor	No
6.	Dr. Richa N K Sharma	Assistant Professor	No

6.2 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	HoD, DRS	Ex-Officio	Chairman
2.	Dr A P Krishna	Professor	Internal Member
3.	Dr. C Jeganathan	Professor	Internal Member
4.	Dr N Patel	Professor	Internal Member
5.	Dr V S Rathore	Asst. Professor	Internal Member
6.	Dr Mili Ghosh	Asst. Professor	Internal Member
7.	Dr Richa N K Sharma	Asst. Professor	Internal Member
8.	Dr A K Sinha	Professor	Internal Member



Sr. No.	Name of the Member	Designation	Role
9.	Dr Manjari Chakravarti	Professor	Internal Member
10.	Dr Bindhu Lal	Professor	Internal Member
11.	Dr Satyaki Sarkar	Asso. Professor	Internal Member
12.	Dr Dheeraj Kumar	Professor (IIT,ISM)	External Member
13.	Dr Y S Rao	Professor (IIT,Bombay)	External Member
14.	Dr Rajneesh Kumar	Head, (Geomatics Division) CMPDI, Ranchi	External Member
15.	Dr Milap Punia	JNU, Delhi (School of Social Sciences)	External Member
16.	Dr Mukund Behera	Assoc. Professor (IIT, KGP)	External Member

SECTION 7

OTHER INFORMATION

7.1 Publication by students

- Kumar, Akshay, Krishna, A.P, (2021). Groundwater Quality Assessment using Geospatial Technique based Water Quality Index (WQI) Approach in a Coal Mining Region of India, Arabian Journal of Geosciences, 14:1126, <https://doi.org/10.1007/s12517-021-07474-9>, Springer.
- Kumar, P; Krishna, A P; Rasmussen, T.M.; Pal, M.K. (2021). Rapid Evaluation and Validation Method of Above Ground Forest Biomass Estimation Using Optical Remote Sensing in Tundi Reserved Forest Area, India. ISPRS Int. J. Geo-Inf., 10, 29. <https://doi.org/10.3390/ijgi10010029>.
- Kumar, Praveen, Krishna, A P, (2020). Forest biomass estimation using multi polarisation SAR data coupled with optical data, Current Science, 119:8, pp. 1316-1321.
- Khan, Baddiuzaman, Rathore, V.S., Krishna, A.P. (2020) Identification of Desakota Region and Urban Growth Analysis in Patna City, India Using Remote Sensing Data and GIS. Jour. Indian Soc. Remote Sensing. 49, 935-945, Springer.
- Hazra, Pranata, Krishna A.P. (2019). Spatio-temporal change assessment of glacier extent in Sikkim Himalaya, India using geospatial techniques. Environmental Earth Sciences; 78(14) : 1-20. doi:10.1007/s12665-019-8390-1
- Beependra Singh, Jeganathan, C. and Rathore, V.S. (2020). Improved NDVI based proxy leaf fall indicator to assess rainfall sensitivity of deciduousness in the central Indian forests through remote sensing. Nature-Scientific Reports, 10:17638, <https://doi.org/10.1038/s41598-020-74563-2>.
- Swadhina Koley and Jeganathan C. (2020). Estimation and evaluation of high spatial resolution surface soil moisture using multi-sensor multi-resolution approach. Geoderma - The Global Journal of Soil Science, 378, 114618.
- J. Dash, M.D. Behera, C. Jeganathan, C.S. Jha, S. Sharma, R. Lucas, A.A. Khuroo, A. Harris, P.M. Atkinson, D.S. Boyd, C.P. Singh, M.P. Kale, P. Kumar, S.K. Behera, et al. (2020). India's contribution to mitigating the impacts of climate change through vegetation management, Tropical Ecology, 1-4, <https://doi.org/10.1007/s42965-020-00075-9>.
- Niraj Priyadarshi, V.M. Chowdary, I.C. Das, Jeganathan, C., Y.K. Srivastava, G. Srinivasa Rao, Uday Raj & C.S.Jha (2020). Wavelet and non-parametric statistical based approach for long term land cover trend analysis using time series EVI data, Geocarto International, 35(5), 512-534.
- Kathwas, A.K., Patel, N. (2021) Geomorphic Control on Soil Erosion—a Case Study in the Subarnarekha Basin, India, Polish Journal of Soil Science 54 (1), 1-24.
- Kumari, Pallavi; Sharma, Richa N K and Rathore, V S (2020). Tropospheric NO₂ and Covid-19: A preliminary comparative study between two districts, Sheohar and Begusarai of Bihar State in



- India, International Journal of Management, IT & Engineering, 10 (12).
12. Kumar, Hemant, Sharma, Richa N K, A. P. Krishna (2020). Application of Advanced Remote Sensing Data in Mineral Exploration in the Vicinity of Heavy Dense Forest Cover Area of Jharkhand and Odisha State Mining Area, International Journal of Environmental and Ecological Engineering, 14 (9):243-246.
 13. Kumar, P, Krishna, A P, Rasmussen, Thorkild M, Pal, Mahendra K, (2020). An Approach for Fraction of Vegetation Cover Estimation in Forest Above-Ground Biomass Assessment Using Sentinel-2 Images, 5th IAPR International Conference on Computer Vision & Image Processing (CVIP 2020), Springer, 4-6 December, 2020, IIIT-Allahabad.
 14. Hazra, P and Krishna, A P (2020). Glacial lake outburst flood (GLOF) simulation of Shako Cho, Sikkim Himalaya, ISRS National Symposium on Remote Sensing for Environment Monitoring & Climate Change Assessment: Opportunities and Challenges, 18-19 December, 2020, SAC-ISRO, Ahmedabad.
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7.2 Achievements of Students

Sr. No	Name of Student	Achievement/ Position/ Award etc	Organised by	Date and Venue
1.	Bhola Mahto Palash Choudhary Sourav Dekha Surbhi Tamang (Team Mapathon 3869)	Winner	IITB-ISRO-AICTE MAPATHON	07-22 Dec, 2020/Online
2	Pranata Hazra Nikta Roy Mukherjee Subham Singh Prashant Parasar (Team Mapathon 1511)	Winner	IITB-ISRO-AICTE MAPATHON	07-22 Dec, 2020/Online
3	Swadhina Koley	Awsar award in best story in Ph.D category	DST, GoI	September 2020/Online

8. Any other relevant information

8.1 Infrastructure Development:

Sl.	Item Detail	Installation/ Date	Supplier
1.	Soil Moisture Meter	05.04.2021	VH Instruments, Delhi
From Project Grants			
1.	Mobile Workstations (Laptop) - 4 Nos.	31.05.2021	Dell India
2.	Resistivity Meter	28.04.2021	IGIS Hyderabad
3.	Workstations (2 Nos.)	26.08.2020	Dell India
4.	Desktop of High end configuration (6 Nos.)	15.09.2020	HP India



8.2 PhD(s) awarded in the current academic year by the department

Sl.No.	Ph.D. Scholar & Guide / Co-Guide / External Guide	External Examiner with Designation	Name of Organization	Date of Viva-Voce
1.	Praveen Kumar Guide: Dr. A.P. Krishna	Dr. Vijay Kumar Professor	VIT Vellore	04.09.2020
2.	Amar Kumar Kathwas Guide: Dr. N. Patel	Dr. Subashisa Dutta Professor	IIT Guwahati, Assam	07.09.2020

8.4 In Addition to the regular academic work the following faculty members also have executed additional duty

01 Dr A P Krishna:

Acting Registrar (till 17 January 2021)
 Head, Department of Remote Sensing (Since 01 January 2021)
 Chairman, Doctoral Committee (Since 01 January 2021)
 Chairman, Departmental Academic Committee (Since 01 January 2021)
 Chairman, Departmental Policy Committee (Since 01 January 2021)
 Member, BoS, Architecture Department (Since 01 January 2021)
 Member, Doctoral Committee, CEE Department
 Member, Doctoral Committee, Architecture Department
 Member, Academic Council of BIT

02 Dr. C. Jeganathan:

Dean of Research, Innovation and Entrepreneurship (Since 01 January 2021)
 Head, Department of Remote Sensing (till 31 December 2020)
 Chairman, Doctoral Committee (till 31 December 2020)
 Chairman, Departmental Academic Committee (till 31 December 2020)
 Chairman, Departmental Policy Committee (till 31 December 2020)
 Member, DAC, Civil and Environmental Engg. Department, BIT Mesra
 Member, DAC, Computer Science and Engg. Department, BIT, Mesra
 Member, Doctoral Committee in CEE Department
 Member, Doctoral Committee in Architecture Department
 Member, Academic Council of BIT

03 Dr V S Rathore:

Nodal Officer Finance & Procurement TEQIP-III since July 2018
 Prof. Incharge stock
 Prof. Incharge sports activities
 IQAC member and NAAC core team
 M.Tech, (Remote Sensing) Course coordinator
 Member, DAC
 Member DPC
 Member DPC for Department of Civil Engg.
 In Charge- RS Research Laboratory

04 Dr Mili Ghosh:



M.Sc.(Geoinformatics) Course coordinator

Departmental Co-ordinator, NAAC

Member, DAC

Departmental ERP Co-ordinator

Departmental Time-Table Incharge

In Charge- DIP Laboratory

05 Dr Richa N K Sharma:

Co-Ordinator, Placement Cell, from the Department, BIT Mesra

Member, Department Policy Committee, Department of Architecture, BIT, Mesra.

Co-Ordinator, PhD from the Department

In Charge- GIS Laboratory

Member, DAC



Department of Space Engineering and Rocketry

SECTION 1

DEPARTMENTAL PROFILE



ANECHOIC JET FACILITY



ROCKET LAUNCHERS

1. About the Department :

The Department of Space Engineering and Rocketry was established in 1964 at Main campus. It offers two-year postgraduate degree programs, leading to M. Tech. degree in Space Engineering and Rocketry with two specializations, namely Aerodynamics and Rocket Propulsion. The two programmes of the department have received NBA accreditation in 2018 for two years.

The departmental facilities consist of laboratories housing equipment for training, research and curriculum development in the related areas. The facilities for Aerodynamics include subsonic and supersonic wind tunnels, water tunnel, calibration rig, supersonic free jet facility and a new anechoic chamber facility. The associated instrumentation include, Schlieren system, high-speed data acquisition system, 2-channel hot wire CTA System, dynamic pressure transducers,

strain gage, pressure calibrators, high speed camera etc. Rocket propulsion laboratories consist of static test firing stands for solid, liquid and hybrid rockets, pulveriser, mixers and vacuum casting units for solid and hybrid propellant preparation and propellant characterization facilities. Combustion laboratory is equipped with pressure-controlled combustion set-ups for burn rate determination of solid propellants at high and sub-atmospheric pressure ranges and optical pyrometer to study flame morphology. A separate instrumentation laboratory is equipped with simultaneous thermal analyzer (DSC + TGA + DTG), UV-Vis spectrophotometer, bomb calorimeter, and Brookfield viscometers. All major data acquisition tasks are done via dedicated software and computers. Computing needs are fulfilled by a dedicated computational fluid dynamics laboratory housing ten terminals. It includes research grade software including ANSYS suite and MatLab.



SECTION 2

RESEARCH PROJECTS

2. Sponsored Projects (Research and Consultancy)

a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Supersonic Flow Studies over spike blunt body with different nose bluntness ratio	Sudip Das (PI) Priyank Kumar (CoPI)	AR&DB	17th June 2020	22.3 Lakhs	2 Years
2.	Aerodynamic Characterization of Reusable Launch Vehicles at Low Speeds	Priyank Kumar (PI) Sudip Das (CoPI)	RESPOND ISRO	3rd Dec 2019	22.39 Lakhs	3 Years
3.	Steady & Unsteady investigation on Slender Body at High Angles of Attack	Priyank Kumar (PI) Sudip Das (CoPI)	AR&DB	23rd May 2018	26.86 Lakhs	3 years
4.	Development of catalyst system for stable combustion of HAN green propellants	Dr. Shelly Biswas (PI) Dr. Rajiv Kumar (Co-PI)	ARDB	27th May 2021	30.207 Lakhs	3 Years
5.	AICTE -IDEA LAB	Priyank Kumar Coordinator Sudip Das Co- Coordinator	AICTE and Industry	17th June 2021	106.79 Lakhs	2 Years

b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Effect of protrusion on regression rate and combustion instability at varying L/D of hybrid rocket motor	Dr. Rajiv Kumar	SERB, DST	12th September, 2016	₹ 31,19,600	11-09-2019

c) Consultancy Projects carried out/ongoing

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator/ Co-Investigator	Ongoing/ Completed*
			from	to			
1.	CFD Analysis of Metal Casting Process	Intocast – Hitech, Jamshedpur	11.08.2019	10.08.2020	1.20 (module wise)	Dr. Priyank Kumar	Completed



SECTION 3

SEMINAR / CONFERENCE

3.1 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Rajiv Kumar	5 days FDP on "Inculcating Universal Human Values in Technical Education"	AICTE	AICTE	Online mode	19-04-2021 to 23-04-2021
2.	Dr. Rajiv Kumar	3rd National Aerospace Propulsion Conference	-	BMS College and GTRE, Bangalore	Online mode	17.12.2020 to 19.12.2020
3.	Dr. Rajiv Kumar	Webinar on " Value addition in the fines of Gua Iron ore Mines of Jharkhand"	-	NIT Jamshedpur	Online mode	12-09-2021
4.	Dr. Rajiv Kumar	One week FDP on "Artificial Intelligence and Machine Learning in Healthcare"	TEQIP-III	BIT Mesra	Online mode	27.07.2020 to 31.07.2020
5.	Dr. Rajiv Kumar	Webinar on Impact of Covid 19 on Mental Health and Well Being	TEQIP-III	BIT Mesra	Online mode	08.08.2020
6.	Dr. Rajiv Kumar	Two week FDP on "Delivering Online Course Using Canvas LMS"	TEQIP-III	BIT Mesra	Online mode	27.07.2020 to 05.08.2020
7.	Dr. Partha Mondal	Delivering Online Course using Canvas LMS	TEQIP-III	BIT Mesra	Online	27.07.2020 to 05.08.2020
8.	Dr. Partha Mondal	National Education Policy 2020	TEQIP-III	BIT Mesra & Deoghar	Online	24.03.2021
9.	Dr. Partha Mondal	8th International and 47th National Conference on Fluid Mechanics and Fluid Power	IIT Guwahati	IIT Guwahati	Online	9.12.2020 to 11.12.2020
10.	Dr. Shelly Biswas	5 days FDP on "Inculcating Universal Human Values in Technical Education"	AICTE	AICTE	Online at BIT Mesra	19-04-2021 to 23-04-2021
11.	Dr. Shelly Biswas	Webinar on " Value addition in the fines of Gua Iron ore Mines of Jharkhand"	-	NIT Jamshedpur	Online mode	12-09-2020
12.	Dr. Shelly Biswas	One week FDP on "Artificial Intelligence and Machine Learning in Healthcare"	TEQIP-III	BIT Mesra	Online mode	27.07.2020 to 31.07.2020
13.	Dr. Shelly Biswas	Webinar on Impact of Covid 19 on Mental Health and Well Being	TEQIP-III	BIT Mesra	Online mode	08.08.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
14.	Dr. Shelly Biswas	Two week FDP on "Delivering Online Course Using Canvas LMS"	TEQIP-III	BIT Mesra	Online mode	27.07.2020 to 05.08.2020
15.	Dr. Shelly Biswas	One week online short term course on Chemistry of Advanced Functional Materials (CAFM-2020)	NIT Srinagar	NIT Srinagar	Online mode	21.09.2020 to 25.09.2020
16.	Dr. Shelly Biswas	Online Course EN101x: English for Oral Communication	IIT Bombay X	IIT Bombay	Online mode	15.07. 2020 to 15.12. 2020
17.	Dr. Mohan Varma	Webinar on copyright issues in Academics	-	IPR Cell BIT, Mesra	Online mode	17.08.2020
18.	Dr. Mohan Varma	NEP 2020 Brain Storming Session, Access, Equity, Quality Affordability & Accountability	-	AICTE	Online mode	08.10.2020
19.	Dr. Mohan Varma	AICTE Quality Initiatives	-	AICTE	Online mode	24.06.2021

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

1. Saranyamol V. S., Kumar P, Das S., (2020) "Characteristics of Open Cavity Flow with Floor Inclinations at $M=2.0$ ", Proceedings of the Institution of Mechanical Engineers, Part G :Journal of Aerospace Engineering, September 2020, <https://doi.org/10.1177/0954410020966493>.
2. Sahoo, D., Karthick, S. K., Das, S., and Cohen, J., (2021) "Shock-related Unsteadiness of axisymmetric Spiked Bodies in Supersonic Flow", Experiments in Fluids, 62:89, (2021), DOI: <https://doi.org/10.1007/s00348-020-03130-2>.
3. Krishna, T. V., Kumar P, Das S., Desikan, S.L.N., "Effect of Cavity Rear Wall Modifications on Pressure Fluctuations at Supersonic Speed", Acta Astronautica, Vol. 185, May 2021, pp. 78-88, <https://doi.org/10.1016/j.actaastro.2021.04.030>
4. Karn, P. K., Kumar, P., Das, S. (2021) "Asymmetrical Vortex over Slender Body: A Computational Approach", Defense Science Journal, Vol. 71, No. 2, March 2021, pp. 282-288, DOI: 10.14429/dsj.71.15959.
5. Vignesh B. and Kumar, R., (2020) "Effect of multi-location swirl injection on the performance of hybrid rocket motor" Acta Astronautica, Vol-176, 2020, pp. 111-123.
6. Dinesh, M., Kumar R., (2020) "Experimental Studies of Protrusion Inserted Hybrid Rocket Motor with Varying L/D Ratio", Journal of Spacecraft and Rockets, Published online on October, 2020.
7. Kumar P, Kumar R, (2020) "Heat of Combustion Studies for Carbon Black Mixed ADN, KDN and AP Oxidizer", Science and Technology of Energetic Materials, Vol. 81, No. 4, 2020.
8. Dinesh M., Rajput S. S., Kumar R., (2021) "Protrusion Effect on the Performance of Hybrid Rocket with Liquefying and Non-Liquefying Fuels" Acta Astronautica, Vol-178, 2021, pp.536-547.
9. Mondal, P., (2021) "Prediction of Moment Using a Modified Discrete Vortex Method in Ground Effect", Defence Science Journal, Vol. 71, No. 2, 2021, pp. 146-152, DOI : 10.14429/dsj.71.16127
10. Uma V., Biswas S., (2020) "Effect of Metal Additives on Neutralization and Characteristics of AP/HTPB Solid Propellants", Combustion and Flame 2020; 221: 326-337. (IMPACT FACTOR-4.570)



11. Biswas S., Sharma D. K., (2021) "A Review on the Co-processing of Biomass with other Fuels Sources", International Journal of Green Energy, 2021; 18(8): 793-811. <https://doi.org/10.1080/15435075.2021.1880914>. (IMPACT FACTOR: 1.388)
12. N. Yadav, P.K. Srivastav and Mohan Varma, Recent Advances in Catalytic Combustion of AP Based Composite Solid Propellants, Defence Technology, 17 (3), 2021, pp. 1013-1031.

4.2 Publications in Proceedings:

1. Sahoo D., Karthick S. K., Das S., and Cohen J., "Numerical simulations to capture the shock related flow unsteadiness over an axisymmetric hemispherical body with a sharp tip spike at supersonic speed", International Shock Interaction Symposium -2020 (SIS-2020), IIT-Madras, Nov. 2020, Chennai.
2. Arora, A., Das, S., and Kumar, P., "Investigation of Flow over a BWB at different angles of attack," AIAA Annual Technical Symposium, Houston, 24th October, 2020
3. Arora, A., Das, S., and Kumar, P., "Flow Field Investigation on BWB Aircraft at Different Angles of Attack," 8th International and 47th National conference on Fluid Mechanics and Fluid Power, IIT Guwahati, December, 2020

4. Lavala, S. R., Mondal, P., and Das, S., "Experimental Investigation on Shock Cell Characteristics of Sonic/Supersonic Jets", 8th International and 47th National conference on Fluid Mechanics and Fluid Power, IIT Guwahati, December, 2020.
5. Rao, L. S., Mondal, P., and Das, S., "Experimental Investigation on Shock Cell Characteristics of Sonic/Supersonic Jets", FMFP2020-062, 8th International and 47th National Conference on Fluid Mechanics and Fluid Power, IIT Guwahati, India, 9th-11th December 2020.
6. Rao, L. S., Mondal, P., and Das, S., "Experimental Investigation on Shock Cell Characteristics of Sonic/Supersonic Jets", FMFP2020-062, 8th International and 47th National Conference on Fluid Mechanics and Fluid Power, IIT Guwahati, India, 9th-11th December 2020.

43. Book: Nil

4.3.1 Chapter(s) in Edited Book:

1. Shelly Biswas, Cracking and synergistic co-cracking of Jatropha oil with plastics, petroleum vacuum residue and bagasse. In "Recent Developments in Jatropha Research", Editor- Juan Francisco García Martín, Nova Science Publishers, Inc. 2021.

SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Dr. Priyank Kumar	Experimental Aerodynamics	GNA University	National	April 2021
2.	Dr. Priyank Kumar	Wind Tunnel Testings : Aerospace & Beyond	Karunya Institute of Technology & Science	National	April 2021
3.	Dr. Priyank Kumar	Wind Tunnel Testings	NCERT, New Delhi	National	June 2021
4.	Dr. Rajiv Kumar	Reviewer of innovative ideas/innovations under INSPIRE Award-MANAK Scheme	National Innovation Foundation, India	National Level	For year 2020-2021



Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
5.	Dr. Rajiv Kumar	Best Researchers Award	New Science Inventions by Science Father	International level	2021
6.	Dr. Rajiv Kumar	Invited lecture in one-week International Webinar on Rocket Propulsion	SRM Institute of Science and Technology, Chennai	International level	19th October, 2020
7.	Dr. Rajiv Kumar	Motivational speech	Voyager model rocketry organisation for disabled students	National level	1st June, 2021
8.	Dr. Rajiv Kumar	Chief guest speaker in Students in India conduct research	Voyager model rocketry organisation	National level	6th June, 2021
9.	Dr. Shelly Biswas	Best Research Award	New Science Inventions by Science Father	International level	2020
10.	Dr. Shelly Biswas	Guest speaker for the Webinar on Fuels from Co-processing of Waste Plastics	New Horizon College of Engineering, Bangalore.	National level	4th August 2020
11.	Dr. Shelly Biswas	Guest lecture on "Green Fuels"	Amity Institute of Applied Sciences, Amity University.	National level	29th April, 2021
12.	Dr. Shelly Biswas	Invited lecture in Workshop entitled "Advanced Skills in Research and protection of IPR"	Amity Institute of Applied Sciences, Amity University.	National level	7th to 11th June, 2021

5.2 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	Cohen, Jacob., Das, Sudip., Jsac, LLC	Method and Cavity for Suppression of Cavity Flow Oscillations and Acoustic Loads using Curved Rear Face	US Patent: US 10,823207 B2	Date of Patent: 03/11/2020
2.	Rajiv Kumar and PA Ramakrishna At IIT Madras	Method for Improving the Mechanical Properties of Paraffin Wax	Patent No.: 343739	Date of Grant: 10/08/2020
3.	Rajiv Kumar and PA Ramakrishna At IIT Madras	Hybrid Rocket Engine Having High Regression Rate	Patent No.: 343577	Date of Grant: 07/08/2020



SECTION 6

ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

6.1 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. Mohan Varma	Professor and Head	No
2.	Dr. Sudip Das	Professor	No
3.	Dr. Priyank Kumar	Assistant Professor	No
4.	Dr. Partha Mondal	Assistant Professor	No
5.	Dr. Rajiv Kumar	Assistant Professor	No
6.	Dr. Shelly Biswas	Assistant Professor	No
7.	Dr. Swarupkumar Y. Jejurkar	Assistant Professor	No

6.2 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Prof. Rajkumar S. Pant	Professor	IIT Bombay
2.	Padmashri Prof. R. M. Vasagam	Chancellor	Dr. MGR Educational and Research Institute, Chennai

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	HOD/In-Charge	(Ex-officio)	Chairman
2.	Dr. Mohan Varma	Professor	Internal Member
3.	Dr. Sudip Das	Professor	Internal Member
4.	Dr. Priyank Kumar	Asst. Professor	Internal Member
5.	Dr. Rajiv Kumar	Asst. Professor	Internal Member
6.	Dr. D. P. Mishra	Professor	Internal Member
7.	Dr. Gautam Sarkhel	Professor	Internal Member
Any two of the following			
8.	Dr. M. K. Laha	Professor, Deptt. of Aerospace Engg., IIT, Kharagpur	External Member
9.	Dr. D. P. Mishra	Professor, Deptt. of Aerospace Engg., IIT, Kanpur	External Member
10.	Dr. Debopam Das	Professor, Deptt. of Aerospace Engg., IIT, Kanpur	External Member
11.	Dr. S. R. Chakravarthy	Professor, Deptt. of Aerospace Engg., IIT Madras, Chennai	External Member
12.	Dr. S. B. Verma	Dy. Head, Experimental Aerodynamics Division, NAL, Bangalore	External Member
13.	Shri P. Pathak	GM, R&D Centre of Steel Authority of India Ltd. Shyamli Colony, Doranda, Ranchi - 834002	External Member



SECTION 7

OTHER INFORMATION

7.1 Publication by students, if any

Publications in Journals :

1. Karn, P. K., Kumar, P., Das, S. "Asymmetrical Vortex over Slender Body: A Computational Approach", Defense Science Journal, Vol. 71, No. 2, March 2021, pp. 282-288, DOI: 10.14429/dsj.71.15959.
2. Bala Vignesh and Rajiv Kumar, "Effect of multi-location swirl injection on the performance of hybrid rocket motor" Acta Astronautica, Vol-176, 2020, pp. 111-123.
3. Mengu Dinesh and Rajiv Kumar, "Experimental Studies of Protrusion Inserted Hybrid Rocket Motor with Varying L/D Ratio", Journal of Spacecraft and Rockets, Published online on October, 2020.
4. Pratim Kumar and Rajiv Kumar, "Heat of Combustion Studies for Carbon Black Mixed ADN, KDN and AP Oxidizer", Science and Technology of Energetic Materials, Vol. 81, No. 4, 2020.
5. Mengu Dinesh, Saideep Singh Rajput and Rajiv Kumar, "Protrusion Effect on the Performance of Hybrid Rocket with Liquefying and Non-Liquefying Fuels" Acta Astronautica, Vol-178, 2021, pp.536-547.
6. Uma Vellaisamy and Shelly Biswas, Effect of Metal Additives on Neutralization and Characteristics of AP/HTPB Solid Propellants, Combustion and Flame 2020; 221: 326-337. (IMPACT FACTOR-4.570)
7. Publications in Proceedings: (International/National)
8. Rajiv Kumar and K. Tamizarasan, "Use of N₂O-O₂ as the Oxidizer for the Hybrid Rocket Application" 3rd National Aerospace Propulsion Conference (NAPC 2020), BMS College and GTRE, Bangalore, 17th- 19th December, 2020.
9. Mengu Dinesh and Rajiv Kumar, "Effect of Protrusion Configuration on Combustion Stability of Hybrid Rocket Motor" 3rd National Aerospace Propulsion Conference (NAPC 2020), BMS College and GTRE, Bangalore, 17th- 19th December, 2020.
10. Arora, A., Das, S., and Kumar, P., "Investigation of Flow over a BWB at different angles of attack," AIAA Annual Technical Symposium, Houston, 24th October, 2020
11. Arora, A., Das, S., and Kumar, P., "Flow Field Investigation on BWB Aircraft at Different Angles of Attack," 8th International and 47th National conference on Fluid Mechanics and Fluid Power, IIT Guwahati, December, 2020
12. Rao, L. S, Mondal, P., and Das, S., "Experimental Investigation on Shock Cell Characteristics of Sonic/Supersonic Jets", 8th International and 47th National conference on Fluid Mechanics and Fluid Power, IIT Guwahati, December, 2020.
13. Rao, L. S., Mondal, P., and Das, S., "Experimental Investigation on Shock Cell Characteristics of Sonic/Supersonic Jets", FMFP2020-062, 8th International and 47th National Conference on Fluid Mechanics and Fluid Power, IIT Guwahati, India, 9th-11th December 2020.
14. Rao, L. S., Mondal, P., and Das, S., "Experimental Investigation on Shock Cell Characteristics of Sonic/Supersonic Jets", FMFP2020-062, 8th International and 47th National Conference on Fluid Mechanics and Fluid Power, IIT Guwahati, India, 9th-11th December 2020.

7.3 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Padma Shri M. C. Dathan Batch : 1984-1986	Scientific Advisor to Chief Minister of Kerala Former Director, Vikram Sarabhai Space Centre (2014) Former Director, Satish Dhawan Space Centre (2008)
2.	Dr. Ramakant Singh Batch : 1987-1989	Dy. Director General Civil Aviation Department, Bangalore Region
3.	Dr. D. Narayan Batch : 1989-1991	Scientist 'G' Group Director Aeronautical Development Agency (ADA)



Sr. No	Name, Batch and Affiliation	Short Description
4.	Shri Rajeev Sharma Batch : 1989-1991	Chief Technical Officer, Grid Dynamics, New Jersey, USA Former Dy. Project Director 'AGNI', DRDL
5.	Sujith Kumar R. Batch : 1994 - 1996	Scientist/ Engineer 'G' VSSC, Thiruvananthapuram

8. Any other relevant information :

1. Prof. R. M. Vasagam (Padmashri), Chancellor, Dr. MGR Educational and Research Institute, Chennai and Adjunct Professor of the Department has delivered a Webinar on "Opening up Indian Space Programme to Start up Firms ". on March 02, 2021
2. Dr. Rajkumar S. Pant, Professor, IIT Bombay and Adjunct Professor of the Department has delivered an Invited Talk on "Design of Electric and Hybrid Transport Aircraft" on Feb. 02, 2021.

9. Special Covid Initiatives, if any

1. All Covid related protocols were followed and accordingly new initiatives in preparation of online lectures and laboratory classes were taken by faculty members including videography and technical content sharing with the students

BIT MESRA OFF CAMPUS : DEOGHAR

SECTION 1

CAMPUS PROFILE



1 About the Campus:

BIT Mesra, Off-Campus Deoghar was established in 2007 with the financial and infrastructural supports from the Govt. of Jharkhand and has entered into the 14th year of its successful operation. Over the years, the institute has established itself as an important, fully residential, AICTE approved educational hub in Santhalpargana, Jharkhand. The campus is well equipped with modern instruments and software facilities for the undergraduate engineering courses in CSE, ECE, EEE and Mechanical Engineering with a total intake capacity of 300. From the year 2020, the lateral entry to the engineering branches has also been initiated as per the AICTE norms. Also from the year 2020, BBA and BCA courses have been started with 40 seats in each of them.

Programmes Offered	Intake
B.Tech. in Computer Science & Engineering	90
B.Tech. in Electronics & Communication Engineering	60
B.Tech. in Electrical & Electronics Engineering	60
B.Tech. in Mechanical Engineering	60

B.Tech. in Production Engineering (till 2020)	30
BBA	40
BCA	40

The campus is spread over an area of 25 acres, has its staff quarters, library (having more than 28,900 volumes), language lab, gymnasium, health center, ambulance facility, ATM, canteen, playground, two basketball courts, entrepreneur development cell, training and placement cell and is under CC TV surveillance. Most of the faculty members of this campus are engaged in R&D activities; organize conferences, workshops & seminars and regularly publish quality research articles in journals of international repute. The NSS members of the campus regularly arrange for blood donation camps and literacy drives in nearby villages as a part of the institute's social responsibilities. Over the years, the institute has encouraged its students to take part in various inter-college affairs including athletic and sports events and literary activities. The institute has witnessed its students well placed not only in Govt. sectors, like defense, ONGC, IOCL, power plants, renewable energy, electricity distribution, etc. the alumni of this campus are efficiently working in multi-national companies, like TCS, CTS, Wipro, Amdocs, NPCI, Docquity,



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Adani Group, Vodafone, Eshopbox, BYJU's, Transrail Lighting. For Batch 2017-2021, the highest package obtained has been Rs. 13 LPA with stipend of Rs. 35k per month at Docquity Company. For the last three years the institute has witnessed student-placement over 75% with an average annual CTC between Rs. 5 lacs to 6 lacs. The institute has also produced many entrepreneurs, who are successfully running

their own companies and business ventures. Apart from giving quality education and healthy lifestyles, the institute is also very keen on developing the moral characters of its students and thus regularly arranges for spiritual events in association with Art of Living, Ram Krishna Math and Mission, International Society for Krishna Consciousness, etc.



SECTION 2

RESEARCH PROJECTS

2. Sponsored Projects (Research and Consultancy)

a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Reconstruction and digitization of PATAH Art, a perishing cultural heritage of Eastern India with special reference to Santhal Parganas	Dr. Manoj Kumar Dutta	Indian National Science Academy (INSA)	23.10.2020	Rs. 275616/- (for one year)	Initially for 1 year, may be extended upto 3 years



SECTION 3

SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	5 Days Practice Session including Webinar & Workshops toward Celebration of International Day of Yoga (IDY) 2021	Dr Sanjay Kumar	BIT Mesra, Off Campus Deoghar	June17 to 21, 2021
2.	AICTE Inspired Workshop/Webinar on "National Education Policy 2020 : Its Potential in Transforming the Education Scenario: A Detailed Analysis	Dr Sanjay Kumar	BIT Mesra, Off Campus Deoghar (online)	Mar 24, 2021

3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Manoj Kumar Dutta	2nd International Conference on Microelectronic Devices, Circuits and Systems (ICMDCS 2021)	BIT, Mesra	VIT University, Vellore	Online	11.02.2021-13.02.2021
		6th International Conference on Emerging Applications of Information Technology (EAIT 2020) (two papers)	BIT, Mesra	Computer Society of India (CSI) Kolkata Chapter and University of Kalyani	Online	25.02.2021 – 27.02.2021
2.	Dr. Manoj Kumar Dutta	TEQIP-III Sponsored One-week Online Faculty Development Program	BIT, Mesra	Dept. of Computer Science, BIT Mesra	Online	11.9.2020 -15.9.2020
3.	Dr. Manoj Kumar Dutta	TEQIP-3 FDP on Mathematical Approaches in Mechanics	Free	IIT Indore	Online	24.12.2020 – 31.12.2020
4.	Dr. Soumen Karmakar	5-day online FDP on the theme "Inculcating Universal Human Values in Technical education"	NA (Free)	AICTE	Online	14.6.2021 -18.6.2021
5.	Dr. S.S. Majhi	Faculty Development Programme on Trends in Chemical Sciences: Challenges and Opportunities in the coming decade	CUJ	Central University of Jharkhand	CJU	21.9.2020 -26.9.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
6.	Dr. A.C. Singh	Faculty Development Programme on Trends in Chemical Sciences: Challenges and Opportunities in the coming decade	CUJ	Central University of Jharkhand	CUJ	21-26.9.2020
7.	Dr. S.S. Majhi	Faculty Development Programme on Trends in Chemical Sciences: Challenges and Opportunities in the coming decade	CUJ	Central University of Jharkhand	CUJ	21-26.9.2020
8.	Mr. Raja Ram Dutta	One Week FDP on "Cyber Security and Investigation Tools"	TEQIP -III Sponsored	BIT, Mesra	Dept of CSE, BIT Mesra (Online)	11-15.9.2020
9.	Mr. Raja Ram Dutta	AICTE-ISTE approved Orientation/Refresher Programme on Deep Learning		BIT Mesra	Dept of CSE, BIT Mesra (Online)	14.12.2020 to 19.12.2020
10.	Mr. Raja Ram Dutta	AICTE-ISTE approved Orientation/Refresher Programme on Deep Learning		BIT Mesra	Dept of CSE, BIT Mesra (Online)	29.04.2021 - 05.05.2021
11.	Mr. Raja Ram Dutta	Innovation Ambassador Training	NIL	MoE's Innovation Cell & AICTE, New Delhi	Online	16.02.2021
12.	Dr. Kamta Nath Mishra	Artificial Intelligence and Machine Learning in Healthcare	Nil	B.I.T. Mesra	Dept of CSE, BIT Mesra (Online)	27 – 31.9.2020
13.	Dr. Kamta Nath Mishra	Block chain	Nil	B.I.T. Mesra	Dept of CSE, BIT Mesra (Online)	7 – 11.9.2020
14.	Dr. Kamta Nath Mishra	Universal Human Values	Nil	AICTE New Delhi	Online (AICTE New Delhi)	29.11.2020 to 3.12.2020
15.	Mr. Rayees Ahamad	Block chain	Nil	B.I.T. Mesra	Dept of CSE, BIT Mesra (Online)	7 – 11.9.2020
16.	Mr. Rayees Ahamad	Smart Computing Technologies and Apps	Nil	MS College of Engg., Kuttippuram	CSE Department	14 – 19.12.2020
17.	Mrs. Anita Kushwaha	Intelligent Computing in Data Science at Sri Krishna College of Engineering and Technology, Coimbatore between 7th-11th December 2020.	-	Sri Krishna college of Engineering and Technology Coimbatore.	Coimbatore	7-11.12.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
18.	Mrs. Anita Kushwaha	Online AtalFDPData Sciences which is scheduled for 14-18 Dec 2020 at Central University of Punjab, Bathinda, Punjab.		Central University of Punjab, Bathinda, Punjab.	Punjab	14-18.12.2020
19.	Mrs. Anita Kushwaha	"AI and its impact on present day communication networks".		Gyan Ganga Institute of Technology & Sciences.		4-8.1.2021
20.	Mrs. Anita Kushwaha	Research through HPC	TEQIP-III	BIT Mesra	B.I.T. Mesra	30-31.1.2021
21.	Mrs. Anita Kushwaha	A Two Weeks Self-Paced Online FDP on Delivering Online Course Using Canvas LMS".				28.6.2021 – 9.7.2021
22.	Mr. Soumya Ray	Inculcating Universal Human Values in Technical Education	AICTE	AICTE	AICTE New Delhi	14-18.6.2021
23.	Mr. Soumya Ray	Internet of Things(IoT)	Babasaheb Bhimrao Ambedkar University	AICTE	AICTE New Delhi	05-09.10.2020
24.	Mr. Soumya Ray	Blockchain	National Institute of Technology, Raipur	AICTE	Online	14-18.9..2020
25.	Mr. Soumya Ray	Artificial Intelligence & Machine Learning Using Python	National Technology Summit, IIT Roorkee	Finland Labs	Banglore	06-10.7.2020
26.	Mr. Arbind Kr. Choudhary	Cyber Security and Forensics	AICTE	Gautam Buddha University	Online	3-7.10.2020
27.	Mr. Arbind Kr. Choudhary	Cloud Technology	AICTE	Beant College of Engineering and Technology, Gurdaspur	Online	26-30.10.2020
28.	Mr. Arbind Kr. Choudhary	Deep Learning	AICTE-ISTE	BIT Mesra	Online	14-19.12.2020
29.	Mr. Arbind Kr. Choudhary	Block chain	AICTE	Indian Institute of Technology Patna	Online	20-24.12.2020
30.	Mr. Arbind Kr. Choudhary	Quantum Computing	AICTE	Gandhi Institute Of Technology And Management Gitam Bengaluru	Online	4-8.1.2021



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Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
31.	Mr. Swapan Kr. Borat	Recent Trends and Future Opportunities on Deep Learning at	AICTE	Central University of Rajasthan	Online	21-25.9.2020
32.	Mr. Swapan Kr. Borat	Cloud Technology	AICTE	Government Engineering College Gandhinagar Gujarat.	Online	2-6.11.2020
33.	Dr. Nishi Kant Kumar	Artificial Intelligence and Machine Learning in Healthcare Mesra,	AICTE	jointly organized by the Department of Bioengineering and Electronics & Communication Engineering, Birla Institute of Technology	Online	27-31.7.2020
34.	Dr. Nishi Kant Kumar	Blended Learning and Flipped Classroom	AICTE	Sardar Vallabhbhai National Institute of Technology Surat.	Online	10-14.08-2020
35.	Dr. Nishi Kant Kumar	Business Data Analysis and Research Publication		Faculty of Management Studies, Shri Shankaracharya Technical Campus, Shri Shankaracharya Group of Institutions, Bhilai, C.G., India.	Online	2-7.11.2020
36.	Dr. Nishi Kant Kumar	Deep Learning organized by	AICTE	Birla Institute of Technology, Mesra, Ranchi, Jharkhand.		14-19.12.2020
37.	Dr. Sounak Paul	FDP on "Cloud Technology"	AICTE	Gitam University & AICTE	Online	16.11.2020
38.	Dr. Sounak Paul	FDP on "Block chain"	AICTE	IIT Ropar & AICTE	Online	11-15.1.2021
39.	Dr. Sounak Paul	FDP on "Cyber Security"	AICTE	Central University Kerala & AICTE	Online	1-5.2.2021
40.	Dr. Sounak Paul	FDP on "Inculcating Universal Human Values in Technical Education"	AICTE	AICTE	Online	19-23.4.2021



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
41.	Dr. Ranjan Chattaraj	Orientation Towards Technical Education & Curriculum Aspect (FDP)	-	NITTT (MoE)	Online	10.09.2020 - 11.11. 20
42.	Dr. Ranjan Chattaraj	Seminar on Applications of statistics in science and Engineering	-	BIT Mesra	Online	5-6.3.2021
43.	Dr. Bishnu Kumar	Orientation Towards Technical Education & Curriculum Aspect (FDP)	-	NITTT (MoE)	Online	10.09.2020 - 11.11.2020
44.	Dr. Bishnu Kumar	Refresher Course in Mathematics	-	Ramanujam College, University of Delhi.(MoE)	Online	16-30.03.21
45.	Dr. Bishnu Kumar	FDP on SciLab	-	S K Birsha University, Purulia	Online	02-15.09.20
46.	Dr. Amit Kumar	FDP on Canvas LMS	-	Production and Industrial Engineering, BIT Mesra Ranchi	Online	28.06.21 - 09. 07.21
47.	Dr. Amit Kumar	FDP on Inculcating Universal Human Values in Technical Education	-	AICTE	Online	14.06.21 - 18. 06.21
48.	Dr. Amit Kumar	FDP on Latex	-	Jamshedpur Women's College in collaboration with spoken tutorial, IIT Bombay	Online	13.07.20 - 19. 07 20
49.	Dr. Amit Kumar	FDP on Universal Human Values for DEEKSHARAMBH (Student Induction Program)	-	NIT Patna	Online	10.08.20 - 14. 08 20
50.	Dr. Amit Kumar	FDP on Recent Trends in Computer Science	-	Dept. of Computer Science and Computer Application, Thiruvalluvar University, Tamilnadu, Chennai	Online	22.07.20 - 28. 07 20



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
51.	Dr. Amit Kumar	Webinar on "Important aspects in writing Research Articles and Research Proposals"	-	R & D, E G S Pillay Arts and Science College, Nagapattinam	Online	18.07.2020
52.	Dr. Amit Kumar	International Conference on "Covid-19 Pandemic and its impact on the Human Society: Divergent Voices and Perspectives"	-	Dept. of English and Political Science, Nirmala College Ranchi	Online	19.07.2020 - 21. 07.2020
53.	Dr. Amit Kumar	Webinar on Migration and Livelihood Under the Covid-19 Pandemic: Challenges and Strategies	-	Dep of commerce, Sonamukhi with Alipurduar	Online	22. 07.2020
54.	Dr. Amit Kumar	Conference on "Impact of Covid-19 on Indian Economy"	-	Victoria Institution and The Eastern India Regional Council of the Institute of Company Secretaries of India	Online	26.07.2020
55.	Dr. Amit Kumar	Webinar on "Role of Guidance and Career counselling in the perspective of present pandemic situation of Covid-19"	-	Mankar College, WB	Online	05.08.2020 – 06.08.2020
56.	Dr. Amit Kumar	Accreditation Webinar Series on "W10- Applying for accreditation"	-	NITTTR, Bhopal	Online	02.08.2020
57.	Dr. Ritesh Kumar Upadhyay	International Conference on Evolution in Manufacturing ICEM.	MNIT Jaipur.	MNIT Jaipur In association with NIT Uttarakhand & NIT Warangal.	MNIT Jaipur (In Online mode).	10.12.2020
		National Seminar (web) on Advances in Machining.	NITTTR Kolkata.	NITTTR Kolkata in collaboration with SPIU, Uttar Pradesh.	NITTTR Kolkata (In online mode)	26.09.2020
		AICTE Training and Learning (ATAL) Academy Online FDP on "Green Technology & Sustainability Engineering.	Dr BR Ambedkar NIT Jalandhar	Dr BR Ambedkar NIT Jalandhar	NIT Jalandhar (In Online Mode)	19.10.2020 - 23.10.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
		AICTE Training and Learning (ATAL) Academy Online FDP on "Energy Storage.	Bharathiar University	Bharathiar University	Bharathiar University (In Online Mode)	05.10.2020 - 09.10.2020
		FDP on Frontiers in Chemical Engineering' from organized by Department of Chemical Engineering.	MMUT, Gorakhpur	MMUT, Gorakhpur & Department of Chemical Engineering SVPNIT, Surat.	MMUT, Gorakhpur (In Online Mode).	14.09.2020 - 18.09.2020
		Short term course on "Advanced Materials for Structural Applications	IIT Indore	Department of Metallurgy Engineering and Materials Science , IIT Indore	IIT Indore (In Online Mode)	29.09.2020 - 04.10.2020.
58.	Mr. Nilesh Kumar Rajalwal	Advanced Optimization techniques and Hands on with MATLAB/ SCILAB		MNIT Jaipur, NIT Patna, IIIT Jabalpur	Online	13.7.2020 -24.7.2020
59.	Mr. Nilesh Kumar Rajalwal	Typhoon HIL for Real Time Power System Studies		Typhoon HIL	Online	20.7.2020 -24.7.2020
60.	Mr. Nilesh Kumar Rajalwal	W-10 Applying for Accreditation (Accreditation Webinar Series)		NITTTR, Bhopal	Online	20.08.2020
61.	Mr. Nilesh Kumar Rajalwal	Systems Engineering		NIT Delhi	Online	26.10.2020 -30.10.2020
62.	Mr. Nilesh Kumar Rajalwal	Recent Trends in Power System		NIT Sikkim	Online	23.01.2021 -02.02.2021
63.	Mr. Sridhar Chintala	Accreditation Webinar Series	-	NITTTR Bhopal	Online	20.08.2020
64.	Mr. Sridhar Chintala	Deep Learning and Artificial Intelligence	-	Indira Gandhi Delhi Technical University for Women	Online	21.09.2020 – 25.09.2020
65.	Mr. Sridhar Chintala	Internet of Things (IoT)	-	College of Engineering, Kallooppura	Online	14.09.2020- 18.09.2020
66.	Mrs. Payal Bhardwaj	Webinar on W-10, Applying for accreditation	NA	NITTTR, Bhopal	Online	20.08.2020
67.	Mrs. Payal Bhardwaj	ATAL FDP on Wearable Devices	NA	College of Engineering, Pune	Online	21.09.2020- 25.09.2020



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Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
68.	Mrs. Payal Bhardwaj	ATAL FDP on Innovation and Intelligence	NA	NIT, Durgapur	Online	06.10. 2020 – 10.10. 2020
69.	Mrs. Payal Bhardwaj	Refresher Programme in Deep Learning	NA	BIT MESRA	Online	14.12.2020-19.12.2020
70.	Mrs. Payal Bhardwaj	ATAL FDP on Cloud Technology		NITTTR, Chennai	Online	08.02. 2021 – 12.02. 2021
71.	Mrs. Payal Bhardwaj	ATAL FDP on Telemedicine		Model Engineering College	Online	15.02. 2021 – 19.02. 2021
72.	Mrs. Payal Bhardwaj	Inculcating Human Values in Technical Education	NA	AICTE	Online	31.05.2021-04.06.2021
73.	Mrs. Payal Bhardwaj	Delivering Online Course using CANVAS LMS	NA	BIT MESRA	Online	28.06.2021-09.07.2021
74.	Mr. Akash Kumar Gupta	5 day's FDP on Leadership & Excellence	-	ATAL FDP, AICTE	Online	07.9.2020 -11.9.2020
75.	Mr. Akash Kumar Gupta	Webinar Aacharyadevo Bhava	-	National Assessment and Accreditation Council (NAAC)	Online	11.9.2020
76.	Mr. Akash Kumar Gupta	Webinar on Overview of digital image processing	-	Mc-Graw Hill	Online	11.9.2020
77.	Mr. Akash Kumar Gupta	5 day's FDP on Cloud Technology	-	ATAL FDP, AICTE	Online	02.11.2020 -09.11.2020
78.	Mr. Akash Kumar Gupta	5 day's STTP on Optimization techniques: Recent Trends and Applications in Engineering		AICTE Sponsored STTP	Online	05.10.2020 – 10.10.2020
79.	Mr. Akash Kumar Gupta	5 day's STTP on Intelligence Application with Deep Learning using Pytorch	-	AICTE Sponsored STTP	Online	21.9.2020 – 26.9.2020
80.	Mr. Akash Kumar Gupta	Webinar on Creating Awareness about National Education Policy, 2020	-	Ministry of Education GOI	Online	16.9.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
81.	Mr. Akash Kumar Gupta	1 day Workshop on Online Training program on Research through HPC	-	BIT Mesra, Ranchi	Online	19.9.2020
82.	Mr. Akash Kumar Gupta	Webinar on NEP 2020 (One More Policy or Game Changer)	-	UGC-FRP's University	Online	24.9.2020
83.	Mr. Akash Kumar Gupta	Webinar on Role and Relevance of Gandhi-ji in Science, Education and Society in India	-	BIT Mesra, Ranchi with IIT Kharagpur	Online	30.9.2020
84.	Mr. Akash Kumar Gupta	Webinar on Technical writing: Tips, Tricks and Tools	-	AICTE Sponsored at JIS University by Taylor and Francis Group	Online	10.10.2020
85.	Mr. Akash Kumar Gupta	Webinar on Publication Ethics and Plagiarism	-	BVICAM, New Delhi	Online	16.10.2020
86.	Mr. Akash Kumar Gupta	Webinar on AATMANIRBHAR BHARAT: A Roadmap for Inclusive Growth	-	NIT Patna	Online	02.10.2020
87.	Mr. Akash Kumar Gupta	India Science Webinar Series on Analyzing Experimental Data and Making Pretty Plots in MATLAB	-	Mathworks	Online	19.10.2020
88.	Mr. Akash Kumar Gupta	India Science Webinar Series on Introduction to Simulink Online, an Interactive Tool for Simulation and Modelling	-	Mathworks	Online	21.10.2020
89.	Mr. Akash Kumar Gupta	6 day's Research orientation Program on International Research Orientation Program	-	MMICT & BM Mullana, AMBALA MM(DU)	Online	26.10.2020 - 31.10.2020
90.	Mr. Akash Kumar Gupta	Webinar on "Building a Successful and Satisfactory Academic Career"	-	ACM India Webinar Series	Online	07.11.2020
91.	Mr. Akash Kumar Gupta	5 day's FDP on Cyber Security Analytics and Cyber Forensics	-	Saintgits college of engineering, Kottayam	Online	16.9.2020 – 20.9.2020
92.	Mr. Akash Kumar Gupta	5 day's FDP on Universal Human Values	-	NIT Patna	Online	23.9.2020 – 27.9.2020



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Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
93.	Mr. Akash Kumar Gupta	Webinar on Artificial Intelligence and its Implementation in Alexa by Rohit Prasad - VP, and Head Scientist @ Amazon Alexa	-	Birla Institute of Technology Mesra Alumni Association - North America	Online	19.12.2020
94.	Mr. Akash Kumar Gupta	5 day's FDP on Medical image analysis in Telemedicine	-	ATAL FDP, AICTE	Online	19.01.2021 – 23.01.2021
95.	Mr. Akash Kumar Gupta	5 day's FDP on Development of decentralized IoT systems using Blockchain	-	ATAL FDP, AICTE	Online	25.1.2021 -29.01.2021
96.	Mr. Akash Kumar Gupta	Two week FDP on Emerging Trends and Challenges in VLSI Mixed Signal Processing for Fourth Industrial Revolution	-	AICTE SPONSORED @ KNCET, Trichy, Tamilnadu	Online	08.02.2020 – 20.02.2010
97.	Mr. Akash Kumar Gupta	5 day's FDP on Advances in Communication and Signal Processing	-	NIT Jalandhar	Online	05.4.2021 – 09.4.2021
98.	Mr. Akash Kumar Gupta	6 day's FDP on Green IoT for Green Environment	-	Gurunanak Institute of Technology, JIS Group	Online	19.4.2021 – 25.4.2021
99.	Mr. Akash Kumar Gupta	5 day's FDP on Inculcating Universal Human Values in Technical Education	-	AICTE	Online	26.4.2021 – 30.4.2021
100.	Mr. Akhilesh Kumar Roy	Two weeks self paced online FDPon Delivering Online courses using Canvas LMS	-	BIT Mesra	Online	28.06.2021 – 09.7.2021
101.	Dr. R. K. Lal	Two weeks self paced online FDPon Delivering Online courses using Canvas LMS	-	BIT Mesra	Online	28/06/2021 to 09/07/2021
102.	Mr. Vikash Sharma	TEQIP Sponsored Online FDP on " Artificial Intelligence and Machine Learning in Healthcare"	-	Birla Institute of Technology, Mesra	Online	27.7.2020 – 31.7.2020
103.	Mr. Vikash Sharma	Two weeks self paced online FDPon Delivering Online courses using Canvas LMS	-	BIT Mesra	Online	28.06.2021 – 09.7.2021



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
104.	Mr. Vikash Sharma	5 day's FDP on Inculcating Universal Human Values in Technical Education	-	AICTE	Online	19.4.2021 – 23.4.2021
105.	Mr. Vikash Sharma	One Month Innovation Ambassador Training Programme		AICTE	Online	01.11.2020 – 30.11.2020
106.	Mr. Vikash Sharma	The Strategy of Content Marketing		Coursera, UC Davis	Online	01.7.2020 – 30.8.2020
107.	Mrs. Sutapa Mondal and Arup Kumar Nandi, An Improved Hydro-mechanical Braking System to Maintain a Constant Pedal Feel During Deceleration of Electric Vehicle	International Conference on Future Trends in Materials and Mechanical Engineering (ICFTMME-2020),		SRM Institute of science and technology, Delhi-NCR Campus, Ghaziabad.	online	06.11.2020- 07.11.2020
108.	Mrs. Sutapa Mondal	National Education Policy,		BITD and BIT, Mesra	online	24.3.2021
109.	Mrs. Sutapa Mondal	Two weeks self paced online FDP on Delivering online Course using CANVAS LMS		Department of Production and Industrial Engineering, BIT, Mesra	online	28.6.2021 – 09.7.2021
110.	Mr. Sutapa Mondal	ATAL FDP titled 'Design and Simulation of Hybrid and Electric Vehicle system'		Department of Mechanical Engineering, Hindustan Institute of Technology and Science, Chennai	Online	02.11.2020 – 06.11.2020
111.	Dr. Sanjay Kumar	Two weeks self paced FDP on delivering online course using Canvas LMS,	BIT, Mesra, Ranchi	Dept of Production and Industrial Engineering, BIT, Mesra, Ranchi,	Online	28.6.2021 – 09.7.2021
112.	Dr. Sanjay Kumar	Two days International Symposium on 7-IN-1 on the the theme of "Chitt-Kaya NiveshSthaan"	Aarhus University, Denmark	Aarhus University, Denmark	Online	21.6.2021 – 22.6.2021
113.	Dr. Sanjay Kumar	Two days 6G Knowledge Lab Opening and 36th Virtual GISFI Workshop	Aarhus University, Herning, Denmark	Aarhus University, Herning, Denmark	online	21.12.2020- 22.12.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
114.	Dr. Sandip Ghosh Hazra	5-day online FDP on the theme "Inculcating Universal Human Values in Technical education	NA (Free)	AICTE	Online	14.6.2021 -18.6.2021
115.	Dr. Anil Kumar Sharma	NPTEL Course on Nuclear & Particle Physics. Score: 67 %	Self funded	IIT, Guwahati	Online / Proctored Exam at Asansol	26.7.2020 – 20.11.2010
116.	Dr. Anil Kumar Sharma	NPTEL Course on Fundamentals of Micro & Nano Fabrication. Score: 84 %	Self funded	IISc, Bangalore	Online / Proctored Exam at Asansol	26.7.2020 – 20.11.2010
117.	Dr. Anil Kumar Sharma	FDP- Inculcating Universal Human Values in Technical Education	AICTE	AICTE	Online	19.4.2021 – 23.4.2021
118.	Mr. Prafulla Kumar Manoharan	FDP- Advances in Manufacturing	TEQIP III	BIT Sindri, Dhanbad	Online	15.6.2021 -21.6.2021
119.	Mr. Prafulla Kumar Manoharan	FDP- Delivering online course using CANVAS LMS	BIT, Mesra	Department of P & I Engg. BIT, Mesra	Online	28.6.2021 -09.7.2021
220.	Mr. Vijay Kumar Mandal	FDP- Delivering online course using CANVAS LMS	BIT, Mesra	Department of P & I Engg. BIT, Mesra	Online	28.6.2021 -09.7.2021

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

- Ram Krishna Sarkar, Manoj Kumar Dutta (2021). Coupled propagation of two beams in cubic quintic nonlinear medium. International Journal for Light and Electron Optics (OPTIK), Elsevier, 227, 166093.
- Soumen Karmakar (2020). Selective synthesis of DC carbon arc-generated carbon nanotube and layered-graphene and the associated mechanism. Nanotechnology (Institute of Physics, UK). 32, 105602
- Rohit Srivastava, Jayeeta Chattopadhyay, Rahul Patel, Sanchit Agrawal, Shaista Nouseen, Santosh Kumar, Soumen Karmakar (2020). Highly efficient ternary hierarchical NiV2S4 nanosphere as hydrogen evolving electrocatalyst. International Journal on Hydrogen Energy, Elsevier. 45, 21308-21318
- M. K. Dutta, R. K. Sarkar and S. Karmakar (2021). Fabrication and Characterization of CdS-Cu2S Thin Film Heterojunction Diode Using Chemical Bath Deposition (CBDT) Technique. Bulgarian Chemical Communications. 53, 158 - 162.
- Mohineet Kaur, Ram Krishna Sarkar, Manoj Kumar Dutta (2021), Investigation on quality enhancement of old and fragile artworks using non-linear filter and histogram equalization techniques. Optik - International Journal for Light and Electron Optics, Elsevier. 244, 167564.
- Ram Krishna Sarkar, Anjan Biswas, Sarang Medhekar (2021). Investigation of Coupled Self-Tapering/Self-Uptapering of Soliton Beams in Nonlinear Media. Optik (Elsevier). 232, 166511
- Kamta Nath Mishra, Subhash Chandra Pandey (2021). Fraud Prediction in Smart Societies Using Logistic Regression and k-fold Machine Learning Techniques. Wireless Personal Communication



- (Springer), Vol. 119, Pages1341-1367.
8. Kamta Nath Mishra, (2020). A proficient mechanism for cloud security supervision in distributive environment. International J. of Computer Network and Information Security, MECS Press Hong Kong, Vol. 12, No. 6, Pages 57-77.
 9. Kamta Nath Mishra, Ved P. Mishra, Shashwat Saket, Shivam Prakash Mishra (2021). Hybrid Approach for Deception Tracing in Smart Cities Using LR and n-fold Intelligent Machine Learning Techniques. Int. J. of Management and Practices, Enderscience, Vol. 14, Pages. 1 -25, 2021.
 10. Tribhuwan Kishore Mishra, Arbind Kumar, S. K. Sinha (2021). Sliding wear behavior of thermally sprayed WC-20Cr3C2-7Ni and La2O3 composite coatings. Emerging Materials Research. 10, 1-9.
 11. Tribhuwan Kishore Mishra, Arbind Kumar, S. K. Sinha (2021). Comparative study of sliding wear behavior of HVOF sprayed WC-12Co, WC-10Co-4Cr and Cr3C2-25NiCr coatings. International Journal of Refractory Metals and Hard Materials. 94, 105404.
 12. Deep Shekhar Acharya, Sudhansu Kumar Mishra and Ganapati Panda (2021). A Comparative Performance Assessment of Evolutionary Fractional Order PID Controllers for Magnetic Levitation Plant with Time Delay. Journal of Scientific and Industrial Research. 80, 322-327
 13. Deep Shekhar Acharya, Sudhansu Kumar Mishra (2020). Optimal Consensus Recovery of Multi-Agent System subjected to Agent Failure. International Journal on Artificial Intelligence Tools (IJAIT,) World Scientific. 29, 1-21
 14. Srihari Gude and Kartick Chandra Jana. Parameter extraction of photovoltaic cell using an improved cuckoo search optimization. Solar Energy, 204, 280-293.
 15. Nilesh Kumar Rajalwal and Debomita Ghosh (2020). Recent trends in integrity protection of power system: A literature review. International Transactions on Electrical Energy System, Wiley. 30, e12523.
 16. Brijesh Kumar Singh; Mainak Mukhopadhyay (2021). Energy Detector Based Spectrum Sensing Performance Analysis over Fading Environment, JSIR Vol. 80 (03), page 239-244.
 17. Saurav Ganguly, Jayanta Ghosh, Puli Kishore Kumar, Mainak Mukhopadhyay (2020). An Efficient Source Localization Method in Presence of Multipath using Smart Antenna System, JSIR, Vol.79 (12), page 1069-1073.
 18. Anichur R, Chinmay C, A Adnan, Md. R, Md. JI, Dipanjali K, R Ziaur, SB Shahab (2021). SDN-IoT Empowered Intelligent Framework for Industry 4.0 Applications during COVID-19 Pandemic. Cluster Computing, DOI: 10.1007/s10586-021-03367-4.
 19. JM Diaz, AB Shariq, MO Edeh, Chinmay C, S.Qaisar, DLHF Emiro, AC Paola (2021). Artificial Intelligence-Based Kubernetes Container for Scheduling Nodes of Energy Composition. Int. J. of System Assurance Engineering and Management. 1-14. DOI: 10.1007/s13198-021-01195-8.
 20. KB Hemanta, Chinmay C, S Yogesh, KP Suvendu (2021). COVID-19 Diagnosis System by Deep Learning Approaches. Expert Systems. 1-12, DOI: 10.1111/exsy.12776
 21. D Sujata, Chinmay C, KG Sourav, KP Subhendu, F Jaroslav (2021). BIFM: Big-data Driven Intelligent Forecasting Model for COVID-19. IEEE Access. 1-13. DOI: 10.1109/ACCESS.2021.3094658.
 22. A Bakhtawar, RJ Abdul, Chinmay C, N Jamel, R Saira, R Muhammad (2021). Blockchain and ANFIS empowered IoMT Application for Privacy Preserved Contact Tracing in COVID-19 Pandemic. Personal and Ubiquitous Computing. 1-17, DOI:10.1007/s00779-021-01596-3.
 23. K. Amit, Chinmay C (2021). Task Offloading in Fog Computing using Smart Ant Colony Optimization. Wireless Personal Communications. 1-22, DOI: 10.1007/s11277-021-08714-7.
 24. Ajay K, A Kumar, Chinmay C, K Natalia (2021). Deep Learning and Internet of Things based Lung Ailment Recognition through Coughing Spectrograms. IEEE Access. 1-11, DOI: 10.1109/ACCESS.2021.3094132
 25. K. Amit, Chinmay C. (2021). Artificial Intelligence and Internet of Things based Healthcare 4.0 Monitoring System. Wireless Personal Communications. 1-14, DOI: 10.1007/s11277-021-08708-5.
 26. A Gupta, Chinmay C., B Gupta (2021). Secure transmission of EEG data using watermarking



- algorithm for the detection of epileptical seizures. *Traitement du Signal*, IETA. 38(2), 473-79, DOI: <https://doi.org/10.18280/ts.380227>.
27. R Rajkumar, D Dileepan, Chinmay C, P Suresh (2021). Modified Minkowski Fractal Multiband Antenna with Circular-Shaped Split-Ring Resonator for Wireless Applications. Elsevier - Journal of the International Measurement Confederation. Vol. 182, 1-9, DOI: <https://doi.org/10.1016/j.measurement.2021.109766>
28. Sachin D, Chinmay C, Jaroslav F, Rashmi G, Arun KR, Subhendu KP (2021). SSII: Secured and high-quality Steganography using Intelligent hybrid optimization algorithms for IoT. *IEEE Access*. Vol. 9, 1-16, DOI:10.1109/ACCESS.2021.3089357.
29. Amit K., Chinmay C (2021). Early and Accurate Prediction of diabetics based on FCBF Feature Selection and SMOTE. *Int. J. of System Assurance Engineering and Management*. 1-8, DOI: 10.1007/s13198-021-01174-z
30. Sunil KM, Manju K, Chinmay C., Deepak S, Durgesh S. (2021). Performance Evaluation of AODV and DSR Protocols of Flying Ad-hoc Network using Highway Mobility Model. *J. of Circuits, Systems, and Computers*. 31(1), 1-31, DOI: 10.1142/S0218126622500086 [SCI, IF - 1.36]
31. R. Vinayakumar, N Harini, Chinmay C, D. P. Tuan (2021). Deep learning based Meta-classifier Approach for COVID-19 Classification using CT scan and Chest X-ray Images. *Multimedia Systems*. 1-15, DOI: <https://doi.org/10.1007/s00530-021-00826-1>.
32. K Manpreet, ZK Mohammad, G Shikha, N Abdulfattah, Chinmay C, KP Subhendu (2021). MBP: Performance Analysis of Large Scale Mainstream Blockchain Consensus Protocols. *IEEE Access*. 9, 1-14, DOI:10.1109/ACCESS.2021.3085187
33. M Revathi, P Suresh, Chinmay C, KU Saravana (2021). Improved Performance on Seizure Detection in an Automated Electroencephalogram Signal under Evolution by Extracting Entropy Feature. *Springer Multimedia Tools and Appl*. DOI: <https://doi.org/10.1007/s11042-021-11069-7>
34. M.A. Mohd, ZK. Mohammad, AA Mohd, N Abdulfattah, RR Danish, Chinmay C (2021). Distributed ledger Technology based Robust Access and Real-time Synchronization for Consumer Electronics. *PeerJ Computer Science*. 7:e566, DOI: <https://doi.org/10.7717/peerj-cs.566>.
35. S Chauhan, Richa Banerjee, Chinmay C, M Mittal, A Shiva, V Ravi (2021). A Self-Congruence and Impulse Buying Effect on User's Shopping Behaviour over Social Networking Sites: An empirical study. *Int. J. of Pervasive Computing and Communications*. DOI: <https://doi.org/10.1108/IJPCC-01-2021-0013>.
36. Ahmed A., Abdul RJ, Chinmay C, Jamel N, Wisha Z, Zunera J (2021). ElStream: An Ensemble Learning Approach for Concept Drift Detection in Dynamic Social Big Data Stream Learning. *IEEE Access*. 1-12. DOI: 10.1109/ACCESS.2021.3076264
37. Amit S, Lalit G, Chinmay C. (2021). Improvement of System performance in an IT Production Support Environment. *International Journal of System Assurance Engineering and Management*. 1-19, DOI: <https://doi.org/10.1007/s13198-021-01092-0>.
38. Amit K, Chinmay C, Wilson J (2021). Reinforcement Learning for Medical Information Processing over Heterogeneous Networks. *Springer Multimedia Tools and Appl*. 1-22, DOI: <https://doi.org/10.1007/s11042-021-10840-0>.
39. R Dwivedi, S Dey, C Chakraborty, S Tiwari (2021). Grape Disease Detection Network based on Multi-task Learning and Attention Features. *IEEE Sensors Journal*. 1-8, DOI:10.1109/JSEN.2021.3064060.
40. Hemanta KB, Chinmay C, Subhendu KP, Vinayak KR (2021). Feature and Sub-feature selection for classification using correlation coefficient and fuzzy model. *IEEE Transaction on Engineering Management*. 1-15, DOI: 10.1109/TEM.2021.3065699
41. Sukanya R., Chinmay C. (2021). Panic Buying Situation during COVID-19 Global Pandemic. *Journal of Information Technology Management*. 13(2), 231-44, DOI:10.22059/jitm.2021.80625.
42. Ajay K, Kumar A., Bharat B., Chinmay C (2021). Secure Access Control for Manufacturing Sector with Application of Ethereum Blockchain. *Peer-to-Peer Networking and Applications*. 1-17, DOI: <https://doi.org/10.1007/s12083-021-01108-3>.



43. Usman RK, Ubaid U, Shehzad K., Umar R, Chinmay C, Fadi AT (2021). Path Loss Modelling at 60 GHz mmWave Based on Cognitive 3D Ray Tracing Algorithm in 5G. Peer-to-Peer Networking and Applications. 1-17, DOI: <https://doi.org/10.1007/s12083-021-01101-w>.
44. Sundresan P, Mujahid T., Ganthan N., Suresh P, Chinmay C., Saju M. Zeeshan B., Mohammad TQ. (2021). ANN base Novel Approach to Detect Node Failure in Wireless Sensor Network. CMC-Computers, Materials & Continua. Tech Science Press, 69(2), 1447-62, DOI: 10.32604/cmc.2021.014854.
45. Arindam S, Mohammad ZA, Moirangthem MS, Abdulfattah, Chinmay C., Subhendu KP (2021). Artificial Neural Synchronization using Nature Inspired Whale Optimization. IEEE Access. 1-14, DOI: 10.1109/ACCESS.2021.3052884, ISSN: 2169-3536.
46. Chinmay C., Arij N.A. (2021). Intelligent Internet of Things and Advanced Machine Learning Techniques for COVID-19. EAI Endorsed Transactions on Pervasive Health and Technology. 1-14, DOI: <http://dx.doi.org/10.4108/eai.28-1-2021.168505>.
47. Andrea S., Lalit G., Peter X., Chinmay C. (2021). A Novel Green IoT-based Pay-As-You-Go Smart Parking System. Computers, Materials & Continua. Tech Science Press. DOI:10.32604/cmc.2021.015265, 1-22.
48. Amit K., Chinmay C., Wilson J. (2021). Intelligent Healthcare Data Segregation using Fog Computing with Internet of Things and Machine Learning. Int. J. of Engineering Systems Modelling and Simulation. DOI: 10.1504/IJESMS.2021.10036745.
49. Amit K., Chinmay C., Wilson J., A. Kishor, C. Chakraborty, W. Jeberson (2020). A Novel Fog Computing Approach for Minimization of Latency in Healthcare using Machine Learning. International Journal of Interactive Multimedia and Artificial Intelligence. 1-11, DOI: <http://dx.doi.org/10.9781/ijimai.2020.12.004>.
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5. Payal Bhardwaj, Ritesh Kumar Badhai (2020),



Design and Analysis of Flexible Microstrip Antenna for Wearable Applications at ISM band, IEEE 17th India Council International Conference INDICON, 2020.

4.3 Book:

1. Kamta Nath Mishra & Subhash Chandra Pandey 2021. Cloud-IoT Technologies in Society 5.0, Nova Science Publishers Incorporation, USA, pp. 1 – 370.
2. Sanjay Kumar (2021), Shiksha Hi Samadhan, Published by Parikalpna, New Delhi.
3. Chinmay C., Amit B, Mahesh H.K., Lalit G, Basabi C (2020). Internet of Things for Healthcare Technologies, Springer – Studies in Big Data, 73, ISBN 978-981-15-4111-7.
4. Tarik R, Chinmay C., Kym F (2020), Advances in Telemedicine for Health Monitoring: Technologies, design and applications, IET. ISBN 978-1-78561-986-1.
5. Banerjee S, Chinmay C., Dasgupta K (2021). Green Computing and Predictive Analysis for Healthcare, New York: Chapman and Hall/CRC, 1-196. ISBN: 978-0-429-31722-4, <https://doi.org/10.1201/9780429317224>
6. Chakraborty U, Banerjee A, Saha JK, Sarkar N, Chinmay C., Artificial Intelligence and the Fourth Industrial Revolution, Jenny Stanford Publishing Pte. Ltd. , ISBN 978-981-4800-79-2 (Hardcover), 978-1-003-00000-0 (eBook)
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8. Chinmay C., Ghosh U., Ravi V., Shelke Y. (2020). Efficient Data Handling for Massive Internet of Medical Things - Healthcare Data Analytics, Springer Series: Internet of Things, ISBN : 978-3-030-66632-3.
9. Chinmay C., Roy S., Sharma S., Tran TA. (2020) Environmental Sustainability for Green Societies: The Impact of the COVID-19 Pandemic, Springer Nature, ISBN: 978-3-030-66489-3.
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15. Ghosh U, Chinmay C, Garg, L., Srivastava, G. Intelligent Internet of Things for Healthcare and Industry, Book series: Internet of Things, Springer nature, ISBN 978-3-030-81473-1

4.3.1 Co-Authored:

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2. Shakeel, V. P. Mishra, and Kamta Nath Mishra, (2021). The New Phase of Manufacturing: Industry 4.0, Springer Book on Machine Intelligence and Data Science Applications, pp. 97-110.

4.3.2 Chapter(s) in Edited Book

1. Nilesh Kumar Rajalwal, Debomita Ghosh (2020). Superseding Mal-Operation of Distance Relay Under Stressed System Conditions”, In book: Wide Area Power Systems Stability, Protection, and Security (Springer), DOI: 10.1007/978-3-030-54275-7_15.
2. Debashis D, Chinmay C., Sourav B. (2020), A framework development on a big data analytics for terahertz healthcare, Elsevier: Terahertz Biomedical and Healthcare Technologies, Ch. 7, 1-25, <https://doi.org/10.1016/B978-0-12-818556-8.00007-0>.
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telemedicine system for remote healthcare monitoring, IET: Advances in telemedicine for Health Monitoring, Healthcare Technologies Series 23, Ch. 9, 1-24, ISBN – 978-1-78561-986-1.

4. Banerjee B, Chinmay C., Das D (2020). An approach towards GIS application in smart city urban planning, CRC – Internet of Things and Secure Smart Environments Successes and Pitfalls, Ch. 2, 71-110. ISBN – 9780367266394.
5. Amit B, Chinmay C., Megha R (2020). Medical imaging, artificial intelligence, Internet of things, wearable devices in terahertz healthcare technologies, Elsevier: Terahertz Biomedical and Healthcare Technologies, Ch. 8, 1-38, ISBN – 9780128185568.
6. Sucharitha M., Chakraborty C., Srinivasa Rao S., Reddy V.S.K. (2021). Early Detection of Dementia Disease Using Data Mining Techniques. Springer: Internet of Things for Healthcare Technologies. Studies in Big Data, vol 73. 177-194, https://doi.org/10.1007/978-981-15-4112-4_9
7. Mandal R, Mondal MK, Banerjee S, Chinmay C. (2020). Biswas U, A Survey and critical Analysis on Energy Generation from Datacenter, Elsevier: Data De-duplication Approaches-Concepts, Strategies and Challenges, Ch. 11, 203-230. <https://doi.org/10.1016/B978-0-12-823395-5.00005-7>
8. Sanjukta B, Chinmay C. (2020). Machine Learning for Biomedical and Health Informatics, CRC: Big Data, IoT, and Machine Learning Tools and Applications, Ch. 4, 353-373, ISBN 9780429322990, <https://doi.org/10.1201/9780429322990>
9. Chinmay C., Sanjukta B. (2021). Healthcare

Data Monitoring under Internet of Things, CRC: Green Computing and Predictive Analytics for Healthcare, 1st edition, Ch. 1, 1-18.

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11. Chanda PB, Das S, Banerjee S, Chinmay C. (2021). Study on Edge Computing using Machine Learning Approaches in IoT Framework, CRC: Green Computing and Predictive Analytics for Healthcare, 1st edition, Ch. 9, 159-182.
12. Chinmay C., Megha R. (2021), Smart Healthcare Systems using Big Data, Elsevier: Demystifying Big data, Machine learning and Deep learning for Healthcare Analytics, Ch. 2, 1-16, <https://doi.org/10.1016/B978-0-12-821633-0.00002-7>
13. Ahmed S., Hossain M.F., Kaiser M.S., Noor M.B.T., Mahmud M., Chakraborty C. (2021). Artificial Intelligence and Machine Learning for Ensuring Security in Smart Cities. In: Chakraborty C., Lin J.CW., Alazab M. (eds) Data-Driven Mining, Learning and Analytics for Secured Smart Cities. Advanced Sciences and Technologies for Security Applications. Springer, Cham. https://doi.org/10.1007/978-3-030-72139-8_2
14. Faria T.H., Shamim Kaiser M., Hossain C.A., Mahmud M., Al Mamun S., Chakraborty C. (2021). Smart City Technologies for Next Generation Healthcare. In: Chakraborty C., Lin J.CW., Alazab M. (eds) Data-Driven Mining, Learning and Analytics for Secured Smart Cities. Advanced Sciences and Technologies for Security Applications. Springer, Cham. https://doi.org/10.1007/978-3-030-72139-8_12

SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Mr. Raja Ram Dutta	Innovation Ambassador Training District President Deoghar (Jharkhand).	Department of Research & Innovation, Research Foundation of India	District	2020-21



Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
2.	Dr. Chinmay Chakraborty	Best Session Runner-up Award, for "Artificial Intelligence for Smart Healthcare"	Congress on Intelligent Systems (CIS2020)	International Level	2020
3.	Dr. Chinmay Chakraborty	Best Researcher Award	7th Int. Scientist Awards on Engineering, Science, and Medicine	International Level	2020
4.	Dr. Sanjay Kumar	Honorary Rosalind Member	London Journals Press (UK)	International	Feb 2021
5.	Dr. Anil Kumar Sharma	Silver Medal in certification course on Fundamentals of Micro & Nano Fabrication, conducted by IISc, Bangalore	NPTEL	National	Nov-2021

5.2 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	Garg, Lalit; Chukwu, Emeka; Nasser, Nidal; Chakraborty, Chinmay; Garg, Gaurav	An integrated secure covid-19 contact tracing framework using IoT platform with blockchain, Australian patent	2020102965	2020
2.	S Pratap Singh, Amit Kumar, Saket Mishra, Lakshmanan M, Sanjay Kumar	Interferers Counting Distributions under Given Channel Conditions (ICDuGCC)	202111000133 (Indian patent)	08 Jan, 2021

SECTION 6

ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
1.	Smart India Hackathon	No	Mr. Raja Ram Dutta	Since SIH 2017

6.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Prof. R. C. Jha	Professor & Director	No
PHYSICS			
2.	Dr. Ram Krishna Sarkar	Asst. Prof. & In Charge	No
3.	Dr. Soumen Karmakar	Asst. Prof.	No
4.	Dr. Manoj Kumar Dutta	Asst. Prof.	No



Sr. No.	Name	Designation	TEQIP Sponsored
CHEMISTRY			
5.	Dr. S.S. Majhi	Asst. Prof. & In Charge	No
6.	Dr. A.C. Singh	Asst. Prof.	No
CSE			
7.	Dr. Kamta Nath Mishra	Asst. Prof. & In Charge	No
8.	Mrs. Anita Kushwaha	Asst. Prof.	No
9.	Dr. Sounak Paul	Asst. Prof.	No
10.	Mr. Rayees Ahamad	Asst. Prof.	No
11.	Mr. Arbind Kr. Choudhary	Asst. Prof.	No
12.	Mr. Balaram Mandal	Asst. Prof.	No
13.	Mr. Raja Ram Dutta	Asst. Prof.	No
14.	Mr. Soumya Ray	Asst. Prof.	No
15.	Mr. Swapan Kr. Borat	Associate Lecturer	No
16.	Mr. Saswata Mukherjee	Associate Lecturer	No
17.	Dr. Nishi Kant Kumar	Associate Lecturer	No
18.	Mrs. Neena Jha	Associate Lecturer	No
MATHS			
19.	Dr. Ranjan Chattaraj	Asst. Prof. & In Charge	No
20.	Dr. Amit Kumar	Asst. Prof.	No
21.	Dr. Bishnu Kumar	Asst. Prof.	No
MECH			
22.	Prof. Arbind Kumar	Professor & In Charge	No
23.	Dr. Ashish Kumar Chakraborty	Assoc. Professor	No
24.	Mr. Bibhanshu Sekhar Choudhary	Asst. Prof.	No
25.	Dr. Ritesh Kumar Upadhyay	Asst. Prof.	No
26.	Mr. Gopiseti Srinivasarao	Asst. Prof.	No
27.	Mr. Ashutosh Kumar	Asst. Prof.	No
EEE			
28.	Dr. Pankaj Mishra	Asst. Prof. & In-Charge	No
29.	Mr. Piyush Kumar Ojha	Asst. Prof.	No
30.	Dr. Deep Shekhar Acharya	Asst. Prof.	No



Sr. No.	Name	Designation	TEQIP Sponsored
31.	Mr. Srihari Gude	Asst. Prof.	No
32.	Mr. Prabhat Kumar Ranjan	Asst. Prof.	No
33.	Mr. Nilesh Kumar Rajalwal	Asst. Prof.	No
34.	Mr. Surendra Kumar Mahto	Assoc. Lecturer	No
ECE			
35.	Dr. Sanjay Kumar	Assoc. Prof. & In Charge	No
36.	Dr. Rajesh Kumar Lal	Assoc. Prof.	No
37.	Dr. Mainak Mukhopadhyay	Asst. Prof.	No
38.	Dr Chinmay Chakraborty	Asst. Prof.	No
39.	Mr. Sridhar Chintala	Asst. Prof.	No
40.	Mr. Akash Gupta	Asst. Prof.	No
41.	Mr. Vikash Sharma	Asst. Prof.	No
42.	Mr. Akhilesh Kr. Roy	Asst. Prof.	No
43.	Ms. Payal Bharadwaj	Asst. Prof.	No
44.	Mrs. Sutapa Mandal	Asst. Prof.	No
45.	Mr. Mahendra Kumar Das	Associate Lecturer	No
PROD			
46.	Prof. Vinay Sharma	Professor & In Charge	No
47.	Dr. Anil Sharma	Asst. Prof.	No
48.	Mr. P. K. Manoharan	Asst. Prof.	No
49.	Mr. Vijay Mandal	Associate Lecturer	No
H&M			
50.	Dr. Sandip Ghosh Hazra	Asst. Prof.	No
51.	Dr. Sandeep Kumar Sengupta	Asst. Prof.	No

SECTION 7

OTHER INFORMATION

7.1 Student Entrepreneurship activities/Start-ups if any

Sr. No	Name of Student	Source of Funding	Title of Start up	Short Description
1.	Vishal Kumar – Roll Number BTECH/60069/18 and Adarsh Raj – Roll Number BTECH/60068/18	Self + (Applied to BIT Mesra for Support)	INTEGRITI	Social Media Platform Development



7.2 Publication by students, if any

Publications in Journals :

1. Kamta Nath Mishra, Ved P. Mishra, Shashwat Saket, Shivam Prakash Mishra (2021). Hybrid Approach for Deception Tracing in Smart Cities Using LR and n-fold Intelligent Machine Learning Techniques. Int. J. of Management and Practices, Enderscience, Vol. 14, Pages. 1 -25, 2021.

7.3 Publications in Proceedings:



Achievements of Students :

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1.	Mr. Utkarsh Kumar, 2019 (CSE) Batch	Received prestigious Google Summer of Code (GSoC) Scholarship.	Google	2021, India
2.	Mr. Swapnil Sinha, 2018 (CSE) batch	Received prestigious Google Summer of Code (GSoC) Scholarship.	Google	2020, India
3.	Ms. Taanya Ambasht, 2016 (CSE) batch	Received 237th rank in Indian Civil Service Exam in the year 2020.	UPSC, New Delhi	2020, India
4.	Google Summer of Code 21 Internship under Python Argentina	Mr. Utkarsh Kumar	2k19 batch, CSE	May, 2021
5.	Placement in Docequity (13LPA)	Ms. Shivangi Joshi	2k17 batch, CSE	2021
6.	2nd prize in Covid Gameathon'21 organized by AngelHack with HEART Hyderabad through a grant from US Consulate General Hyderabad	Ms. Pratyasha Kumar Ms. Satarupa Deb Mr. Ravi Kant Jha Mr. Abhinav Kumar	2k20 batch, ECE and CSE	March, 2021
7.	14th rank in Google Hash Code 2021	Ms. Satarupa Deb Ms. Ridhima Gupta Ms. Arundhati Mukherjee Mr. Abhinav Kumar	2k20 batch, CSE	Feb, 2021
8.	Research Intern by Center of Cognitive Computing , IIIT Allahabad. Duration - 1st June to 31st July, 2021	Mr. Pratyush Harsh	2k18 batch, CSE	May, 2021
9.	Selection in Samsung PRISM Project	Mr. Pratyush Harsh Mr. Nikhil Watsh	2k18 batch, CSE	January, 2021
10.	World rank of 1103 in Google Kick Start Coding Competition 2020	Mr. Mayank Jha	2k19 batch, CSE	Nov, 2020



Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
11.	GHC Student Scholarship for the 2021 Virtual Grace Hopper Celebration	Ms. Ankita Priya	2k18 batch, CSE	June, 2021
12.	Poem Published in Book 'Dastan-e-Corona' Anthology by Indian Poet Club	Mr. Sejal Vijay	2k18 batch, ECE	June, 2021
13.	Ms. Pratyasha Kumar, ECE, BTECH/60096/20 Ms. Satrupa Deb – CSE, BTECH/60115/20 Mr. Ravi Kant Jha – ECE, BTECH/60097/20 Mr. Abhinav Kumar – CSE, BTECH/60137/20	Covid Gameathon'21 Second Prize (Rs. 75,000.00 + Certificates + Revenue from the game developed by the team)	Angel Hack in association with HEART Hyderabad and St. Francis College for Women Hyderabad (Through a grant from the U.S. Consulate General Hyderabad) [Supported by Stumagz]	Start Date - 12th February 2021 Submission Date – 12th March 2021 Results Announced – 17th March 2021/ Online Mode

7.4 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture (Insert Picture here. Further send the JPEG file along with the email.)
1.	Dr. Vinay Pandey Senior Technical Lead, Mercedes Benz R&D Bangalore Alumnus of BIT Mesra	26th June, 2021 [Online Invited Talk]	
2.	Mr. Sabyasachi Roy, Director and Co-founder, ANTS Group (ANTS Ceramic Pvt. Ltd. & ANTS Innovations Pvt. Ltd.), Vasai, Maharashtra, INDIA (https://antsceramics.com/)	27th June 2021, Invited Talk (Online)	

7.5 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Mr. Abhishek Sharma	He was a student of 2011 passing out batch. Presently he is Additional Civil Judge, Mathura, UP
2.	Mr. Ujjawal Sharma	He was a student of 2012 passing out batch. He complete his MS in Information Security form Johns Hopkins University, USA. He has been the Associate Solution Advisor at Delloitte. Presently he is a Cyber Security Engineer.



Sr.No	Name, Batch and Affiliation	Short Description
3.	Ms. Apurva Pathak	She was a student of 2012 passing out batch. She complete her MS form RWTH Aachen University, Germany. Presently she is telecom Professional working on CDMA technologies at QUALCOMM.
4.	Ms. Nupur Tiwary	She was a student of 2011 passing out batch. Presently, she is Assistant Vice President at Credit Suisse, Poland
5.	Mr. Rishav Anand	He was a student of 2013 passing out batch. He worked in IBM from 2013 to 2017. After that he joined Mathworks Inc. and is presently continuing there as engineer in several projects related to Machine Learning, Deep Learning, Data Analytics, Natural Language Processing, etc.

8. Any other relevant information

- NSS in association with Jharkhand state government established solid waste management system in the BIT Deoghar Jasidih campus.
- Start up company formed and registered by BIT Deoghar students
Team members: Adiya Kumar and Vishal Kumar (ECE. 2k18 batch)
Company Name: INSTICONNECT PVT LTD.

9. Activities by the Dept. of ECE:

- Invited Talk on the topic of "Key Research Issues towards Investigations on Multiple Access Scheme for 5G & Beyond Communication Systems" in the International Symposium on the theme of "Chitt-Kaya NiveshSthaan" held at Aarhus University, Denmark, 22 June 2021(Online).
- Expert talk on the topic of "NOMA for 6G" in a Workshop jointly organized by CTIF Global Capsule (CGC) and Global ICT Standardisation Forum for India (GISFI) and technically sponsored by IEEE and Wireless World Research Forum (WWRF) held at Herning, Aarhus University, Denmark, 21 Dec, 2020. (online)
- Exclusive Interview on Ten News Live on "The Education scenario in the country and New Education Policy 2020", June 12, 2021.
- Panel Discussion on Ten News Live on the topic of "Impact of Covid 2.0 on higher education admission and academic year 2021-22", May 30, 2021.

10 Activities by Student Bodies:

Club Name	Date	Event Name
Literary Society & NAPS	12th March, 2021	Essay competition on 'Azadi ka Amrut Mahotsav' to celebrate the 75 years of India's Independence.
NSS	3rd April, 2021	Essay competition on 'Elimination of Single use plastic'. Winners were awarded e-certificates.
Abhivyakti-The Drama Club of BIT Deoghar	01st – 10th August, 2020	e-Tamasha A 10 day online drama fest consisting of various event such as Ankahi, Chak De, Jane Bhi Do Yaaron. Winners were awarded e-certificates.
Dance Club	14th – 16th August 2020	Nritya'20 A three-day online event where students participated in events such as Taal Se Taal Mila, Nach Le, Retro Fusion. Winners were awarded e-certificates.



Club Name	Date	Event Name
Swar - Music Club BITD	18th – 20th Dec., 2020	Music in a Minute An online event in which participants had to prepare a one-minute musical video and upload it on social media. Winners were awarded e-certificates
Fine Arts Society	15th – 20th August, 2020	Freedom Art Competition A 6-day online painting competition in which participants had to draw posters/paintings related to the theme of Freedom. Winners were awarded e-certificates.

11. Activities by IEEE Student Branch BIT Deoghar:

Sl. No.	Date	Activity
1	9th July – 24th August 2020	Tech Talks – A technical competition among the engineering students from various colleges of the country. Details given below.
2	11th August 2020	First Talk in the Series – “Samvaad – an Interactive Session with Alumni” - Dr Romit Maulik BITD (2008 – 2012) - Bachelor of Engineering in Mechanical Engineering. At present he is pursuing his research under Margaret Butler Postdoctoral Fellowship at the Argonne National Laboratory, Greater Chicago Area, USA.
3	22nd August 2020	Second Talk in the series - “Samvaad – an Interactive Session with Alumni” - Mr. Jaideep Dutta. Birla Institute of Technology (2011-2015) - Bachelor of Engineering in Mechanical Engineering Purdue University (2018-2019) – Master of Science in Business Analytics and Information Management
4	5th September 2020	Third Talk in the series - “Samvaad – an Interactive Session with Alumni”- Mr. Abhishek Sharma (2007 – 2011 Batch) , Bachelor of Engineering in Electrical and Electronics Engineering. Currently, he is serving as an Additional Civil Judge (Junior Division) in Uttar Pradesh Judicial Services.
5	19th September 2020	Fourth Talk in the series - “Samvaad – an Interactive Session with Alumni”- Mr. Anshuman Tripathi (2010 -2014 Batch), Bachelor of Engineering in Electronics and Communication Engineering. Currently he is posted as Assistant Commissioner, Income Tax and Revenue Services, Bangalore
6	26th September 2020	First Talk in the series “Gyan Ganga - Talk with Professor” – Professor Sayan Chatterjee –SMIEEE, MIEI, Assoc. Prof., Dept. Of Electronics and Telecommunication Engineering. Jadavpur University, Kolkata, India. Earlier Scientist at SAMEER, Kolkata. Associated with a number of prestigious projects from DRDO and ISRO.
7	26th September 2020 onwards (every Saturday and Sunday)	Workshop for the IEEE Student Branch Members by the Alumni – “Data Structure and Algorithms” – Resource Persons Mr. Lucky Sharma (CSE 2014) Software Development Engineer – 3, Walmart Laboratory Bangalore. and Mr. Apoorv Anurag (CSE 2012) Software Development Engineer, Booking.com, Amsterdam, The Netherlands. Both are BIT Mesra Off Campus Deoghar Alumni.
8	3rd October 2020	Fifth Talk in the series - “Samvaad – an Interactive Session with Alumni”- Manish Rai Alumnus BIT Deoghar. Bachelor of Engineering in Electronics and Communication Engineering (2008-2012). Currently Data and Research Scientist at Varsity Tutors, Seattle, U.S.A. At present he is working in the area of application of Artificial Intelligence and Machine Learning Techniques on the Wild Life Conservation in different parts of the world.



Sl. No.	Date	Activity
9	17th October 2020	Sixth Talk in the series - "Samvaad – an Interactive Session with Alumni"– Mr. Saurabh Chandra – (Bachelor of Engineering in Electronics and Communication Engineering, BIT Mesra, top 5 % of the class) followed by PGDM, Business Administration and Management, IIM Ahmedabad, (second rank holder). Presently - India Site Head, Data Platform, Visa Inc. and Advisor Ycart technologies.
10	24th October 2020	IEEEExtreme 14.0 - The team members include Pranavmani Tripathi (BTECH/60077/19), Shivam Prakash Misha (BTECH/60045/19) and the team leader Sachin (BTECH/60055/19). They are students from the third semester of Computer Science and Engineering Branch. Mr. Vikash Sharma, Asst. Prof., department of Electronics and Communication Engineering was the Proctor of the team. The team participated with the name Dank74 in the competition. Over 3700 teams from 773 engineering colleges from 63 countries participated in this competition. From India, the total number of participating teams was 1671. As per the results published, Team Dank secured 1464 position in International rank and 354 position in India Rank.
11	24th October 2020	Second Talk in the series "Gyan Ganga - Talk with Professor" - Dr. Ioannis Tomkos, Fellow IEEE, Professor at University of Patras, Greece. Over the past 20 years, he has managed teams that participated in industry R&D projects and in a record number of EU-funded projects (over 25 in total; 14 just in FP7) with a consortium-wide leading role (including being Technical Manager of 9 major EU projects with a total budget of over 50M€). He has raised over 9M€ in funding (among the top performers in terms of attraction of funding within EU). He has served as a member of the Photonics21 PPP and the 5G-PPP/5G-IA. He is a Fellow of the IET (2010), OSA (2012) and of IEEE (2018). He has co-authored over 650 journal articles & conference proceedings papers and over 400 entries at IEEE Xplore.
12	7th November 2020	Seventh Talk in the series - "Samvaad – an Interactive Session with Alumni"– Lucky Sharma Alumnus BIT Deoghar. Bachelor of Engineering in Computer Science and Engineering (2010-2014). Software Engineer III, Walmart Labs, Bangalore.
13		Mayank Jha – Roll Number – BTECH/ Secured Global Rank 1103 in "Google Kick Start 2020 Competition". Kick Start offers coders around the world the chance to develop and hone their programming skills through online-hosted competition rounds. The three-hour rounds feature a variety of algorithmic challenges, all developed by Google engineers so that you get a taste of the technical skills needed for a career at Google (the top competitors from our Kick Start rounds may be invited to interview at Google!).
14	21st November 2020	Third Talk in the series "Gyan Ganga - Talk with Professor" - Dr. Naveen Garg, Professor, IIT Delhi – Topic – Introduction to Cryptography He did his B.Tech. and Ph.D. in Computer Science from IIT Delhi, was a postdoctoral researcher at the Max-Planck-Institut fur Informatik, Germany and since 1998 he has been a faculty member at IIT Delhi.
15	28th November 2020	Eighth Talk in the series - "Samvaad – an Interactive Session with Alumni"– Ujjawal Sharma - Alumnus BIT Deoghar – EEE Branch 2008 –2012 Currently *Information Security Researcher, Carson and Saint Corp., USA*



Sl. No.	Date	Activity
16	17th January 2021	Conducted an Online Coding Completion named Code Wars in order to alter the complacent attire of daily coding acquisition. The event was conducted on the Hackerrank platform. In which around 45 Students participated to adept their coding skills. Conquering the exhilarating question set formed the soul of the event. The galvanizing performance by the students left everyone bamboozled. But over all others, the top three pinnacle performances are: 1. Harsh Govind 2. Vishal Kumar 3. Anand Raj
17	16th January 2021	Ninth Talk in the series - "Samvaad – an Interactive Session with Alumni"– Rahul Dey - Alumnus BIT Deoghar – ECE Branch 2008 –2012 Currently Full Stack Engineer Altonomy, Singapore.
18	13th February 2021	Fourth Talk in the Series "Gyan Ganga - Talk with Professor/Professional"- Dr. Balakrishnan Subramanian who is an Asst. Prof. at VIT University, Topic - Quantum Game Theory.
19	27th February 2021	Fifth Talk in the Series "Gyan Ganga - Talk with Professor/Professional" – Mr. Prashant Behera co-founder of ScoreData and Diablo.ai - both early-stage startups in the area of Machine Learning. He has been working in Silicon Valley for the past 30 years at companies like Sybase, Netscape, and Yahoo. His main interests are in identity management, big data, machine learning. The webinar on "Data Science and why everyone needs to get it."
20	28th February 2021	Community Partner with the Robotics Club, NIT Patna in the event "Abhiyuthaan "
21	7th April 2021	Sixth Talk in the Series "Gyan Ganga - Talk with Professor/Professional". Mr. Umesh Hota, President – Human Resources – Aditya Birla Group. Topic – BeyondBE.
22	30th May 2021	In association with the Training and Placement Office, BIT Mesra Off Campus Deoghar organized "A Guidance Program on Career Opportunities after B.E./B.Tech" by Mr. Anand Kumar, ACE Engineering Academy, Hyderabad.
23	1st February - 5th June 2021	Vision Hunt – Innovative Solutions for Modern Challenges – An in-house competition sponsored by BITD Alumni.
24	17th – 18th July, 2021	Margdarshan – Enter to Learn, Leave to achieve. A two days interaction program with the eminent alumni of BIT Mesra who are the proud owners/ founding members of Reputed Companies in India. The event featured talks by Mr. Sougata Basu, Alumnus of BIT Mesra and founder of CashRich Mr. Shubhanshu Shekhar Shukla, Alumnus of BIT Deoghar Campus and co-founder of National NGO Dristi Mr. Niraj Sharan, Alumnus of BIT Mesra and Chairman & CEO of Aura Incorporation. Mr. Anoop Garg, Alumnus of IIT BHU and co-founder of Programming Pathshala.



12. Activities by Geeks for Geeks Student Chapter BIT Deoghar:

S. No.	Date	Event Name
1	February, 2021	GEEKS AMONGUS – One da Hackathon event based on the game AMONG US. It was a coding event, hosted on HackerRank 4. The event was sponsored by Balsamiq, Give My Certificate and Geeks for Geeks
2	Sept. – Oct., 2020	#8PMCODE – A question-based event, in which the one who is the first to answer the question get a shoutout on the Instagram handle. The participant having the maximum numbers of shoutouts was declared the winner.

Infrastructure / Equipment added during the year:

13. Special Covid Initiatives, if any

1. Tie up with local administration for prioritizing COVID-19 vaccination drive for BIT Deoghar employees.
2. Till date, 75%+ employees have been vaccinated.

BIT Mesra Off Campus : Jaipur

SECTION 1

CAMPUS PROFILE



1. About the BIT Jaipur Campus:

BIT Jaipur Campus was established in 1995. The focus of the institute is to provide quality education in Engineering, Applied Sciences and Management with technology and professional exposure through innovative programmes & practices. Driven by the mission that the technology and innovative management practices will be the gateway to the future growth, it is today one of the leading institutes of Rajasthan in the field of Engineering, Applied Sciences and Management.

Development Vision:

Development is a never ending process, undoubtedly, knowledge spread, innovative concepts, innovative practices and technology breakthroughs are at core of this process. In the professional education domain, it is a two dimensional need for upgrading knowledge and infrastructure - one to understand the fast happening conceptual and technology breakthroughs and second to facilitate new such breakthroughs to take place with more knowledge inputs and basic research. In the present competitive environment, it is now a willing compulsion for a capable and growth oriented organization to be a part of contemporary development process.

With excellent performance, progressive mind set and good will earned, the BIT Jaipur Campus has a long term vision to consolidate its strengths and excel further in engineering and management education and research in emerging areas. The BIT Jaipur Campus has good potential to be one of the leading technical institutes in western part of the country.

Academic Programmes:

Undergraduate:

B.Tech in following branches of Engineering:

- i) Computer Science & Engineering (CSE)
- ii) Electronics and Communication Engineering (ECE)
- iii) Electrical & Electronics Engineering (EEE)
- iv) BBA, BCA & B.Sc. (Animation & Multimedia)

Postgraduate:

Master of Computer Application (MCA), Master of Business Administration (MBA) and M.Sc. in Animation Design.

Doctoral :

Ph.D Programme in Computer Science Engineering, Management and in Basic Sciences (Physics, Chemistry & Mathematics)



Main Facilities and Equipment:

Building & Campus : The institute is built up in about 5 Acre land (20000 Sq M). The built up area is about 6000 Sq M consisting of 12 Class Rooms, 15 Lab Halls, Mechanical Workshop, Seminar Hall (175 seat Capacity), Common Computer/ Internet Access Centre (30 Computers), Library Hall, T & P Cell, Indoor Sports & Gymnasium Hall, Student Activity Room, Music Room, Canteen Hall and Administrative Block. All Class rooms & and computer labs are air conditioned.

Equipment: All required lab equipment are available in the institute to conduct B.Tech. Course in ECE, EEE & CSE discipline along with equipment required for Mechanical Workshop and Animation courses. The institute has three Dell Power Edge servers and 430 Computers for lab, internet and administrative requirement.

Software/Simulation Tools :

For Electronics & Electrical Labs : CADENCE VLSI simulation tool, ANSYS- HFSS RF Design

Software, TCAD Design tool, MATLAB, Xilinx ISE Foundation Tool, ComSim, MultiSim, Code Composer Studio, PCB Design Util Board, System View, Open IT Guru, SUSE-V10, Ethernet Network Analyzer, Network Simulator, Lab View with ELVIS Hardware kit, ETAP Software, MAGNET 2D v7.7, ANSYS Academic Research EM 1 Task

For Computer Science Labs: AutoCAD, Rational Rose, Oracle and Visual Prolog

For Animation Lab : Coral Graphics, Maya, Adobe suit, Sound Forge, Toon Boom, Macro Media Flash and 3D Studio

For Management Studies : SYSTAT and Tally Data Analysis Software

For English Communication : Language lab, 30 Users

Online e-Journals & e-books : IEEE, Science Direct, PROQUEST, ASTM Digital Library

SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects (Research and Consultancy)

a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Development of Distributed Deep Learning Dynamic Causality Analysis Model for Predicting Epilepsy and Simulation of Epileptic Brain	Dr Vishwambhar Pathak (PI), Dr. Vivek Gaur (Co-PI)	DST, Govt of India	12/03/2020	16.8 Lakh	2 years
2	Lightning impact on ozone precursor over Indian region and its implications on tropospheric ozone	Dr. Swagata Payra (PI)	Ministry of Earth Sciences, Govt of India	09/10/2017	34.64 Lakh	3 years (it is in under consideration for extension)
3	Prediction of ground-level particulate matter concentrations from Multi -Satellite AOD over the Indian Subcontinent	Dr. Swagata Payra (Co-PI)	Space Application Centre (SAC), ISRO, Govt of India	No. ISRO/ RES/3/806/19-20 dated 10th October 2019	22.08 Lakh	September, 2022 (2 years and 6 months)



Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
4	AERONET campaign	Dr. Swagata Payra Co-Investigator in a collaborative project	GSFC, NASA, USA	November, 2009	10 Lakh	October, 2029 (20 years)

SECTION 3**SEMINAR / CONFERENCE****3.1 Seminar / Conferences / Short – Term Courses Conducted :**

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Faculty Coordinator	Funding / Sponsoring Agency	Date of Event
1	Webinar Presentation on Layout Design For Animation By Mr. Sunil Dutta, a well known Animation Layout Artist at D. Neg. London UK Conducted for Animation Students	Mr. Gautam Goswami & Mr. Gaurav Chaudhary	BIT Jaipur	20.03.2021
2	Webinar Presentation on Film Making By Mr. Jiwan Kalia, a well-known Film Maker, Director, Actor, and Animator- New Delhi Conducted for Animation Students	Dr. Vibhuti Pandya	BIT Jaipur	06.03.2021
3	Animation in Advertising & Live Demonstration on 3D Character Animation (Webinar Presentation) By Mr. Kalpesh Patel, Animation Supervisor at The Mill Advertising Studios- Bangalore Conducted for Animation Students	Dr. Vibhuti Pandya	BIT Jaipur	27.02.2021
4	Webinar on Celebration of World Ozone Day	Dr. Swagata Payra	South Asian Meteorological Organization (SAMA)	16.09.2020
5	Workshop on Application of Simulation tools to Design Antenna for Research and Industrial Requirements Conducted for B.Tech Students	Dr. Dheeraj Bhardwaj	-	10.08.20 -14.08.20 (In Online mode)
6	Webinar on "Data Science and Machine Learning" Conducted for B.Tech, MCA & BCA students	Dr Vivek Gaur & Dr. V. Pathak	BIT, Jaipur Campus	07.07.2020

3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1	Dr. Ritu Pareek	Shifting Paradigms in the Teaching-Learning Scenario Post COVID-19	-	DAV Centenary College, Faridabad	Online	08.07.2021- 09.07.2021



वार्षिक प्रतिवेदन 2020-2021

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
2	Gaurav Choudhary	Phad Painting Workshop by Shri Kalyan Joshi (Renowned Folk Artist)	—	Jawahar Kala Kendra, Jaipur	Online	27-06-2021 To 28-06-2021
3	Dr. Aparajita Pandey	Electric Vehicle technology: Challenges and Business Opportunity	ATAL	National Small Industries Corporation, Telangana	Online	21.06.2021 - 25.06.2021
4	Dr. Vivek Gaur	FDP on "Introduction to Machine Learning"	-	Indira Gandhi Technical University for Women, Delhi	Online	21.06.2021- 25.06.2021
5	Dr. Alok Pandey	Cyber Security for Internet of Things	ATAL	IIIT, Jabalpur	Online	21.06.2021 - 25.06.2021
6	Gautam Kumar Goswami	Online Art Workshop on Occasion of Bishnu Rabha Divas	Nritynjali Academy Guwahati	Nritynjali Academy Guwahati	Online	18.06.2021
7	Bimalendu Pathak	One week Short Term Training Programme through ICT mode on Machine Learning with R Programming	NITTR, Kolkata (Established by MHRD, New Delhi, INDIA)	Birla Institute of Technology, Mesra, Ranchi, Jharkhand	Online	14.06.2021 -18.06.2021
8	Dr. Gurminder Singh	Two Weeks Short Term Training Program (STTP) on Advances in Linear Algebra: Technology based Innovations	-	Jaypee Institute of Information Technology, Noida	Online	14.06.2021 - 26.06.2021
9	Dr. Alok Pandey	Cyber Security Vulnerabilities & Safeguards	ATAL	NITTTER, Chandigarh	Online	17.05.2021 - 21.05.2021
10	Dr. Ritu Pareek	New Directions in English Language Teaching: Issues, Practices, Challenges	-	SKIT, Jaipur	Online	03.05.2021- 05.05.2021
11	Dr. Deepak Verma	Inculcating Universal Human Values in Technical Education		All India Council for Technical Education (AICTE)		26.04. 2021- 30.04.2021
12	Dr. Anand Kumar Srivastava	FDP on Inculcating Universal Human Values in Technical Education	-	AICTE	Online	19.04.2021- 23.04.2021
13	Dr. Dheeraj Bhardwaj	Webinar on Recent Advancements in RF & Microwave Circuits and Devices	-	Bennett University, G. Noida	Online	05.04.21- 09.04.21



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
14	Dr. Ritu Pareek	Contemporary Issues in South Asian Literature & Cultural Studies	-	Manipal University, Jaipur	Online	30.03.2021-31.03.2021
15	Dr. Anand Kumar Srivastava	ASMA Higher Education Innovation Summit 2021	-	Innoserv Group and ASMA	Online	10.03.2021
16	Dr. Jyoti Kumar Chandel	ASMA Higher Education Innovation Summit 2021	-	Innoserv Group and ASMA	Online	10.03.2021
17	Dr. Gurminder Singh	Seminar on Applications of Statistics in Sciences & Engineering	-	Birla Institute of Technology, Mesra	Online	05.03.2021 – 06.03.2021
18	Dr. I. K. Dadhich	Seminar on Applications of Statistics in Sciences & Engineering		Birla Institute of Technology, Mesra	Online	05.03.2021 – 06.03.2021
19	Dr. Bhawana Agarwal	Seminar on Applications of Statistics in Sciences & Engineering		Birla Institute of Technology, Mesra	Online	05.03.2021 – 06.03.2021
20	Dr. Rishika sharma	FDP on Animation	AICTE Training and Learning (ATAL) Academy	Amity School of Fine Arts, Noida	Online	08.02.2021-12.02.2021
21	Dr. Swagata Payra	FDP on “Essential Physics for Engineers”	NITTTR Chandigarh	NITTTR Chandigarh	Online	01.02.2021 – 06.02.2021
22	Dr. Anju Sharma	Faculty Development Programme/ Short training on “Applied Machine learning & its applications with Python”	EduxLabs	EduxLabs with IIT Hyderabad	Online	27.01.2021-7.02.2021
23	Dr. Rishika sharma	National Webinar	School of Education, VISTAS, Chennai	School of Education, VISTAS, Chennai	Online	22.01.2021
24	Dr. Vibhuti Pandya	Khajuraho International Art Exhibition	—	Everyone’s Art and Cultural Heritage Each Welfare Society, Khajuraho	Online	14.01.2021-31.01.2021
25	Dr. Ritu Pareek	Exploring Collaborative Research Opportunities in Humanities and Social Sciences - Beyond Boundaries	Pan-NIT Humanities and Social Sciences Research Conclave	Department of Humanities and Social Sciences, National Institute of Technology Warangal	Online	08.01.2021-10.01.2021
26	Dr. Aparajita Pandey	Blockchain for Energy and Utilities	Ministry of Power & Smart Grid Mission	Indian Smart Grid Forum	Online	07.01.2021-05.02.2021



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Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
27	Dr. Anand Kumar Srivastava	Webinar on Incidents of Present: A solution to problems of future	-	Department of Physics, University of Lucknow	Online	20.12.2020
28	Dr. Swagata Payra	American Geophysical Union Fall Meeting 2020	AGU	American Geophysical Union	Online / SFO USA	14.12.2020
29	Dr. Deepak Verma	Power Electronics and Control: Recent Advances		Maulana Azad National Institute of Technology, Bhopal.		12.10.2020 - 16.10.2020
30	Dr. Alok Pandey	Cyber Security	ATAL	IIT, Bhilai	Online	07.12-2020 - 11.12.2020
31	Gautam Kumar Goswami	FDP on Graphic design	ATAL Academy	National Institute of Technical Teachers Training and research	Online	07-12-2020 To 11-12-2020
32	Dr. Jyoti Kumar Chandel	Career Options and Investment Opportunities in Share Market	University of Jammu	University of Jammu	Online	28.11.2020
33	Dr. Ravindra Kumar	Online Faculty Development Program On Universal Human Values For Deeksharambh	-	National Institute of Technology Patna	Online	23.11.20- 27.11.20
34	Dr. Jyoti Kumar Chandel	Data Analytics for Non-Coders	Department of Commerce Manipal Academy of Higher Education Manipal.	Department of Commerce Manipal Academy of Higher Education Manipal.	Online	30.10.2020
35	Dr. Vibhuti Pandya	FDP on Painting	Atal Academy	ATAL Academy and Drawing & Painting Dept. Dayalbagh Educational Institute, Agra	Online	27.10.2020- 31.10.2020
36	Gautam Kumar Goswami	FDP on Painting	ATAL Academy	Dayalbagh Educational Institute	Online	27.10.2020- 31.10.2020
37	Dr. Rishika sharma	FDP on Painting	AICTE Training and Learning ATAL Academy	Dayalbagh educational institute, Agra	Online	27.10.2020- 31.10.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
38	Dr. Vibhuti Pandya	A Two Day International Workshop on Self Health Care and Yoga	—	C-Kart and Pandit Madan Mohan Malviya National Mission on Teaching Scheme of MHRD, Govt. of India	Online	20.10.2020 - 21.10.2020
39	Dr. Vibhuti Pandya	FDP on Basic Animation Film Making	Atal Academy	ATAL Academy and Film & Television Institute of India, Pune	Online	12-10-2020 To 16-10-2020
40	Jyoti Sharma	Digital Tools for Writing, Authoring and Reviewing Manuscripts	Ministry of Electronics and Information Technology (MeitY)	MNIT Jaipur, NIT Patna & IIT Guwahati	Online	21.09.2020- 02.10.2020
41	Dr Madhavi Sinha	One week TEQIP-III Approved Faculty development Programme on "Research Through HPC"	-	Birla Institute of Technology, Mesra	Online	Term1: 19.09.2020 Term2: 23.01.2021 - 24.01.2021 Term3: 30.01.2021 - 31.01.2021
42	Dr Vivek Gaur	One week TEQIP-III Approved Faculty development Programme on "Research Through HPC"	-	Birla Institute of Technology, Mesra	Online Mode	Term1: 19.09.2020 Term2: 23.01.2021 - 24.01.2021 Term3: 30.01.2021 - 31.01.2021
43	Dr M.M. Agarwal	One week TEQIP-III Approved Faculty development Programme on "Research Through HPC"	-	Birla Institute of Technology, Mesra	Online Mode	Term1: 19.09.2020 Term2: 23.01.2021 - 24.01.2021 Term3: 30.01.2021 - 31.01.2021
44	B. Pathak	One week TEQIP-III Approved Faculty development Programme on "Research Through HPC"	-	Birla Institute of Technology, Mesra	Online Mode	Term1: 19.09.2020 Term2: 23.01.2021 - 24.01.2021 Term3: 30.01.2021 - 31.01.2021



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
45	Subhash Chand Gupta	One week TEQIP-III Approved Faculty development Programme on "Research Through HPC"	-	Birla Institute of Technology, Mesra	Online Mode	Term1: 19.09.2020 Term2: 23.01.2021 - 24.01.2021 Term3: 30.01.2021 - 31.01.2021
46	Dr Piyush Gupta	One week TEQIP-III Approved Faculty development Programme on "Research Through HPC"	-	Birla Institute of Technology, Mesra	Online Mode	Term1: 19.09.2020 Term2: 23.01.2021 - 24.01.2021 Term3: 30.01.2021 - 31.01.2021
47	Dr. Anju Sharma	One week TEQIP-III Approved Faculty development Programme on "Research Through HPC"	-	Birla Institute of Technology, Mesra	Online Mode	Term1: 19.09.2020 Term2: 23.01.2021 - 24.01.2021 Term3: 30.01.2021 - 31.01.2021
48	Dr. Alok Pandey	Cyber Security and Investigation Tools	TEQUIP III	BIT, Mesra	Online	11.09.2020 - 15.09.2020
49	Gaurav Choudhary	Conference on Animation & Entertainment Design	—	LightBox Expo	Online	11-09-2020 To 13-09-2020
50	Dr. Aparajita Pandey	Blockchain	ATAL	BIT, Mesra	Online	07.09.2020-11.09.2020
51	Jyoti Sharma	Issues in Nanoscale VLSI Circuit Design	TEQIP-III	RTU, Kota	Online	05.09.2020
52	Gautam Kumar Goswami	Online Group Art Exhibition	Atypical Perspective	Atypical Perspective	Online	01-09-2020
53	Dr. Ravindra Kumar	3rd National Conference on Recent Advances in Science and Technology	TEQIP	Assam Science and Technology University	Online	17.08.20 -19.08.20
54	Dr. Anand Kumar Srivastava	National Webinar on Plasma Physics: Present and Future Aspects	-	SVVV, Indore	Online	10.08.2020-12.08.2020
55	Dr. Anand Kumar Srivastava	National webinar on Attacks and countermeasures for white box cryptography designs	-	Department of Applied Science, SIRTE, Bhopal	Online	31.07.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
56	Dr. Anand Kumar Srivastava	Webinar on Plasma Science and its Applications	-	Barkatullah University, Bhopal	Online	29.07.2020
57	Dr. Anand Kumar Srivastava	Webinar on Challenges involved in simulating complex systems	-	Department of Physics, BIT Mesra	Online	25.07.2020
58	Gaurav Choudhary	Portrait Drawing Workshop	—	Aditya Chari	Online	31-07-2020 To 01-08-2020
59	Dr. Rishika sharma	International Conference on Advancement in Interdisciplinary research	FIRMS (Foundation of Interdisp. Res. in Math. and Sci., Jaipur)	FIRMS	Online	24-07-2020 To 26-07-2020
60	Dr. R.K. Gothwal	Whole genome sequencing of bacterial genomes - Tools and applications	BIT	Technical University of Denmark	Online	21.07.2020 -20.08.2020
61	Jyoti Sharma	Gender Equality and Women Rights	TEQIP-III	RTU, Kota & PCE, Jaipur	Online	17.07.2020
62	Dr. Ritu Pareek	Industry 4.0 Scenario: Redefying Language and Literary Studies	Thiruvalluvar University, Vellore	Department of English	Online	13.07.2020-17.07.2020
63	Dr. Vibhuti Pandya	An International Online Visual Art Event- Rang Malhar	—	Rang Malhar, Jaipur	Online	05.07.2020
64	Jyoti Sharma	8th International Conference on Recent Trends in Computing	Springer	SRM Institute of Science and Technology, Delhi	Online	03.07.2020-04.07.2020
65	Jyoti Sharma	Considerations for Research and Grant Proposals.	IEEE MTT-S and AP-S MUJ Student Branch Chapter	Manipal University Jaipur	Online	01.07.2020
66	Dr. Aparajita Pandey	Blockchain and Machine Learning	AICTE	Gurukul Kangri University	Online	29.06.2020-03.07.2020

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

1. Hemraj Saini, Madan Mohan Agarwal, Mahesh Chandra Govil, Madhavi Sinha (2021). Design of fuzzy controlled routing protocol to save energy in ad hoc networks, International Journal of Services Technology and Management, 27(1-2),

51-71.

2. Sharma S. and Vijayvargiya S., (2021). Soft Computing Approaches for Software Project Effort Estimation (SPEE) - A Review. International Journal of Grid and Distributed Computing, 13(2), 1788 -1799.



3. Chandel J. K., (2021). Relationships Between Service Quality, Service Value, Equity, Satisfaction and Behavioural Intentions in Adventure Tourism. *International Journal of Tourism & Hotel Business Management*, 3(1), pp.430-434.
4. Monisha Singhal M, Chaturvedi P, Gothwal R K, Mohan M K & Solanki P S (2021). Comparative study of synonymous codon usage in bacteria growing at extreme temperatures. *International Journal of Bioinformatics Research and Applications*, 17 (1): 53-68. DOI: 10.1504/IJBRA.2021.10022014.
5. MonishaSinghal; Pragya Chaturvedi; R. K. Gothwal; M.K. Mohan; P.S. Solanki (2021). Comparative study of synonymous codon usage in bacteria growing at extreme temperatures *International Journal of Bioinformatics Research and Applications*, 2021 Vol.17 No.1, pp.53 – 68. DOI - <https://doi.org/10.1504/IJBRA.2021.113966>.
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10. Mona Batra, Archana Bhatnagar (2020). A Requirements Engineering Process Model for Software Development, *International Research Journal of Engineering and Technology (IRJET)*, 7(7), 200-206.
11. Nehra S, Gothwal R K, Meena P, Ghosh P & Trivedi P C (2020). Fungal diseases associated with coconut and their management - A review. *Journal of Indian Botanical Society - Centenary Volume*, 100 (1&2): 239-250.
12. Neha Saini, Roopali Sharma, Ritu Arora and Anil Kumar Bhardwaj (2020). Time Series Analysis of Trend in Production and its Impact on Price of Red Chili in India. *International Journal of Agricultural And Statistical Science*, Vol. 16, No. 1, pp. 347-353.
13. Mukesh Kumar Singh, Roopali Sharma, Ritu Arora (2020), Employees Perception Towards Market Orientation and Its Impact on Firm Performance: Exploratory Factor Analysis, *Journal of Advanced Research in Dynamical and Control Systems*, Vol. 12, Special Issue 07, pp.1828-1833.
14. Bharti Malhotra, Veenu Gupta, Pratibha Sharma, Ruchi Singh, Himanshu Sharma, Madhavi Vyas, RP Mathur, VK Mathur, Deepa Meena, Hemant Malhotra, Pragya D. Yadav, Gajanan Sapkal, Ullas PT, Gururaj Rao Deshpande, Rashmi Gunjekar, Heena Shaman, Devendra T Mourya, Nivedita Gupta, Sujit Singh, P Ravindran, Jitender Tiwari, Dimpal A. Nyayanit, Neeraj Kumar, Sameer Phalke, AnupChugani, Sudhir Bhandari, Pooran Singh Solanki, Prashanth Suravajhala, Manila Salaria (2020). "Clinico-epidemiological and genomic profile of first Zika Virus outbreak in India at Jaipur city of Rajasthan state", *Journal of Infection and Public Health*, 2020, Volume 13, Issue 12, Pages 1920-1926. ISSN 1876-0341, DOI - <https://doi.org/10.1016/j.jiph.2020.10.006>.
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18. Deepak Agrawal, Rajneesh Kumar Karn, Deepak Verma, Rakeshwri Agrawal (2020). DC-DC converter Topologies for LED Driver Circuit: A Review International Journal of Circuits, Systems and Signal Processing, Volume 14, 2020, pp 542-547.

4.2 Publications in Proceedings:

1. Mohit Sharma, Akshiv Agrawal and Deepak Verma (2021). Sensing in Lithium-Ion Based Battery Management System. In National Conference on Advancements in Mechanical, Electronics and Electrical Engineering (AMEEE - 2021) April 15-16, 2021
2. Khushi Jain and Deepak Verma (2021). A State-of-the-art Review of Different Implementation on LED drivers. In National Conference on Advancements in Mechanical, Electronics and Electrical Engineering (AMEEE - 2021) April 15-16, 2021
3. Devki Nandan Gupta, Abhishek and Deepak Verma(2020), "Distribution Automation and Energy Management System In Smart Grid" Springer Lecture Notes in Electrical Engineering Machine Learning, Advances in Computing, Renewable Energy and Communication Proceedings of International Conference on Machine Learning, Advances in Computing, Renewable Energy and Communication MARC 2020.
4. Shraddha Sharma and Deepak Verma(2020), "Impact of COVID-19 and nine-minute call on Indian power sector: Study of blackout prevention" Proceeding - 2nd International Conference on Technology and Policy in Electric Power and Energy, ICT-PEP 2020, 2020, pp. 301-305, 9249866
5. Jyoti Sharma, Ritambra Parashar and Avireni Srinivasulu, (2021)"A Novel CNFET Based CCCDTA and Its Application as a Schmitt Trigger", Advances in Smart Grid Automation and Industry 4.0, April 21, Vol. 693, pp. 93-101, ISBN: 978-981-15-7674-4 (Print), 978-981-15-7675-1 (Online), https://doi.org/10.1007/978-981-15-7675-1_9.

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6. Anushree Mathur, Mrinalini Kumawat, Jyoti Sharma and Avireni Srinivasulu, "A Schmitt Trigger by means of a Voltage Differencing Transconductance Amplifier" Advances in Smart Grid Automation and Industry 4.0, April 21, Vol. 693, 527-534.
7. Mrinalini Kumawat, Anushree Mathur, Jyoti Sharma and Avireni Srinivasulu, «A Novel Integrator using Voltage Differencing Transconductance Amplifier», Proceedings of 6th International Conference on Recent Trends in Computing, LNNS, July 20, Vol. 177, pp. 1-8, ISBN: 978-981-33-4500-3(Print), <https://doi.org/10.1007/978-981-33-4501-0>.

4.4 Book:

4.3.2 Chapter(s) in Edited Book

1. V. Pathak, P Dhyani, PK Mahanti, V. Gaur, "On Tracking Slow modulations of Effective Connectivity for Early Detection of Epilepsy: Methods", In "Knowledge Modelling and Big Data Analytics in Healthcare: Advances and Applications", CRC Press.(Accepted).
2. Sharma S., Vijayvargiya S., (2021). Applying Soft Computing Techniques for Software Project Effort Estimation Modelling. In Nano-electronics, Circuits and Communication Systems, vol 692, pp. 211-227, Springer, Singapore.
3. Nehra S, Gothwal R K, Varshney A K, Solanki P S, Chandra S, Meena P, Trivedi P C and Ghosh P (2021). Biomanagement of Fusarium spp. associated with pulse crops. In: Food Security and Plant Disease Management, (Eds.) S Droby and A Kumar, Woodhead Publishing, Elsevier, pp. 423-451.
4. Nehra S, Gothwal R K, Varshney A K, Solanki P S, Chandra S, Meena P, Trivedi P C and Ghosh P (2020). Bio-management of Fusarium spp. associated with fruit crops. (Ed.) V K Sharma, M P Shah, S Parmar and A Kumar. In: Fungi bio-prospects in sustainable agriculture, environment and nano-technology, Volume 1, Elsevier Inc., p. 475-505.
5. Nehra S, Gothwal R K, Varshney A K, Meena P, Ghosh P and Trivedi P C (2020). Capparis decidua (Forssk.) Edgew (Syn.: Capparisaphylla Roth) (Family: Capparaceae). In: Bioactives and Pharmacology of Medicinal plants. (Ed.) Pullaiah



T, Apple Academic Press, USA and distributed by CRC press of Taylor & Francis.

6. Sampat Nehra, Raj Kumar Gothwal, Alok Kumar Varshney, Pooran Singh Solanki, Shivani Chandra, Poonam Meena, P.C. Trivedi, P. Ghosh (2021). "Biomangement of Fusarium spp. associated with pulse crops, Editor(s): Ajay Kumar, Samir Droby, Food Security and Plant Disease Management, Elsevier Publisher, 2021, Chapter 21, Pages 423-452. ISSN 9780128218433, doi - <https://doi.org/10.1016/B978-0-12-821843-3.00010-6>.
7. SampatNehra, Raj Kumar Gothwal, Alok Kumar Varshney, Pooran Singh Solanki, Shivani Chandra, Poonam Meena, P.C. Trivedi, P. Ghosh (2021). "Bio-mangement of Fusarium spp.

associated with oil crops", Editor(s): Vijay Kumar Sharma, Maulin P. Shah, Shobhika Parmar and Ajay Kumar, Fungi Bio-Prospects in Sustainable Agriculture, Environment and Nano-Technology, Elsevier Publisher, Volumw: 1: Chapter 19, Pages 475-505. ISSN: 978-0-12-821394-0, doi- <https://doi.org/10.1016/B978-0-12-821394-0.00020-2>.

8. Aditi Gupta and Deepak Verma "A Review of Recent Technology Development in Multilevel Inverter and Their Application in PV Systems" in book entitled Advances in Materials Processing and Manufacturing Applications (Lecture Notes in Mechanical Engineering) 2021, ISBN: 978-981-16-0909-1 Publisher: Springer.<https://www.springer.com/gp/book/9789811609084#aboutAuthors>

SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	MP Rajakumar, A Behura, K V Sairam, Anup P Bhat, Y sawle, A K Bohre, Deepak Verma, S Shekhar, P Chakrabarti, AS Hati, R Mandal, P Chhawacharia	An Efficient Power Distribution Based on IOT-Fog Resource for Effective Proxy Negotiation for Traffic Reduction	Patent No: 2020104365	2021

SECTION 6

ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
1	3-day workshop on 'Linux and DevOps' by Mr. Ashutosh Rohilla (ECE-2017-2021)	Aastha Mathur (VI Sem EEE)	Dr. Aprajita Pandey	15 May 2021 / 11:00am-12:30pm 16 May 2021 / 11:00am-12:30pm 17 May 2021/ 6:30pm-8:00pm
2	SARC Webinar with Arushi Jain and Abhijeet Vijaivargia (2017 ECE, Founder of Global Lancers	Harshita Chaudhary	Dr. Aparajita Pandey	6 March 2021
3	Introduction to Blockchain Workshop.	Aastha Mathur (EEE VI Sem)Gurleen Kaur (EEE IV Sem)	Dr. Aparajita Pandey	19-20 February2021 (2 days)
4	SARC Webinar with Sonam Shekhawat (2010 BAM,Vice President Nucleus Media)	Aastha Mathur	Dr. Aparajita Pandey	6 February 2021



Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
5	Invited talk on - "Right Perspective of Career Planning : Leading the way to Success " By Mr. Ramesh Chandra Maheshwari, An Eminent HR & Career Consultant. Formerly, Chief People officer Aditya Birla Group (during Induction programme for new students)		Dr Anand Kumar Srivastava	26 November 2020
6	Invited talk on - "Concerned and Effective Communication and its Importance in personality and career development" By Dr Anju Dave, Creative Director & Communications Strategist, Try for Good, Jaipur (during Induction programme for new students)		Dr Anand Kumar Srivastava	24 November 2020
7	Invited talk on - Importance of interest in performing arts and fine arts in personality and career development" by Ms. Manisha Gulyani An internationally acclaimed Kathak classical dance Artist, Empanelled in ICCR to represent Kathak in India & abroad. (during Induction programme for new students)		Dr Anand Kumar Srivastava	24 November 2020
8	Invited talk on "Requisites for a happy & successful personal and professional life : Aspects related to cultural and societal values" by Professor Kusum Jain, member, Governing body of Indian Council of Philosophical Research (during Induction programme for new students)		Dr Anand Kumar Srivastava	23 November 2020
9	Invited talk on - "Psychological aspects students are facing in changing cultural, societal and economic order of the country or globalized world in broader sense" by Dr Shiv Gautam, An Internationally renowned expert in the area of Human Psychology and Behavioral Science . Ex Sr. Professor, Deptt. of Psychiatry, S. M. S. Medical College, Jaipur (during Induction programme for new students)		Dr Anand Kumar Srivastava	23 November 2020



Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
10	Invited talk on - "Role of technical education in societal and economic development of the country & requisites for a successful career in Industrial/ corporate Sector" by Mr. Gunjan Saxena, IES & Principal General Manager, BSNL Rajasthan (during Induction programme for new students)		Dr Anand Kumar Srivastava	23 November 2020
11	Webinar on "Enhancing Verbal & Non-Verbal Communication Skills"	Tejas Dadheech, MBA Semester I	Dr Ritu Pareek, Assistant Professor, Department of Management, BIT, Jaipur Campus.	26.08 2020
12	Webinar on Ways to Create Bright Future	Ashish Purohit, MBA Semester IV	Dr. Jyoti Kumar Chandel, Assistant Professor, Department of Management, BIT, Jaipur Campus.	26.08 2020
13	SARC Webinar with Pulkit Sharma and Aankit Roy (2014 CSE, Founders of Khabri)	Agrima Bhardwaj	Dr. Aparajita Pandey	22.08.2020

6.2. List of Faculties

S. No.	Name	Designation
-	Dr. Abhinav Dinesh	Director

Sr. No.	Name	Designation	TEQIP Sponsored
Department of Computer Science & Engineering			
1	Dr. Madhavi Sinha	Associate Professor	No
2	Dr. Shripal Vijayvargiya	Associate Professor	No
3	Mr. P. K. Sharma	Assistant Professor	No
4	Dr. Piyush Gupta	Assistant Professor	No
5	Dr. M.M. Agarwal	Assistant Professor	No
6	Dr. Seema Gaur	Assistant Professor	No
7	Dr. Vivek Gaur	Assistant Professor	No
8	Dr. Vishwambhar Pathak	Assistant Professor	No
9	Dr. ArchanaBhatnagar	Assistant Professor	No
10	Mr. Subhash Gupta	Assistant Professor	No



Sr. No.	Name	Designation	TEQIP Sponsored
11	Mr. Santosh K. Sharma	Assistant Professor	No
12	Dr. Alok Pandey	Assistant Professor	No
13	Mr. B. Pathak	Assistant Professor	No
14	Mrs. Anju Sharma	Assistant Professor	No
15	Mr. Santosh Agarwal	Associate Lecturer	No
Department of Electronics & Communication Engineering			
1	Mr. Ankur Agarwal	Assistant Professor	No
2	Mr. Deepak Chaturvedi	Assistant Professor	No
3	Mrs. Jyoti Sharma	Assistant Professor	No
4	Mr. Gaurav Jain	Assistant Professor	No
5	Mr. Snehanshu Shekhar	Assistant Professor	No
6	Mr. Puneet Sharma	Assistant Professor	No
Department of Electrical & Electronics Engineering			
1	Dr. Prashant Singh Rathore	Assistant Professor	No
2	Dr. (Mrs.) Aparajita Pandey	Assistant Professor	No
3	Dr. Deepak Verma	Assistant Professor	No
Department of Management			
1	Dr. Roopali Sharma	Professor	No
2	Dr. G.P. Mishra	Professor	No
3	Mr. S.C. Mishra	Associate Professor	No
4	Dr. Ritu Arora	Assistant Professor	No
5	Mrs. Pankaj Sharma	Assistant Professor	No
6	Dr. J.K. Chandel	Assistant Professor	No
7	Dr. Priyanshu Sharma	Associate Lecturer	No
8	Mrs. Purvi Mathur	Associate Lecturer	No
9	Dr. Kusum Lata Mishra	Associate Lecturer	No
Department of Animation & Multimedia			
1	Dr. Vibhuti Pandya	Assistant Professor	No
2	Mr. Gautam Kumar Goswami	Assistant Professor	No
3	Mr. Gaurav Choudhary	Assistant Professor	No
4	Mr. Manish Kumar	Assistant Professor	No
5	Dr. (Mrs.) Rishika Sharma	Associate Lecturer	No



Sr. No.	Name	Designation	TEQIP Sponsored
Department of Chemistry			
1	Dr. (Mrs) Ranjana Agarwal	Assistant Professor	No
Department of Physics			
1	Dr. Dheeraj Bhardwaj	Assistant Professor	No
2	Dr. Anand Kumar Srivastava	Assistant Professor	No
3	Dr. Swagat Payra	Assistant Professor (Presently deputed at Jaipur Campus)	No
4	Dr. Ravindra Kumar	Associate Lecturer	No
Department of Mathematics			
1	Dr. Gurminder Singh Malhotra	Associate Professor	No
2	Dr. Indra Kumar Dadheech	Assistant Professor	No
3	Dr. (Mrs.) Bhawna Agarwal	Assistant Professor	No
Department of Mechanical Engineering			
1	Mr. Vikas Sangwan	Assistant Professor	No
Department of Humanities			
1	Dr. (Mrs.) Ritu Pareek	Assistant Professor (English Language)	No
Department of Bio- Technology			
1	Dr. M. Krishna Mohan	Professor (Presently Deputed to BISR, Jaipur)	No
2	Mr. P.S. Solanki	Asst. Professor (Presently Deputed to BISR, Jaipur)	No
3	Dr. R.K. Gothwal	Asst. Professor (Presently Deputed to BISR, Jaipur)	No
Department of Environmental Science			
1	Mrs. Nidhi Singh	Associate Lecturer	No

6.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Madhavi Sinha	Associate Professor, Computer Science & Engineering	Internal Member of BOS for B.Tech. Programme in CSE, MCA & BCA
2	Dr P. S. Rathore	Assistant Professor, Electrical & Electronics Engineering	Internal Member of BOS for B.Tech. Programme in EEE
3.	Mr. Ankur Agarwal	Assistant Professor, Electronics & Communication Engineering	Internal Member of BOS for B.Tech. Programme in ECE



Sr. No.	Name of the Member	Designation	Role
4.	Dr. Vibhuti Pandya	Assistant Professor, Animation & Multimedia	Internal Member of BOS for B.Sc Animation & Multimedia and M.Sc. Animation Design Programmes
5.	Mr Gautam Goswami	Assistant Professor, Animation & Multimedia	Internal Member of BOS for B.Sc Animation & Multimedia and M.Sc. Animation Design Programmes

SECTION 7

OTHER INFORMATION

7.1 Publication by students, if any

Publications in Journals :

1. Mishra Elvira, "Evolution of Fiction in Gaming Storylines with Respect to the Contemporary Climate", International Journal of Current Research, Vol. 12, Issue 07, Page No. 12421-12425, July 2020, ISSN 0975-833X.

Publications in Proceedings:

1. Mohit Sharma, Akshiv Agrawal and Deepak Verma (2021). Sensing in Lithium-Ion Based Battery Management System. In National Conference on Advancements in Mechanical, Electronics and Electrical Engineering (AMEEE - 2021) April 15-16, 2021
2. Khushi Jain and Deepak Verma (2021). A State-of-the-art Review of Different Implementation on LED drivers. In National Conference on Advancements in Mechanical, Electronics and Electrical Engineering (AMEEE - 2021) April 15-16, 2021
3. Devki Nandan Gupta, Abhishek and Deepak Verma (2020), "Distribution Automation and Energy Management System In Smart Grid" Springer Lecture Notes in Electrical Engineering Machine Learning, Advances in Computing, Renewable Energy and Communication Proceedings of International Conference on Machine Learning, Advances in Computing, Renewable Energy and Communication MARC 2020.

4. Shraddha Sharma and Deepak Verma (2020), "Impact of COVID-19 and nine-minute call on Indian power sector: Study of blackout prevention" Proceeding - 2nd International Conference on Technology and Policy in Electric Power and Energy, ICT-PEP 2020, 2020, pp. 301-305, 9249866.
5. Anushree Mathur, Mrinalini Kumawat, Jyoti Sharma and Avireni Srinivasulu, "A Schmitt Trigger by means of a Voltage Differencing Transconductance Amplifier" Advances in Smart Grid Automation and Industry 4.0, April 21, Vol. 693, 527-534.
6. Mrinalini Kumawat, Anushree Mathur, Jyoti Sharma and Avireni Srinivasulu, "A Novel Integrator using Voltage Differencing Transconductance Amplifier", Proceedings of 6th International Conference on Recent Trends in Computing, LNNS, July 20, Vol. 177, pp. 1-8, ISBN: 978-981-33-4500-3(Print), <https://doi.org/10.1007/978-981-33-4501-0>.

Edited Book Chapter:

1. Aditi Gupta and Deepak Verma, Book Chapter "A Review of Recent Technology Development in Multilevel Inverter and Their Application in PV Systems" in book entitled Advances in Materials Processing and Manufacturing Applications (Lecture Notes in Mechanical Engineering) 2021, ISBN: 978-981-16-0909-1 Publisher: Springer. <https://www.springer.com/gp/book/9789811609084#aboutAuthors>



7.2 Achievements of Students :

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1.	Pranjal Agawal B.Tech. (CSE) 2019-2023	Grace Hopper Scholarship for GHC Celebration	AnitaB.org in collaboration with Association for Computing Machinery, USA.	Awarded for year 2021
2.	Komal Devnani B.Tech. (CSE) 2019-2023	Grace Hopper Scholarship for GHC Celebration	AnitaB.org in collaboration with Association for Computing Machinery, USA.	Awarded for year 2021
3	Gurleen Kaur	Winner of Beginner Track in defHacks Worldwide 3.0 Hackathon	Devpost	25th-27th June 2021 Online
4	Aastha Mathur	3rd position in Kavyapath Veethika	Maharani College, University of Rajasthan , Jaipur	18-20th March 2021 Online
5	Gurleen Kaur	Recipient of Ethereum India Fellowship with 2000\$	Ethereum Foundation and Devfolio	Feb 2021-April 2021 Online
6	Gurleen Kaur	Best Hardware Hack	HackCBS 3.0 and Major League Hacking	6-8 November 2020 Online
7	Parkhi Jain	2nd Position all over Jaipur in classical dance- Kathak	Bhatkhande Sangit Vidyapith, Lucknow	20/06/2020 Online
8	Gurleen Kaur	Winner of Beginner Track in defHacks Worldwide 3.0 Hackathon	Devpost	25th-27th June 2021 Online
9	Elvira Mishra	II Runner-up Prizes in Script Writing & Painting Competitions during during National Youth Festival- MOOD INDIGO-20, Organized Online by IIT Bombay	IIT Bombay	Dec. 2020 Online

7.3 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1	Mr. Sai Kiran B.E. –CSE, 2008-2012 batch Presently working as Software Development engineer, Microsoft USA (2018 onwards)	Have excellent academic record with MS from Cornell University USA. After MS, initially joined as Software Developer then reached to level of Assistant Vice President in Bank of America (till 2018) Presently working as Software Development engineer, Microsoft USA (2018 onwards)



Sr.No	Name, Batch and Affiliation	Short Description
2	Dr Shruti Mehrotra B.E. –ECE, 2007-2011 batch Presently working as Device Modelling Engineer at Global Foundries, a renowned MNC in the area of microelectronics	Have excellent academic record with obtained Ph.D from IIT Kanpur in year 2020 After Ph D, joined Global Foundries, a renowned MNC in the area of microelectronics where presently working as Device Modelling Engineer.
3.	Anshul Vyas B.E. –EEE, 2011-2015 batch Presently working as Site Reliability Engineer at Microsoft	Excellent career progression in industrial domain associating with internationally renowned technology companies. After B.E., joined US MNC Verizon later shifted to Telstra and then got selection in Microsoft where presently working as Site Reliability Engineer
4	Mr. Garvit Bothra BBA in 2008-2011 and MBA in 2012-2014. Presently working as Senior Research Executive, Nielsen India Ltd	Excellent career progression in industrial management domain associating with internationally renowned companies After MBA, joined as Business Analyst in Tata Consultancy Services. Later shifted to Nielsen India Ltd where presently working as Senior Research Executive A sports enthusiast and has remarkable achievements in basket ball and karate with participation at national level and winning events
5	Ankit Vajpeyee B.Sc. Animation & Multimedia 2006-2009 Batch Presently associated with Sony Pictures, Vancouver, Canada as a Film Composer.	After completion of B.Sc. Animation & Multimedia Course he did Post Graduation in Visual Effects from Bournemouth University, U.K. in Year 2012. He specialized in Visual Effects and Motion Graphics. After post graduation he worked for several prestigious companies like Method Studios, Moving Picture- Canada, and Double Negative- London. He has worked for several Hollywood Films like Logan, Miss Peregrine's Home For Peculiar Children, A Little Chaos, Hyena, Da Vinci's Demons, etc.

8 Infrastructure / Equipment added during the year:

Lab Equipment, Computers & peripherals, software, Machinery items and Furniture & Fixtures of about Rs. 77.84 Lakhs were purchase and installed during the year. Following is the category wise break up :

Lab Equipment :	Rs. 29.58 Lakhs
Computers & Peripherals :	Rs. 20.88 Lakhs
Software :	Rs. 12.04 Lakhs
Plant & Machinery :	Rs. 13.69 Lakhs
Furniture & Fixures :	Rs. 1.65 Lakhs

9. Any other relevant information

i) Dr. R. K. Gothwal, Assistant Professor in Biotechnology Chaired a session on Environmental Biotechnology in the "International Conference on Biotechnology for Sustainable Agriculture, Environment and Health held at BISR Jaipur during April 4-8, 2021.

10. Special Covid Initiatives, if any

The institute organized various online and offline sessions to spread awareness about the safety measures to be taken during the covid 19 pandemic.



BIT Mesra Off Campus : Lalpur

SECTION 1

DEPARTMENTAL PROFILE



1. About the Campus :

BIT off-campus at Lalpur, Ranchi started initially with part-time postgraduate M.E. courses in the disciplines of Mechanical, Civil, Electrical and Electronics Engineering. The city being an important industrial and commercial hub, the primary objective of the centre was the benefit of officers working in various Ranchi based Public Sector Undertakings, Private industries, Banks,

etc, who wished to upgrade their educational qualifications.

The MBA, MCA, BCA and BBA courses were started subsequently with laboratory classes being conducted on Sundays and holidays at the Mesra campus.

Currently the Lalpur Extension Centre has over 1700 students on its rolls of which almost 500 are postgraduate students.

SECTION 2

SEMINAR / CONFERENCE

2.1 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Abhaya Ranjan Srivastava	FDP on Outcome Based Education & Online Learning Teaching	BIT Mesra	BIT Mesra	Online	29 /06/2021—03 /07/2021
2.	Dr. Abhaya Ranjan Srivastava	FDP on Universal Human Values for DEEKSHARAMBH (Student Induction Program)	AICTE	NIT Patna	Online	23/11/2020-27 /11/2020
3.	Dr. Abhaya Ranjan Srivastava	Influence of social media on Purchase Intention: A Study of Consumers in Oman. Indian J of Commerce		WCAS Muscat & BIT Muscat	Online	18 /02 /2021



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
4.	Dr. S.N. Sahdeo	Sustainable approach for environmental problems in covid era	RKDF University	RKDF University	Ranchi	9 /05/2021
5.	Dr. S.N. Sahdeo	FDP on preparation of effective on-line teaching.	S.B.U.	Sarla birla university	Ranchi	14/04/2021-20 /04/2021
6.	Dr. Syed Anis Haider	Universal Human value in Education (UHV)	AICTE	AICTE Training and Learning Academy (ATAL)	Online	7/06/2021 -11/06/2021
7.	Dr Mili Dutta	International conference on "Ancient Indian Wisdom :panacea for sustainable well-being"		SMS Varanasi	Online	26/06/2021-27 /06/2021
8.	Dr. Jaleshwar Bhagat	Universal Human value in Education (UHV)	AICTE	AICTE	Online	7-11th June, 2021
9.	Dr. Soumitro Chakravarty	International Conference on "Continuity, Consistency and Innovation in Applied Sciences and Humanities" (ICCIASH-2020)	-----	Department of Science and Humanities, St. Martin's Engineering College, Dhulapally, Secunderabad, T.S, India	ONLINE International Conference	1308/2020-14 /08/2020
10.	Dr. Soumitro Chakravarty	Online FDP on "ROAD - Response Effectiveness, Organising Self, Attitudinal Shift, Decision Making"	AICTE (ATAL Academy)	University College of Engineering, Osmania University.	Online	7/11/2021-11 /11/2021
11.	Dr. Soumitro Chakravarty	Online FDP on "Emotional Intelligence"	AICTE (ATAL Academy)	ST. MARTIN'S ENGINEERING COLLEGE	Online	21/09/2020-25/09/2020
12.	Dr. Soumitro Chakravarty	5 days Faculty Development Program- Student Induction on UHV	AICTE (FDP) on UHV	AICTE	Online	28 /06/2021-02/07/2021
13.	Dr. Satrajeet Choudhury	Psychometrics and Scale Development In Social Sciences	SELF	Sharda University	Online	29 /06/2020-3/07/2020
14.	Dr. Amrita Priyam	Orientation/Refresher Programme On "Deep Learning"	AICTE-ISTE	BIT, Mesra	Online Mode	29/04/2021-05/05/2021
15.	Dr. Binod Kumar Sharma	5-Day Online Fdp On The Theme "Inculcating Universal Human Values In Technical Education"	AICTE	AICTE	Online	7/06/2021-11/06/2021



वार्षिक प्रतिवेदन 2020-2021

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
16.	Dr. Partha Sarathi Bishnu	Deep Learning Workshop	AICTE-ISTE	BIT Mesra	BIT Mesra (Online)	29/04/2021-3/05/2021
17.	Dr. Jaya Pal	Cyber Security And Investigation Tools	TEQIP-III	CSE Dept. BIT, Mesra	Online	11/09/2020-15/09/2020
18.	Dr. Kuntal Mukherjee	2nd International Conference On Emerging Technologies In Data Mining And Information Security, IEMIS 2020	IEM	IEM, Kolkata	Online IEM, Kolkata, West Bengal, India	2/07/2020-4/07/2020
19.	Dr. Kuntal Mukherjee	International Conference On Iot And Its Applications, Icia 2020	NIT	NIT Jamshedpur Jharkhand, India	Online NIT Jamshedpur, Jharkhand	27/12/2020
20.	Dr. Kuntal Mukherjee	1st International Conference On Cyber Intelligence And Information Retrieval, CIIR 2021	IEM	IEM, Kolkata, India	Online IEM, Kolkata	20/05/2021-21/05/2021
21.	Dr. Sanjay Kumar	A Webinar On Machine Learning Engineering Solutions For End-To-End Product Creation: Computer Vision And E-Commerce Case Studies.		Student Alumni Relations Cell BIT, Mesra		12/06/2021
22.	Dr. Sanjay Kumar	5 Day Online FDP On Inculcating Universal human Values In Technical Education	AICTE	AICTE		7/06/2021-11/06/2021
23.	Dr. Sanjay Kumar	A Webinar On Implementation Of NEP 2020		BIT, Mesra	BIT, Mesra	3/04/2021
24.	Dr. Sanjay Kumar	5 Days Online FDP On CYBER SECURITY AND INVESTIGATION TOOLS.	TEQIP	BIT, Mesra	CSE DEPT. BIT, Mesra	11/09/2020-15/09/2020
25.	Dr. Sanjay Kumar	Digital Symposium On AI For India.		JIO INSTITUTE	JIO INSTITUTE	26/08/2020-28/08/2020
26.	Dr. Sanjay Kumar	Webinar On Impact Of Covid-19 On Mental Health And Well Being	TEQIP-III	BIT, Mesra	BIT, Mesra	08/08/2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
27.	Dr. Umesh Prasad	International Conference On "Continuity, Consistency And Innovation In Applied Sciences And Humanities" (ICCIASH-2020)		Department of Science and Humanities , St. Martin's Engineering College, Dhulapally, Secunderabad, T.S, India	ONLINE International Conference	13/08/2020-14/08/2020
28.	Dr. Umesh Prasad	Online FDP On "ROAD - Response Effectiveness, Organising Self, Attitudinal Shift, Decision Making"	AICTE (ATAL Academy)	University College of Engineering, Osmania University.	Online	07/09/2020 to 11/09/2020
29.	Dr. Umesh Prasad	Online FDP On "Emotional Intelligence"	AICTE (ATAL Academy)	St. Martin's Engineering College	Online	21/09/2020-25/09/2020
30.	Dr. Umesh Prasad	5 Days Faculty Development Program- Student Induction On "Inculcating Universal Human Values In Technical Education"(UHV)	AICTE (FDP) on UHV	AICTE	Online	28/06/2021-02/07/2021

SECTION 3

RESEARCH PUBLICATIONS

3.1 Publications in Journals :

- Pooja, Pranab (2021). A comparative study of the leadership skills of the millennial male and millennial female managerial leaders in the Indian service sector; Int. J. services, Economics and Management; Vol. 12, No.1; pp. 41-59
- Yasmin Yaqub, Tanusree Dutta, Raina Chhajer, A. K. Singh (2020), "Impact of Supervisory Support on Training Transfer: An Empirical Study", The Indian Journal of Industrial Relations, page no. 73-87.
- Yasmin Yaqub, A.K Singh, Tanusree Dutta (2021), "An empirical study of factors influencing training transfer in the management training intervention", Journal of Workplace Learning, Page no. 361-374
- Gaitri Kumari, Abhaya Ranjan Srivastava, (2021), A holistic approach of state government in the recuperation of Paitker Painting via Jharkhand Tourism, Craft Research (Scopus Indexed), Vol 12, No.1, pp 79-104,(ISSN: 2040-4689)
- Niraj Mishra, S.L Gupta, Abhaya Ranjan Srivastava, (2020), Influence of social media on Purchase Intention: A study of Consumers in Oman, Indian Journal of Commerce, Vol 73, Issue 3, pp 77-91 (ISSN: Print:0019512X; Online: 2454-6801)
- S. N. Sahdeo (2020), Role of indigenous cows in the development of farmer friendly organic farming technologies by agricultural institutions, International Journal of Asian Agri history, Vol-24, No.-2, July-December,2020
- Sinha, S., Mishra, A. (2020). Measuring Employers' Satisfaction with Expectation Satisfaction Matrix, Purusartha, Vol 13(1) pp.21-34.
- Sinha, S., Jawahar, I.M., Ghosh, P. and Mishra, A. (2020). Assessing employers' satisfaction with Indian engineering graduates using expectancy-disconfirmation theory, International Journal of Manpower, Vol 41(4), pp. 473-489.
- Syed Anis Haider (2021). A study on attitude of



employees at the workplace and its relationship with organizational output with special reference to the steel industries in the state of Jharkhand, SAMBODHI ,Vol-44-Issue-01(IV), ISSN:2249-6661

10. Sumona Das, Syed Anis Haider (2020), A study on employee attitude at the workplace and its relationship with organizational outcome with special reference to the iron and steel industries, Elementary Education (Scopus Indexed) ISSN: 1305-3515.
11. Soumitro Chakravarty, Umesh Prasad (2020), Impact of Internet And Social Media Usage Upon Adolescents And Young Adults: A Qualitative Enquiry, International Journal of Advanced Science and Technology, Vol. 29, No. 8, (2020), pp. 1696-1705.
12. Umesh Prasad, Soumitro Chakravarty (2020), Emerging Role Of Information And Communication Technologies In Modern Education: Issues & Concerns With Special Reference To Developing Economies, International Journal of Advanced Science and Technology, Vol. 29, No. 8, (2020), pp. 1641-1645.
13. S. Sharan, B.K. Sharma, & K. Jacob (2021), Interval type-2 fuzzy automata and Interval type-2 fuzzy 1(IV) grammar Journal of Applied

Mathematics and Computing [SCI Indexed]
<https://doi.org/10.1007/s12190-021-01577-y>

14. Umang Gupta, Vandana Bhattacharjee, Partha Sarathi Bishnu (2021), Outlier Detection in Wireless Sensor Networks Based on Neighbourhood, Wirel. Pers. Commun. 116(1): 443-454 (2021)
15. Umang Gupta, Vandana Bhattacharjee, Partha Sarathi Bishnu (2020), Clustering on Ranked Data for Campaign Selection, IEEE Access 8: 162421-162431 (2020)
16. D. Das, S. Mukhopadhyaya, D. Nandi, "Swarm-based Painting of An Area Cluttered with Obstacles," International Journal of Parallel, Emergent and Distributed Systems, Vol. 36, Issue 4, pp. 359-379, Taylor & Francis, 2021. (ISSN: 1744-5760) [SCOPUS Indexed], DOI: <https://doi.org/10.1080/17445760.2021.1879071>

3.2 Book:

3.1.1 Chapter(s) in Edited Book

1. S.N Sahdeo, "Consumer buying behaviour in Covid-19 pandemic: An online perspective of India", Impact of covid-19 on Indian economy, Bharti publications, New Delhi. Year -2020, ISBN:978-93-89657-45-6

SECTION 4

ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

4.1 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
Department: Management			
1.	Dr. A.N. Jha	Professor	NO
2.	Dr. Pranab Kumar	Associate Professor	NO
3.	Dr. Arun Kumar Singh	Assistant Professor	NO
4.	Dr. Abhay Ranjan Srivastava	Assistant Professor	NO
5.	Ms. Anupma Sahai	Assistant Professor	NO
6.	Dr. Somnath Mukherjee	Assistant Professor	NO
7.	Dr. Sandeep Nath Sahdeo	Assistant Professor	NO
8.	Dr. Syed Anis Haider	Assistant Professor	NO
9.	Dr. Ashutosh Mishra	Assistant Professor	NO
10.	Mr. Amitabh Chandan	Assistant Professor	NO



Sr. No.	Name	Designation	TEQIP Sponsored
11	Dr.(Mrs.) Mili Dutta	Assistant Professor	NO
12	Dr. Pradeep Munda	Assistant Professor	NO
13	Dr. Soumitro Chakravarty	Assistant Professor	NO
14	Dr. Avinash Kumar Sinha	Assistant Professor	NO
15	Dr. Jaleshwar Bhagat	Assistant Professor	NO
16	Dr. Satrajeet Choudhury	Assistant Professor	NO
17	Dr. Tanmoy Kumar Banerjee	Assistant Professor	NO
18	Dr. B.N. Sahyal	Assistant Professor	NO
19	Mr. Prashant Kumar Singh	Assistant Professor	NO
Department: Computer Science & Engineering			
1	Dr. (Mrs.) Amrita Priyam	Associate Professor	NO
2	Mrs. Onima Tigga	Assistant Professor	NO
3	Dr. Sanjay Kumar	Assistant Professor	NO
4	Mr. Amar Kumar	Assistant Professor	NO
5	Mr. Nagendra Prasad Tiwary	Assistant Professor	NO
6	Dr. N.K. Singh	Assistant Professor	NO
7	Dr. Partha Sarthi Bishnu	Assistant Professor	NO
8	Dr. Binod Kumar Sharma	Assistant Professor	NO
9	Dr. Kuntal Mukherjee	Assistant Professor	NO
10	Dr. (Ms.) Jaya Pal	Assistant Professor	NO
11	Dr. Umesh Prasad	Associate Lecturer	NO
12	Mr. Deepak Kumar Mishra	Associate Lecturer	NO
13	Dr. (Mrs.) Srabani Mukhopadhyaya	Associate Professor	NO
14	Dr.(Mrs.) Siba Mitra	Assistant Professor	NO
15	Mrs. Aparna Shukla	Associate Lecturer	NO
16	Mr. Hareshwar Prasad	Associate Lecturer	NO
17	Mr. Khalid Ashraf	Associate Lecturer	NO

SECTION 5**OTHER INFORMATION****5.1 Distinguished Visitors from Industry/Academia/Research organizations**

Sr. No	Name of Visitor with Affiliation	Date of Visit
1.	Mr Sanjay Asthana (Founder & CEO), Concord Consulting Services, Bangalore	9th Sep, 2020



BIT Mesra Off Campus : Noida

SECTION 1

DEPARTMENTAL PROFILE



1. About the Campus:

Birla Institute of Technology, Noida Campus is one of the leading Technical Institutions in the National Capital Region in the State of Uttar Pradesh. Established in the year 1997, the Institution has set bench marks every year, and grown into an Institution of Excellence in Technical Education. Located at the entrance of NOIDA, BIT Noida Campus has become a household name for its excellence in Discipline, Teaching, Training and Placement. Its rich academic tradition has always attracted the most talented students who later on went on to make important contributions to the society.

Vision: "The BIT Noida Campus will stimulate minds of scholars, empower them to contribute to the welfare of society at large; train them to adopt themselves to the changing needs of the economy; advocate them for cultural leadership to ensure peace, harmony and prosperity for all."

Birla Institute of Technology, Noida Campus aims to become an Institution of excellence in imparting quality **Outcome Based Education** that empowers the young generation with **Knowledge, Skills, Research, Aptitude and Ethical values** to solve **Contemporary Challenging Problems**.

Facilities Provided

- In order to nurture effective learning among

students, all class rooms are well equipped with AC and LCD Projectors.

- The Institute has a well-stocked library with more than 5000 volumes on various subjects along with latest editions of prescribed books, several periodicals, journals and high value books to give the students a winning edge.
- The centre believes in holistic personality development of students providing ample space for their recreational activities like – Canteen, Auditorium, Table Tennis space, and badminton, a centralised college computer centre and fully equipped labs.
- The centre is well equipped with e-journals (Emerald, ProQuest ABI Complete, Pro Quest Dissertations & Thesis, Science Direct), and research software like MATLAB and dedicated internet facility for the research scholars.

Academic Programmes Offered:

Under Graduate Courses:

Bachelor in Business Administration (BBA)	3 years
Bachelor in Computer Applications (BCA)	3 years
B.Sc. in Animation & Multimedia (BAM)	3 years

Post Graduate Courses:

Masters in Business Administration 2 years

Masters in Computer Applications 3 years

Ph.D. in Management, Computer Science & Mathematics (Full Time & Part Time)

and to meet the requirements of the industry in the competitive and dynamic business environment. The department has continuously strived to achieve this aim by maintaining the highest standards in the Undergraduate (BBA), Postgraduate (MBA) and Doctoral Programmes offered by it.

Department of Computer Science

The mission of the department is to impart quality education, to produce innovative and globally competent technocrats having sound knowledge in the fields of Computer Science and Engineering. Department of Computer Science and Engineering is running various reputed PG & UG programmes such as 2 years MCA and 3 Years BCA, with the curriculum specifically designed to reflect the depth and breadth of latest technologies, research and innovations in computer science field. The department provides extensive computing resources for research and education. In order to build the intellectual capital of researchers, the department also runs Doctoral programme in Computer Science. Department also has state-of-the-art Computing Labs with latest configuration Dell Systems and required softwares.

Department of Management

The Department of Management was established in the year 1998 with an aim to serve growing need for qualified management professionals

Department of Animation & Multimedia

BIT Off Campus Noida is the first major institute to start Animation and Multimedia as an Undergraduate course. The B.Sc. Animation and Multimedia program was started under University Grants Commission of India's Innovative Program Scheme in the year 2004. The department has high-end workstations loaded with latest versions of graphics, 3d modeling and animation, video editing and game design software. The classrooms are well equipped with projection facility and are upgraded from time to time, in terms of equipment, technology, and pedagogy.

Animation and Multimedia department regularly organizes workshops, conferences, seminars, competitions, film-festivals etc. We are proud to have our students and alumni working across verticals in reputed companies like Microsoft, Adobe, HCL, Facebook, TCS, Oracle, Flipkart, Paytm, Deloitte, Ernst and Young, Protiviti, Ogilvy and Mather, Extramarks, Beehives, KPMG, AIIMS, Hotstar, Zee TV to name a few.





SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects (Research and Consultancy)

a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Impact of Green Brand Image on Green Brand Equity and Green Purchase Intention in Indian Banking Sector	Dr. Meenakshi Sharma	ICSSR	Jan 1, 2020	Rs. 16,00,000	2 years

SECTION 3

SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	Management Colloquium 2021	Ms Harpreet Charanjit	-	19.03.2021 -20.03.2021
2.	Power Seminar on Developing Interpersonal Skills	Rachana Pratik	ICT Academy	05.11.2020
3.	Employability Skills :an industry perspective -power seminar	Rachana Pratik	ICT Academy	21.8.2020

3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1	Mrs. Muntaha Ahmad	Webinar : Trailblazer connect India Program 2021		ICT Academy	Online	25.06.2021
2	Mr. Anurag Joshi	Webinar AICTE Quality Initiatives		AICTE	Online	18.06.2021
3	Mrs. Muntaha Ahmad	FDP: Fundamentals of AI		ICT Academy	Online	14.06.2021 - 18.06.2021
4	Mrs. Mrinalini Mehta	AICTE recognized FDP on Technology Management in Business	Ministry Of Human Resource Development, Government of India	National Institute of technical Teachers training and Research	Online	14.06.2021 -18.06.2021
5	Lipika Jha, Anurag Joshi and Abhishek Singh	Financial investment for Mental well being/ FDP		BIT Noida	Online	06.06.2021



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
6	Dr Smitha Jha	Refresher course in deep learning	AICTE-ISTE	BIT Mesra	Online	25.05.2021-29.05.2021
7	Mrs. Mrinalini Mehta	AICTE recognized FDP on Cryptography for network Security	AICTE	National Institute of technical Teachers training and Research	Online	04.05.2021-07.05.2021
8	Mrs. Mrinalini Mehta	AICTE-ISTE Refresher Program on Deep Learning	AICTE-ISTE	BIT Mesra, Ranchi	Online	29.04.2021 - 05.05.2021
9	Dr. Meenakshi Sharma	International Management Conference on Post Covid Management Strategies: Recovery, Resilience and Adoption	ICSSR	IIM	Bodhgaya	23.04.2021 -24.04.2021
10	Dr. Arun Mittal	Case Writing Competition and Conference		All India Management Association	Online	30.03.2021 -31.03.2021
11	Mrs. Muntaha Ahmad	FDP: Introduction to Python Programming		ICT Academy	Online	29.03.2021 - 03.04.2021
12	Ms Seema Sharma	Webinar on Data Science Using Python		Training and Placement Department, BIT, Noida	Online	13.03.2021
13	Mrs. Pramila Joshi	Workshop on Data Science Using Python		CETPA Infotech Pvt Ltd		13.03.2021
14	Charu Wahi	Higher Education Innovation Summit 2021		ASMA	Online	10.03.2021
15	Mrs. Pramila Joshi	Data Science Using R		ICT Academy	Online	08.03.2021-12.03.2021
16	Dr. Arun Mittal	QIP Short Term Course (online) on Data Analytics	All India Council for Technical Education	Indian Institute of Technology Kanpur	Online	01.03.2021 -06.03.2021
17	Vandna Sharma	3 DAY AICTE EXAMINATION REFORMS ONLINE WORKSHOP	Free	AICTE and KLE Technological University, Hubballi	Online	26.02.2021 - 01.03.2021
18	Vandna Sharma, Charu Wahi	Workshop on 360 Degree Feedback Registration Process for AICTE approved Institutes	Free	AICTE	Online	09.02.2021



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
19	Dr. Meenakshi Sharma	First International Conference on Innovative Technology for Sustainable Development		Vellore Institute of Technology & University of Technology, Sydney	Chennai	27.01.21 – 29.01.21
20	Ms Seema Sharma	FDP on "Research through HPC"		BIT, Mesra	Online	23.01.2021 -24.01.2021, 30.01.2021-31.01.2021
21	Vandna Sharma	National webinar on "PRISM Scheme and Proposal writing"	Department of Scientific & Industrial Research (DSIR) Ministry of Science & Technology, Govt. of India	DSIR-Tepp Outreach Cum Cluster Innovation Centre (TOCIC) IIT Guwahati And DSIR-TOCIC, CGCRI Kolkata In association with Birla Institute of Technology, Mesra	Online	22.01.2021
22	Dr. Monika Bisht	Completed 08 weeks (Jan-March 2021) on-Line NPTEL MOOC Course on the topic "Managing Change in Organisations".	AICTE	IIT, KHARAGPUR	ONLINE	18.01.2021-12.03.2021
23	Dr. Monika Bisht	Completed 08 weeks (Jan-April 2021) on-Line NPTEL MOOC Course on the topic "Principles of Management"	AICTE	IIT, ROORKEE	ONLINE	18.01.2021 - 09.04.2021
24	Ms Seema Sharma, Mrs. Sheetal Sehgal	Training on "Oracle – Java Programming"		ICT Academy in collaboration with Oracle Academy	Online	05.01.2021 - 07.01.2021
25	Ms Lipika Jha	FDP on Oracle - Database design & Programming With SQL(Online Live FDP)		ICT Academy	Online	05.01.2021 – 08.01.2021
26	Partha Acharya	E-conclave in Assistive Technology	—	PHD chamber of commerce	Online	17.12.2020
27	Dr Niket Mehta	User Workflow training	—	BIT Mesra	Online	04.12.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
28	Vandna Sharma	Webinar on National Education Policy: Innovation and Entrepreneurship	BIT Mesra	Institution Innovation Council (IIC) of BIT Mesra	Online	27.11.2020
29	Dr. Monika Bisht	Online FDP on "UNIVERSAL HUMAN VALUES for DEEKSHARAMBH (Student Induction Program)"	AICTE	NIT Patna	Online	23.11.2020-27.11.2020
30	Charu Wahi	Deep Tech for Smart Agriculture in India		FICCI	Online	20.11.2020
31	Dr. Meenakshi Sharma	National Conference on Business Strategy in the VUCA World	ICSSR	J.C. Bose University of Science and Technology, Faridabad	Faridabad	15.10.2020
32	Partha Acharya	Leadership Excellence Program	—	ISCON, Noida	Online	03.10.2020-04.10.2020
33	Partha Acharya	Covid-19 :Helping young people manage low mood and depression (2 weeks course)	—	University of Reading, UK	Online	Sept. 2020
34	Vandna Sharma	Webinar on Copyright issues in academics	BIT Mesra		Online	17.08.2020
35	Partha Acharya	ART OF THESIS WRITING AND ACADEMIC PUBLISHING	https://www.koachscholar.com/	BML Munjal University & Shiv Nadar University	Online	14.08.2020-16.08.2020
36	Dr. Monika Bisht	Two Week Online FDP on "ICT Tools for Teaching, Learning Process and Institute"	AICTE	Jointly organised NIT Patna, MNIT Jaipur, PDPM IIITDM Jabalpur and IIT Roorkee	Online	10.08.2020 - 21.08.2020
37	Abhishek Singh	One day international conference on "futuristic strategy for sustainable banking, financial services and insurance" (As a conference chair)	No	Symbiosis University of applied sciences Indore	Online	01.08.2020
38	Partha Acharya	Demystifying Literature Review Techniques	https://www.koachscholar.com/	IIM, Kozikhode & Prestige Institute of Management	Online	30.07.2020-02.08.2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
39	Abhishek Singh	International webinar on "Financial inclusion : Global and Asian perspective" (As a keynote speaker)	No	KIT Kanpur	Online	17.07.2020

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

1. Harsh, H. and Prasad, A. (2020), "Employment Relations and Perceived Organizational Performance: The Moderating Role of Technological Intensity", Employee Relations, Vol. 43 No. 1, pp.109-130.
2. Ray, K., Sharma, M. (2020). Antecedents of Brand Strength and Its Impact on Global Branding of Indian IT Organizations, Journal of Asia-Pacific Business, DOI: 10.1080/10599231.2020.1824525. (Routledge, Taylor & Francis, non-Paid Scopus)
3. Sharma, M., Choubey, A. (2020). Resistance Towards Green Banking Adoption in Delhi -NCR: A Grounded Theory Approach, AIMA Journal of Management and Research, 14 (2/4), ISSN 0974 – 497. (Peer Reviewed)
4. A. Choubey and M. Sharma 2021 Implementation of robotics and its impact on sustainable banking: A futuristic study. Journal of Physics: Conference Series, Volume 1911, International Conference on Innovative Technology for Sustainable Development 2021 (ICITSD 2021) 27-29 January 2021, Chennai, India. <https://iopscience.iop.org/article/10.1088/1742-6596/1911/1/012013>.
5. Sharma, M., Choubey, A. (2021). Green banking initiatives: a qualitative study on Indian banking sector. Environment, Development and Sustainability. Springer(SSCI, IF 3.29).
6. Jahanvi, Sharma, M.(2021). Brand respect: Conceptualization, scale development and validation. Journal of Business Research, 132(115-123. Elsevier. (SSCI, IF 7.55).
7. Mahato, N. N., Makkad, M. and Sharma, V. (2021) An Innovative and Humane way of improving the efficiency and productivity of manual loading process at Indian Oil Corporation Ltd, Panipat: A Case Study, International Journal of Integrated Supply Management (IJISM), (Scopus Unpaid Indexed) Vol.14, Issue 2, p.228-247, ISSN online: 1753-3635.
8. Misra, Y. and Sharma, V. (2021) Study of Role of Business Strategy on competencies and Human Capital- Indian Context, International Journal of Business and Globalization (IJBG), (Scopus Unpaid Indexed) Vol.27, Issue 1, p.203-219 ISSN online: 1753-3635.
9. Dr Abhishek singh 'The impact of merger on banks financial performance using financial leverage analysis' case review of bank of Rajasthan with ICICI Bank merger" (Paid Scopus) published in journal of critical review, ISSN-2394-5125 VOL 7, ISSUE 17 July,2020.
10. Dr Abhishek Singh "Causal linkages between Exchange Rate and Stock Price: A case study of an emerging market" (Non paid Scopus) published in EEL journal ISSN-2234-5234 special June volume 2021.
11. Mehta Niket (2021), Gamify the Digital Media for Effective Literacy, Media Research and Communication Studies Journal ((MRCSJ), ISSN 2394-7594 Vol VII, March 2021, Pge 56, HSNC University, Mumbai, Kishinchand Chellaram College, Department of Mass Media
12. Dutta Suparna, Mehta Niket (2021), Paradox in Progress: Addressing the issue of Health and Hygiene through Multimedia - A Case Study, Journal of Huazhong University of Science and Technology, Volume 50 February issue (issue 2), <http://hustjournal.com/vol502021feb/>
13. Mehta Niket (2021), Visual Language – The Ideal Language of Communication in 21st Century, Pensee Journal, ISSN: 0031-4773, <http://>



penseereseach.com/index.php/vol51issue2-2/
https://app.box.com/s/dquv18v6ldubgkg-
6ta1phd7b069gwf44

14. Dutta S, Mehta N (2020), Augmented Reality—A Tool for Mediated Communication: A Case Study of Teen Pregnancy in Contexts like India, Fourth International Congress on Information and Communication Technology (ICICY 2019). Advances in Intelligent Systems and Computing, vol 1027. Springer, Singapore. https://doi.org/10.1007/978-981-32-9343-4_43 Series Title: Advances in Intelligent Systems and Computing (Published under the imprint Springer), ISSN:2194-5357

4.2 Publications in Proceedings:

1. R. Dhir and Sharma, V. (2021), Positive Psychological Capital: A Positive Resource and Buffer for Academic Stress, In Conference Proceedings ICDBE-5 - 6 Feb 2021-Dynamic Business Environment: Challenges and

Opportunities in "the New Normal", Bloomsbury Publication, p. 71. ISBN: 978-93-54353-86-4

4.3 Book:

1. Chaturvedi, D. D., Mittal, A., Chaturvedi, S. (2021), Banking and Insurance, 1st Edition, Scholar Tech Press, Delhi.

4.3.1 Chapter(s) in Edited Book

1. Jahanvi, Sharma, M., 2020. Make in India Initiative—"Vocal for Local And Make them Global". Economic Policy and Planning in India Post COVID-19, Bloomsbury India, ISBN:978-93-90513-68-0.
2. Mittal, A. (2021), "Opportunities and Challenges of E-Learning in South Asia: An Analytical Study of India as an Emerging Market" In Khan, B., Affounh, S., Salha, S. and Khlaif, Z. ed., 2021. Challenges and Opportunities for the Global Implementation of E-Learning Frameworks. 1st ed. IGI Global USA, pp.97-111.

SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Patents (Applied / Granted) :

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No.	Year
1.	Bharat Bhushan, Satvik, Arpit, Karan, Rakesh, Manisha, Biplab	IMT-VOICE BASED MOBILE BANKING	2020102380	OCT 2020

5.2 MoUs / Collaborations :

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	ICT Academy	For Teachers FDP, Students Power Seminars, Hands on projects in IT Cos., Management/CS/Animation competitions, Placements and job openings.	1 year

SECTION 6

ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-ordinator	Faculty Co-ordinator	Date / Duration
1.	International Day of Yoga		Umair Ujala and Sheetal Sehgal	18.06.2021
2.	Webinar on How to start the research	S. Jothika (MBA)	Dr Abhishek Singh	31.05.2021/ 1 hour



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Sr. No.	Name of the Activity	Students' Co-ordinator	Faculty Co-ordinator	Date / Duration
3.	Webinar on How to do well in personal interview	S. Jothika (MBA)	Dr Abhishek Singh	23.05.2021/ 1 hour
4.	Annual Sports	Alisha Kumari (BBA)	Umair Ujala and Sheetal Sehgal	26.03.2021 – 27.03.2021/ 2 days
5.	Celebrating 75 years of India's Independence, Azadi ka Amrit Mahotsav	Prashant (BCA) and Sarthak (BBA)	Mrs. Pramila Joshi	12.03.2021
6.	Narrative Framing using DSLR Camera		Aroop Kerketta, Rahul Dora & Kiran Shetti	10.03.2021
7.	Digital Poster Competition		Dr Niket Mehta	08.03.2021
8.	International Women's day	Jothika (MBA)	Mrs. Pramila Joshi	08.03.2021
9.	Time management workshop		Mrs. Pramila Joshi	03.03.2021
10.	Placement preparation activity		Mrs. Seema Sharma, Ms. Charu Wahi, Mrs Sheetal Sehgal, Mrs. Priti Sharma, Mrs. Lipika Jha and Mrs. Muntaha Ahamad	Feb 2021-Apr 2021
11.	Matribhasha Diwas	Prashant (BCA)	Mrs. Pramila Joshi	22.02.2021
12.	Webinar on Business Model of the futures		Dr Abhishek Singh	20.02.2021/ 1 hour
13.	Saraswati Puja		Mrs. Pramila Joshi and Mrs. Soma Sircar	15.02.2021
14.	Webinar on "Study Sutras"		Dr. Monika Bisht	10.02.2021/ 1.30 hours
15.	Soft Skills Training		Mrs. Preety Bajaj	03.02.2021/ 1 hour
16.	Fresher's Welcome		Mrs. Pramila Joshi and Ms. Charu Wahi	06.11.2020
17.	Freedom Run		Umair Ujala and Sheetal Sehgal	28.09.2020 – 29.09.2020
18.	Orientation Programme (PG)		Mr Anurag Joshi, Mrs Seema Sharma and Ms Charu Wahi	01.09.2020 14.09.2020/ 2 Weeks

6.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
Department of Computer Science			
1.	Dr. (Mrs.) Ila Sahay	Associate Professor	No
2.	Mrs. Sadhu Mallika	Assistant Professor	No



Sr. No.	Name	Designation	TEQIP Sponsored
3.	Mr. Anil Kumar	Assistant Professor	No
4.	Mrs. Mrinalini Mehta	Assistant Professor	No
5.	Dr. (Mrs.) Vibha Kaw Raina	Assistant Professor	No
6.	Mrs. Soma Sircar Dasgupta	Assistant Professor	No
7.	Mr. Aruna Malik	Assistant Professor	No
8.	Mrs. Sheetal Sehgal	Assistant Professor	No
9.	Mrs. Pramila Joshi	Assistant Professor	No
10.	Mrs. Muntaha Ahmad	Assistant Professor	No
11.	Dr. (Mrs.) Smitha Jha	Assistant Professor	No
12.	Mr. Anurag Joshi	Assistant Professor	No
13.	Mrs. Priti Sharma	Assistant Professor	No
14.	Dr. Charu Wahi	Assistant Professor	No
15.	Mrs. Seema Sharma	Assistant Professor	No
16.	Dr. Bharat Bhushan Sagar	Assistant Professor	No
17.	Mr. Umair Ujala	Assistant Professor	No
18.	Mr. Sanjay Kumar	Assistant Professor	No
19.	Mrs. Lipika Jha	Associate Lecturer	No
20.	Mr. Rakesh Singh	Associate Lecturer	No
Department of Management			
21.	Dr. (Mrs.) Asha Prasad	Professor	No
22.	Dr. (Mrs.) Vandna Sharma	Associate Professor	No
23.	Dr. (Mrs.) Meenakshi Sharma	Associate Professor	No
24.	Mrs. Rachana Pratik	Assistant Professor	No
25.	Ms. Harpreet Charanjit	Assistant Professor	No
26.	Mrs. Ritu Gandhi	Assistant Professor	No
27.	Mrs. Preety Bajaj	Assistant Professor	No
28.	Dr. Arun Mittal	Assistant Professor	No
29.	Dr. (Ms.) Monika Bisht	Assistant Professor	No
30.	Dr. Abhishek Singh	Assistant Professor	No
31.	Dr. (Mrs.) Suparna Dutta	Associate Professor	No
Department of Animation & Multimedia			
32.	Dr. Niket Mehta	Assistant Professor	No
33.	Mr. Partha Acharya	Assistant Professor	No
34.	Mr. AroopKerketta	Assistant Professor	No
35.	Mr. Kiran A. Shetti	Sr. Animation Trainer	No
36.	Mr. Lalit Mohan Bhatt	Editor	No
37.	Mr. Rahul Dora	Tech. Superintendent	No
38.	Mr. Obed H. Longvah	Cinematographer	No
39.	Mr. Manoj Kumar	Animator	No



6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Vandana Bhattacharjee	HoD CSE BIT, Mesra, Ranchi	Chairman
2.	Dr. Abhinav Dinesh	Director, BIT Jaipur Campus, Contact No. 9928075104 E Mail ID: abhinavdinesh@bitmesra.ac.in	Internal Member
3.	Dr. Asha Prasad	Director, BIT Noida Campus, Contact No. 9910190317 E Mail ID: directornoida@bitmesra.ac.in	Internal Member
4.	Dr. Madhvi Sinha	Associate Professor Computer Science Dept. BIT Jaipur Campus, Contact No. 9314642971 E Mail: madhavisinha@bitmesra.ac.in	Internal Member
5.	Dr. Vibhuti Pandya	Assistant Professor Animation & Multimedia Dept. BIT Jaipur Campus, Contact No. 9351372183 E Mail: vibhutipandya@bitmesra.ac.in	Internal Member
6.	Mr. Gautam Kumar Goswami	Goswami, Assistant Professor- Animation & Multimedia Dept. BIT Jaipur Campus, Contact No. 982810204 E-Mail: gautamgoswami@bitmesra.ac.in	Internal Member
7.	Ms. Soma Sircar Dasgupta	Assistant Professor Computer Science Dept. & Coordinator, A&M Dept. BIT Noida Contact No. 9871112315 E Mail: bitnoidaam@bitmesra.ac.in	Internal Member
8.	Mr. Lalit Mohan Bhatt	Editor & Asso. Coordinator, A&M Dept. BIT Noida, Contact No. 9871090589 E Mail: bhatt@bitmesra.ac.in	Internal Member
9.	Dr. Niket Mehta Assistant Professor	Assistant Professor Animation & Multimedia Dept. BIT Mesra, Noida Campus, Contact No. 9350555195 E-Mail: niket@bitmesra.ac.in	Internal Member
10.	Prof. Chinmay Mehta	Retd. Prof. & Dean- Faculty of Fine Arts, Rajasthan University, Jaipur (Expertise in Art & Design) Contact No. 9829065205 Email ID: chinmaysmehta@gmail.com	External Member
11.	Mr. Chandra Shekher	Independent Writer & Film Maker New Delhi (Expertise in Documentary Films, Media & Communication), Contact No. 9810680172 Email ID: chandra.shekher899@googlemail.co	Members from Industry
12.	Mr. Praveen Chrispugg	Creative Director, Idea Heavens Studios, Chennai (Expertise Animation & Visual Effects) Contact No. 9884583319 Email ID: praveen.navaneethar@gmail.com	Members from Industry

Sr. No.	Name of the Member	Designation	Role
13.	Mr. Sandeep Nandi	Sr. UI/ UX Designer Naukri.com New Delhi, (Expertise in UI/UX Design) Contact No. 9599265350 Email ID: bits.nandi@gmail.com	Members from Industry
14.	Mr. Rajiv Chilaka	Founder, Green Gold Animation Pvt. Ltd. Hyderabad (Expertise in TV Children Content, Storytelling & Animation Cartoon Series) Contact No, 4044361900 Email: rajiv.chilaka@greengold.tv	Members from Industry
15.	Mr. Ajay Joshi	Independent Media Consultant, New Delhi Former Consultant of Animation & Multimedia Dept. BIT Noida and Jaipur Campus (Expertise in TV Broadcast, Animation, Gaming, Visual Effects & New Media technologies) Contact No. 8076831876 Email ID: maildelhi@gmail.com	Members from Industry

SECTION 7

OTHER INFORMATION

7.1 Achievements of Students :

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1.	Abhinav Bisht	First Position, Poster Competition	BIT Noida	08.03.21

7.2 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Mr Saurabh Jain - Ex vice president Paytm and founder fun2do labs	29-6-2021	
2	Mr. Rajat Pandit-A Visual Development Artist	30.6.2021	



Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
3.	Mr. Vishnu Murthy - Art Director and Studio Head, Gamitronics , Hyderabad	28-10-2020	
4.	Mr. Guru Sharath - Lead Animator, Gamitronics, Hyderabad	28-10-2021	

7.3 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Dr. Amresh Kumar Assistant Professor IIM Bodh Gaya	Dr. Amresh Kumar completed his Ph.D. from BIT Noida Campus in 2018. He is an Assistant Professor – Marketing at IIM Bodh Gaya. Prior to this position he has served FIIB, Delhi and Symbiosis, Pune as Assistant Professor of Marketing.
2.	Swati Khanna MCA 2009-2012, Sapient	Currently employed as Senior Associate in Sapient and working for a project with Shell Energy MO Squad. She has been working in ETRM and CTRM domain for last 3 years while serving clients like Uniper and Johnson Matthey.
3.	Divya Dang MBA 2010-2012, Cloud Analogy	She is senior HR at Cloud Analogy. She brings over 9 years of rich experience providing leadership support and assistance across various sectors.
4.	Varun Malik BAM 2005 Batch Executive Producer, Disney Hotstar	An active creator and coordinator of audio visual teams across cities and program categories. Varun has handled all kinds of content – from cookery shows to reality TV. Is Exec. Producer to the TV show “Hostages season 2” at Disney-Hotstar.
5.	Nikhil Joshi Co-Founder, BAM 2006 Batch Digital Jalebi	An entrepreneur and team builder, Nikhil co-founded “Digital Jalebi”. He has rapidly made a name for the brand in India and abroad.
6	Apoorv Singh Karki, BAM 2007 TV Show Director	Director of the highest voted and rated Web show of the country “ASPIRANTS” Made over 3 Billion impressions post its release. His other popular TV shows as director: College Romance,Flames, Engineering Girls,The Aam Aadmi Family.



Sr.No	Name, Batch and Affiliation	Short Description
7	Mr. Deepak Kumar MBA Zonal Head, Allahabad Bank	Zonal Head at Allahabad Bank. Mr. Deepak completed his MBA from BIT-Noida Campus in Marketing and Finance in the year 2005. Prior to the current position, He has worked with the same organisation as AGM for around 11 Years.
8	Ms. Puja Kumari MBA 2007-09 Sr. Manager – HR, NTPC	She is currently working as Sr. Manager - HR in NTPC and has been awarded NHRDN Young HR Icon - 2019.

8. Any other relevant information

Placement details:

Course	Number of students	Total number of students placed	Name of the company	CTC	Number of students
MCA	15	7	Cognizant	401986	1
			Infosys Ltd.	670000	1
			InMovido Technology	120000	2
			A U Small Finance Bank	350000	2
			Coats Digital	480000	1
MBA	14	6	ICICI Prudential Life Insurance	400000	1
			ICICI Securities Ltd	405376	3
			Byju's	1000000	2

Ph.D. Degree awarded to

- Ms. Charu Wahi, (Roll No. Ph.D/143/2009) on the topic "Secured Routing Protocol for Mobile Ad-Hoc Network" on February, 9 2021
 - Mr. Siva Suryanarayana Ch. (Ph.D./IT/1053/2011) on the topic "Analysis of Software Cost Estimation Techniques Using Soft Computing" on April 16, 2021.
 - Ms. Shalini Puri (Ph.D/CS/10051/12) on the topic "An Efficient Bi – Lingual Document Classification Model using Fuzzy Approach" on January, 18 2021.
- Dr. Niket Mehta, Assistant professor, invited to be one of the evaluators for the Toyathon-2021 Grand Finale held online on 22, 23, 24 June 2021 organised by Ministry of Education's Innovation Cell and AICTE. On first two days he mentored and evaluated the teams along with four judges from different institutes.
 - An online National level Poster competition 2021 was organized by Dr. Niket Mehta for school students of class X, XI, XII on the theme of blessings of life. (20th July 2021)
 - Dr. Niket Mehta organised BIT Noida International Animation Film Festival in 2020. Participation from countries such as India, Romania, United Kingdom, Thailand, Spain and France. Website: <https://bitnoidafilmfestival.blogspot.com/> (1st July to 31st July 2020. Concluded on 15th August 2020).
 - Dr. Niket Mehta organised World Animation Day on 28th October 2020 where two expert animators from the industry interacted with the students.

9. Special Covid Initiatives, if any

Department of Animation and Multimedia made a short animation film to popularise and spread awareness of hygiene measures and social distancing.



BIT Mesra Off Campus : Patna

SECTION 1

DEPARTMENTAL PROFILE



1. About the Campus:

Birla Institute of Technology Patna Campus came into existence in the year 2006 with the initiative of Government of Bihar with a vision to provide quality education for the students of Bihar who wishes to pursue their career in technical education. By far, BIT Patna is one of the best equipped, technically sound professional colleges in the state of Bihar. The campus is well networked. The infrastructure includes 25 Acres of academic space. BIT Patna is committed to provide state-of-the-art facilities to its students.

BIT Patna Campus seeks to attract the best students from diverse background and offer them an excellent educational experience. It offers more flexibility and choice to the students in the academic programmes, option of extra- and co-curricular activities, personality development, life-skills and career planning as the part of holistic development.

The Campus strives to achieve excellence in Teaching, Research and Consultancy by creating an environment in which the faculty and students

share a passion for creating, sharing and applying knowledge to continuously improve the quality of education. To keep abreast with latest pedagogy the Institute organizes various International and National Seminar/conferences/ workshops/ FDP/ Short term courses/ Guest lecture etc from time to time.

Programmes Offered at BIT Patna Campus:

BIT Patna provides Four Years Bachelor of Technology (B.Tech.) in 06 disciplines, namely EEE, ECE, CSE, IT, MECHANICAL & CIVIL Engineering. The total intake capacity of B.Tech. programme is 300, in which 50% seats are reserved for the HOME STATE (Bihar).

BIT Patna also provides Three Years Bachelor of Business Administration (BBA), Bachelor of Computer Applications (BCA).

It also provides Two Years Masters of Business Applications (MBA), Masters of Technology (M.Tech.) in CSE & ECE (Wireless Communications) and Ph.D. Programme in Science, Engineering and Management.

SECTION 2

SEMINAR / CONFERENCE

2.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	MANAGEMENT COLLOQUIUM – 2021	Dr. Vijay Agrawal	BIT, Mesra Off Campuses Patna & Noida	19/03/2021-20/03/2021



2.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Paramjit Kour	ICONN 2021	Self	Physics and Nanotechnology, SRM Institute of Science and Technology (SRMIST)	SRM Institute of Science and Technology Kattankulathur, Chennai - 603203 Tamil Nadu - India	01-02-2021 to 03-02-2021
2.	Dr. Paramjit Kour	APTTMC-2021	NA	Mahatma Gandhi Central University, Motihari, Bihar	Mahatma Gandhi Central University, Motihari, Bihar	28-07-2021 to 03.08.2021
3.	Dr. Paramjit Kour	IUHVTE-2021	NA	AICT, New Delhi	AICT, New Delhi	28-06-2021 to 02-07-2021
4.	Md. Asif Hasan	GUCON-2020	IEEE Industry application society USA	Galgotia university	Greater Noida	2-4 October 2020
5.	Dr. Shradha Kishore	'Guru Dakshita' - 4th Faculty Induction Program	UGC	HRDC, University of Allahabad	Online	26.02.21 - 27.03.21
6.	Dr. Shradha Kishore	Inculcating Universal Human Values in Technical Education	AICTE	AICTE	Online	28.06.21- 2.07.21
7.	Mrs. Adhishree	GUCON-2020	IEEE Industry application society USA	Galgotia University	Greater Noida	2-4 October 2020
8.	Raj Kumar Mishra	NCMMM-2020	TEQIP-3	NIT Jamshedpur	ONLINE	29th & 30th August, 2020
9.	Kumar Nikhil	AICTE Training and Learning (ATAL) Academy	AICTE	BIT, Mesra, Ranchi	ONLINE	28-06-2021- 02-07-2021
10.	Dr. Mayank Singh	"Inculcating Universal Human Values in Technical Education	NA	AICTE	ONLINE	19-4-21 - 23-4-21
11.	Dr. Mayank Singh	"Faculty induction program"	NA	NITTTR Bhopal	ONLINE	16.11.2020- 11.12.2020
12.	Dr. Mayank Singh	"Smart Grid: Implementation, challenges and Avenues"	NA	IIIT Bhagalpur	ONLINE	14.04.2021- 18.04.2021
13.	Dr. P.C. Srivastava	F.D.P. on Mathematical approaches in Mechanics	-	Department of Mathematics, I.I.T Indore	Department of Mathematics, I.I.T Indore	24 Dec 2020 to 31 Dec 2020.
14.	Dr. P.C. Srivastava	F.D.P on Applicability of Mathematical Sciences in Emerging World	-	Invertis University, Bareilly	Invertis University, Bareilly	28 July 2020 to 02 Aug 2020



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Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
15.	Dr. Rajnish Kumar	Workshop on "Scilab"		Sreepathy Institute of Management and Technology with course material provided by Spoken Tutorial Project, IIT Bombay	Sreepathy Institute of Management and Technology	21-09-2020 to 25-09-2020
16.	Dr. Rajnish Kumar	ATAL FDP on Advancements in Coputaional Fluid Dynamics using FLUIDYN		Alliance University	Alliance University	07-06-2021 to 11-06-2021
17.	Dr. P. Singh	Inculcating Universal human values in Technical Education		AICTE, New Delhi	AICTE, New Delhi	21-06-2021 to 25-06-2021
18.	S. K. Chatterjee	FDP (Refresher course on Deep Learning).	AICTE/ ISTE	BIT, Mesra, Ranchi	Dept. of CSE	14.12.2020 – 19.12.2020
19.	Dr. Ravi Shankar Pandey	Inculcating Universal Human Values in Technical Education	AICTE	AICTE	OnLine	21June, 25 June 2021
20.	Dr. Ajit Kumar Keshri	UGC sponsored two week Refresher Course in Information Technology	UGC	UGC-Human Resource Development Centre, Ranchi University, Ranchi	Online	Jan. 07, 2021 – Jan. 20, 2021
21.	Dr. Ajit Kumar Keshri	One week FDP on the theme " Inculcating Universal Human Values in Technical Education"	AICTE	AICTE	Online	June 21, 2021 – June 25, 2021
22.	Dr. Ayan Kumar Das	Conference: 8th ACSS International Doctoral Symposium	BIT Mesra, Patna campus	University of Calcutta	Kolkata	9-10 April, 2021
23.	Dr. Ayan Kumar Das	FDP: AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Quantum Computing"	NA	BIT Mesra	Mesra, Ranchi (Online)	21-25 June 2021
24.	Dr. Ratnesh Mishra	5 Days FDP on Quantum Computing	AICTE Training And Learning (ATAL) Academy Online Elementary	GOVERNMENT COLLEGE OF ENGINEERING, Sengipatti, Thanjavur	On-Line	from 21.06.2021 to 25.06.2021
25.	Dr. Ratnesh Mishra	Virtual Global Summit On Artificial Intelligence: Responsible AI for Social Empowerment (RAISE00)	Ministry of Information & Technology Got. Of India	Ministry of Information & Technology Got. Of India	On-Line	Oct. 5-9,2020.



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
26.	Dr. Ratnesh Mishra	6 days AICTE Sponsored On-Line Short Term Training Program on "Cyber Security & Forensic"	AICTE	Department of CSE and ECE of Sri Aurobindo Technology Indore	On-Line	12-17 October 2020
27.	Dr. Ratnesh Mishra	TEQIP-III Sponsored three days National Webinar workshop on "Transforming Pedagogy in India"	TEQIP-III	NIT Jamshedpur	On-line	01-03 August 2020
28.	Dr. Ratnesh Mishra	International Webinar on " Covid-19 Pademic: Crises and aftermath"	Department of Biochemistry and Biochemical Engineering JIBB ,	Sam Higginbottom University of Agriculture , Technology And Sciences	On-line	July 20-21,2020
29.	Dr. Ratnesh Mishra	International Webinar on " Emerging Trends in Computer Science & Information Technology"	Department of Computer Science & Information Technology, (VIAET,0	Sam Higginbottom University of Agriculture , Technology And Sciences	Om-line	July 10-11,2020.
30.	Sheel Shalini	5 days FDP on Inculcating UHV conducted	BIT Patna	AICTE	online	28th June-2nd July
31.	Sheel Shalini	International Conference on Computational Techniques ICCT-2021	Self	Dept of CSE, Invertis University, Bareilly and CSI Allahabad Chapter	online	January 22-23th,2021
32.	Sheel Shalini	5 days FDP on IOT and Cloud Applications	Self	Dept of Information Science and engineering, Dayananda Sagar Academy of Technology & Management, Bangalore	Online	July 06-10, 2020
33.	Sheel Shalini	6 days FDP on Intelligent Systems	Self	Dept of CSE, Invertis University, Bareilly	Online	29th June-4th July, 2020
34.	Kanhaiya Lal	One week FDP on Artificial Intelligence and M/C learning in Healthcare	Teqip-III,BIT Mesra	ECE and BIOEngg,BIT Mesra	Online	27th July – 31 July, 2020
35.	Dr. Sweta Kumari	Inculcating Universal Human Values in Technical Education	AICTE	AICTE	Online	26.04.2021 to 30.04.2021



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
36.	Dr. Sweta Kumari	Security and Privacy Challenges in Computing paradigms (SPCCP-2020)	TEQUIP-III Sponsored	NIT Jalandhar	Online	01.09.2020 to 05.09.2020
37.	Dr. Sweta Kumari	Artificial Intelligence and Machine Learning in Healthcare	TEQUIP-III	BIT Mesra, Ranchi	Online	27.07.2020 to 31.07.2020
38.	Mr. Chandan Kumar	Incorporating Universal Human Value in education	FREE	AICTE	New Delhi	21.06.21 to 25.06.21
39.	Dr. Anand Kumar	Welding and fabrication of high strength steel for modern power plant	FREE	IIT Bhubaneswar	Bhubaneswar	21.06.21to 25.06.21
40.	Dr. Somen Mandal	Incorporating Universal Human Value in education	FREE	AICTE	New Delhi	07.06.21 to 11.06.21
41.	Dr. Somen Mandal	Thermal Analysis of Discontinuity In Deposited Bead	FREE	NIT Jaipur	Jaipur	10-12 Dec, 2020
42.	Dr. S.K. Pradhan	ICONN-2021(Int.conf.)	Self	SRM Univ	SRM Univ Chennai	01-03 February 2021
43.	Dr. S.K. Pradhan	STC on Hybrid manf. process Opportunities & challenges	NA	NIT Jalandher	NIT Jalandher	06-10 July 2020
44.	Dr. S.K. Pradhan	STC on Advances in design & manf. Engg.	Self	Mech.Engg.NIT Patna	NIT Patna	03-07 August2020
45.	Dr. S.K. Pradhan	FDP on Solar energy utilization-2020	Self	Mech. Engg. NIT Patna	NIT Patna	14-18 September 2020
46.	Dr. Amit Kumar	Sustainable Product Design and Manufacturing, organized by School of Mechanical Engineering	Free	Shri Mata Vaishno Devi University	Karta, Jammu	15-21 April, 2021
47.	Dr. Anish	"Inculcating Universal Human Values in Technical Education"	BIT	All India Council for Technical Education (AICTE)	Online	19th April to 23rd April 2021
48.	Dr. Angshuman Mandal	1st Online International Conference on Recent Advances in Computational and Experimental Mechanics (ICRACEM 2020)		Indian Institute of Technology Kharagpur	Online	September 4-6, 2020
49.	Dr. Angshuman Mandal	Orientation towards Technical Education & Curriculum Aspects (Module 1 of 8 Module Online Course)		National Initiative for Technical Teachers Training (NITTT) Under AICTE	Online	10 September, 2020 to 11 November 2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
50.	Dr. Angshuman Mandal	Professional Ethics & Sustainability (Module 2 of 8 Module Online Course)		National Initiative for Technical Teachers Training (NITTT) Under AICTE	Online	10 September 2020 to 11 November 2020
51.	Dr. Angshuman Mandal	Communication Skills, Modes and Knowledge Dissemination		National Initiative for Technical Teachers Training Under AICTE	Online	10 September 2020 to 11 November 2020
52.	Bandana Mahto	One day Workshop on "Application of Remote Sensing and GIS in Civil Engineering"		Dr. B.R. Ambedkar NIT Jalandhar, Punjab, India.	Online	4 July, 2020
53.	Bandana Mahto	Four-Day e-FDP on "Application of Remote Sensing and GIS in Civil Engineering"		Silicon Institute of Technology, Sambalpur, Odisha, India	Online	7 July, 2020 - 10 July, 2020
54.	Bandana Mahto	Two-Day Webinar on "Water Resources: Engineering, Planning and Tools"		BIT Sindri, Dhanbad, India & Floodkon Consultants	Online	22 August, 2020 - 23 August, 2020
55.	Bandana Mahto	Online FDP on "GIS & Remote Sensing"		AICTE Training and Learning (ATAL) Academy	Online mode at Siksha 'O' Anusandhan	5 October, 2020 to 9 October, 2020
56.	Bandana Mahto	Online FDP on "GIS & Remote Sensing"		AICTE Training and Learning (ATAL) Academy	Online mode at Goa University	12 October, 2020 to 16 October, 2020
57.	Dr. Sunil Kumar Pandey	Inculcating Universal Human Values in Technical Education	AICTE	All India Council for Technical Education	Online	28th June, 2021 to 2nd July, 2021
58.	Mr. Sultan Khan	Inculcating Universal Human Values in Technical Education	AICTE	All India Council for Technical Education	Online	28th June, 2021 to 2nd July, 2021
59.	Dr. Sohini Ghosh	Skill Development and e-learning in Post Covid-19 Age	Advantage Care	Advantage Care	Online	27th June, 2021.
60.	Dr. Sohini Ghosh	Implementation of NEP 2020	BIT Mesra	BIT Mesra	Online	3rd April, 2021.
61.	Dr. Ashish Mohan Dubey	Universal Human Values for DEEKSHARMBH Student Induction Program	AICTE	Department of Mechanical Engineering, NIT Patna.	Online	November 23-27, 2020.
62.	Dr. Sohini Ghosh	Copyright Issues in Academics	BIT Mesra	BIT Mesra	Online (MS-Teams)	17th August, 2020.



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
63.	Dr. Ashish Mohan Dubey	ICT Tools for Teaching, Learning Process and Institute	Ministry of Electronics and Information Technology (MeitY), Government of India	Electronics & ICT Academies of NIT Patna, MNIT Jaipur, PDPM IITDM Jabalpur, IIT Guwahati and IIT Roorkee	Online	August, 10-21, 2020
64.	Dr. Sushil Kumar	ICT Tools for Teaching, Learning Process and Institute	Ministry of Electronics and Information Technology (MeitY), Government of India	Electronics & ICT Academies of NIT Patna, MNIT Jaipur, PDPM IITDM Jabalpur, IIT Guwahati and IIT Roorkee	Online	August, 10-21, 2020
65.	Dr. Sushil Kumar	Negotiation Skills: Negotiate and Resolve Conflict	Macquarie University	Coursera	Online	August 13, 2020
66.	Dr. Ashish Mohan Dubey	"Impactful Teaching & Student Engagement Education"	Uttarakhand Science Education & Research Centre (USERC) and Vibha, Vigyan Bharti Dehradun.	Centre for Continuing Education, UPES, Dehradun In association with Uttarakhand Science Education & Research Centre (USERC) and Vibha, Vigyan Bharti Dehradun.	Online	August, 04-09, 2020
67.	Dr. Sohini Ghosh	Inspiring Leadership through Emotional Intelligence	Case Western Reserve University, Ohio, USA.	Coursera	Online	11th July, 2020.

SECTION 3

RESEARCH PUBLICATIONS

3.1 Publications in Journals :

1. K.P. Tiwary, F.Ali, R.K. Mishra, S.K. Choubey, K Sharma (2020); Influence of Nickel on Structural and Opticle behaviour of Cadmium Sulphide nanoparticles; Journal of Ovonic Research 16(4),235-243.
2. K.P. Tiwary, F.Ali, R.K. Mishra, S.K. Choubey, K Sharma (2021); Doping effect of Ni²⁺ ion on Structural, Morphological and Optical properties of Zinc Sulphide Nanoparticle Synthesized by assisted method; Optic 227, 166045.
3. K P Tiwary, F Ali, SK Choubey, RK Mishra, K Sharma (2021). Doping effect of Ni²⁺ ion on structural, morphological and optical properties of Zinc sulfide nanoparticles synthesized by microwave assisted method. Optik 227, 166045.
4. K P Tiwary, F. Ali, R K Mishra, S K Choubey, K Sharma (2020). Influence of Nickel on structural and optical behaviour of cadmium sulphide nanoparticles. Journal of Ovonic Research 16 (4), 235 -243.
5. P. Kour, S.K. Pradhan, R. Pandey, R.K. Singh, P. Kumar and M. Kar, 2020, Effect of Fe Concentration on Ferroelectric and Magnetic Properties of Lead Iron Niobate, Journal of Electronic Materials, 49(9), pp.5631-5637
6. Hasan, MA, Parida, SK. Adaptive modulation index based controller for suppression of



- circulating current in parallel inverters of autonomous microgrid. *Int Trans Electr Energ Syst.* 2020;e12701.
7. Shradha Kishore, Vijaya Laxmi – “Modeling, analysis and experimental evaluation of boundary threshold limits for Maglev system’ *International Journal of Dynamics and Control*, September 2020. <https://doi.org/10.1007/s40435-020-00619-w>
 8. Adhishree Srivastava, S.K Parida, “Adaptive Protection Strategy in a Microgrid Under Disparate Operating Modes”, *Electric Power Components and Systems*, Taylor and Francis, Vol. 48, issue 8, pp. 781-798, Oct, 2020.
 9. K.P. Tiwary, Firdaus ali, S.K. Choubey, R K Mishra, K. Sharma, “Doping effect of Ni²⁺ ion on structural, morphological and optical properties of zinc sulfide nanoparticles synthesized by microwave assisted method”, *Optik* 227(2021) 166045.
 10. Kumar Nikhil, Dr. Vijaya Laxmi, Dr. Dinesh Chandra, “Designing Controller using Stable Krylov Subspace Method”, *Psychology and Education*, Vol. 57, No.- 9, pp. 5046-5053, Nov, 2020.
 11. Shailendra Kumar and Prakash Chandra Srivastava (2020) An Initial Value Technique for the solution of fifth order Singularly Perturbed Boundary Value Problem *Journal of International Academy of Physical Sciences India*, Vol. 24 (2020) P.P. 313-322. (ISSN No. 0974 – 9373).
 12. The paper entitled “A Reward Based Formal Model for Distributed Software Defined Networks”, authored by Dr. R.S. Pandey, Vivek Wireless Personal Communications, Springer, <https://doi.org/10.1007/s11277-020-07733-15> August 2020
 13. The paper entitled A Semantic Model of Web Service Choreography with Space Based QoS”, authored by Dr. R.S. Pandey, *Int. J. Advanced Networking and Applications* Volume: 12
 14. The paper entitled Load balancing for software-defined network: a review”, authored by Dr. R.S. Pandey, Vivek Srivastav, Received 27 Nov 2019, Accepted 16 Apr 2021, Published online: 27 Apr *International Journal of Computers and Applications* Taylor & Francis
 15. Kanika Thakur & Kanhaiya Lal, “Student Intelligence analysis: A data mining approach” *Solid state technology*, ISSN: 0038-111X, 2020, vol 63 no. 2s (2020), pp 2961-2981.(Scopus)
 16. Mishra, Bimal Kumar, Ajit Kumar Keshri, Dinesh Kumar Saini, Syeda Ayesha, Binay Kumar Mishra, and Yerra Shankar Rao. “Mathematical model, forecast and analysis on the spread of COVID-19.” *Chaos, Solitons & Fractals* (2021): 110995. (SCI Indexed, Impact Factor: 5.944) <https://doi.org/10.1016/j.chaos.2021.110995>
 17. Ayan Kumar Das, Sidra Kalam, Chiranjeev Kumar, Ditipriya Sinha. “TLCoV- An automated Covid-19 screening model using Transfer Learning from Chest X-ray images”, in *Chaos, Solitons & Fractals*, Elsevier, Vol. 144, doi: <https://doi.org/10.1016/j.chaos.2021.110713>, Impact Factor: 3.764, SCI Indexed
 18. Ayan Kumar Das, Sidra Kalam, Nausheen Sahar, Ditipriya Sinha, “UCFL: User Categorization using Fuzzy Logic towards PUF based Two-Phase Authentication of Fog assisted IoT devices”, in *Computers and Security*, Elsevier, Vol. 97, doi: <https://doi.org/10.1016/j.cose.2020.101938>, Impact Factor: 3.579, SCI-E Indexed, Listed in ABDC journal list, Category-A, 2020.
 19. Milan Dholey, Ditipriya Sinha, Sankar Mukherjee, Ayan Kumar Das, Sudip Kumar Sahana, “A Novel Broadcast Network Design for Routing in Mobile Ad-Hoc Network”, in *IEEE Access*, Vol. 8, 188269-188283, Impact Factor: 3.745, SCI-E Indexed, doi: 10.1109/ACCESS.2020.3030802, 2020.
 20. Raj Vikram, Ditipriya Sinha, Debashis De, Ayan Kumar Das, “EEFFL: energy efficient data forwarding for forest fire detection using localization technique in wireless sensor network”, in *Wireless Network*, Springer, <https://doi.org/10.1007/s11276-020-02393-1>, Impact Factor: 2.659, SCI Indexed, 2020
 21. Raj Vikram, Ditipriya Sinha, Debasish De, Ayan Kumar Das, “PAFF: predictive analytics on forest fire using compressed sensing based localized Ad Hoc wireless sensor networks”, in *AIHC*, Springer, DOI: 10.1007/s12652-020-02238, Impact Factor: 4.594, SCI-E Indexed, 2020.
 22. P. Bhardwaj, and R.K. Badhai, (2020). Compact wideband folded strip monopole antenna for brain stroke detection. *International Journal of Microwave and Wireless Technologies*, 1-10. doi:10.1017/S1759078720001579.



23. Megha Dadel, Zeba Parween, Shweta Srivastava, "Compact UWB MIMO Antennas with High Isolation", IETE Journal of Research, 2021, pp. 1-8.
24. Shahir Uddin, Tarannum Parveen, M. A. Hassan, Dharmendra K. Singh, "Design and analysis of Optical parameters of hybrid solid core PCF", International Journal of Analytical and Applied Chemistry, vol.6, no.2, pp.37-48, 2020
25. Chandan Kumar, Arbind Kumar, "Static Analysis of Elastically Supported Isotropic Sandwich Plate under Various Types of Transverse Load", Solid state Technology, Vol. 64 No.2(2021), pp- 7950-7970.
26. P Kour, SK Pradhan, R Pandey, RK Singh, P Kumar, M Kar (2020) Effect of Fe concentration on Ferroelectric and Magnetic properties of Lead Iron Niobate. Journal of Electronic Materials 49 (9), 5631-5637.
27. Amit Kumar, V S Chauhan, R Kumar, K Prasad, Electromagnetic radiation detection in cement-mortar/lead zirconate titanate composites using drop-weight impact technique, Construction and Building Materials, 273 122022 (2021).
28. S K Sharma, Amit Kumar, V S Chauhan, R Kiran, R Kumar, Electromagnetic radiation detection from cubical mortar sample and its theoretical model, Materials Science & Engineering B, 260 114638 (2020).
29. Amit Kumar, A Kumar, K Prasad, Power generation characteristics of 0.50 (Ba_{0.7}Ca_{0.3}) TiO₃-0.50Ba (Zr_{0.2}Ti_{0.8}) O₃/PVDF nanocomposites under impact loading, Journal of Materials Science: Materials in Electronics, 31(15) 12708-12714 (2020).
30. Kumar, G., & Agrawal, V. (2021). An Empirical Analysis on Determinants of Financial Leverage of Listed Manufacturing Firms of India. Turkish Online Journal of Qualitative Inquiry (TOJQI), 12(3), 1366-1397.
31. Reetika Sehgal, Prateek Khanna, Mayank Malviya A.M. Dubey (2021), "Shopping Safety Practices Mutate Consumer Buying Behaviour during COVID-19 Pandemic" in Vision: The Journal of Business Perspective. SAGE Publication. DOI: <https://doi.org/10.1177/09722629211010990>
32. Anuradha Krishna., Dr. Sweta, (2021) "Android Based Smart Door Lock Mechanism for Managing Security of Disabled People" PSYCHOLOGY AND EDUCATION, pp- 6341-6345, vol. 58, No. 2.
33. Vivek Srivastava, A.M.Dubey, A.K.Mahanty & S.K.Pandey (2020), "Insurance Market in India- A Critical Study of Life Insurance" in Wesleyan Journal of Research. Vol.13, No.49, pp. 78-89.
34. Ashutosh Shukla, S.K. Pandey & A.M. Dubey (2020), "Determinants of Organizational Learning in a Firm: An Empirical Analysis of Indian IT Industry" in Global Business Review, Vol.21 No.4, pp. 1051-1064. SAGE Publication. ISSN: 09721509. DOI: <https://doi.org/10.1177/0972150918779162>
35. Dr. Sweta, (2020) "Impact Of Cross Cultural Environment On Strategies Of Human Resource Management Practices" Psychology And Education, pp-5745-5749, vol. 57, No. 9.

3.2 Publications in Proceedings:

1. K P Tiwary and Firdaus Ali (2020). Effect of Cu doping on structural and optical properties of II-VI binary compound semiconducting nanoparticles. AIP Conference Proceeding 2276, 020032-6.
2. R K Mishra, Sridhar, Ritikesh Raj, Prashant Kumar, K Sharma, K P Tiwary (2020). Influence of Cu on structural and optical properties of CdTe nanoparticles. AIP Conference Proceeding 2276, 020012-5.
3. A Novel Approach for Human Intelligence Analysis: Using Clustering Technique by Kanika Thakur, Kanhaiya Lal, 2021 2nd International Conference on Intelligent Engineering and Management (ICIEM), pp-139-143, IEEE (ISBN 978-1-6654-4767-6)
4. Ensemble method to predict impact of student intelligent quotient and academic achievement on placement by K Thakur, K Lal, V Kumar, 2021, 2nd International Conference on Intelligent Engineering and Management (ICIEM), pp - 249-253, IEEE(ISBN 978-1-6654-4767-6)
5. Utsav, A. Abhishek, K. Kant and R.K. Badhai, "Unique Identification for Monitoring of COVID-19 Using the Internet of Things (IoT)," 2020 5th International Conference on Computing, Communication and Security (ICCCS), Patna, 2020, pp. 1-5, doi: <https://doi.org/10.1109/ICCCS49678.2020.9276769>.
6. P. Bhardwaj and R. K. Badhai, "Design and Analysis



- of Flexible Microstrip Antenna for Wearable Applications at ISM Band," 2020 IEEE 17th India Council International Conference (INDICON), New Delhi, India, 2020, pp. 1-5, doi: <https://doi.org/10.1109/INDICON49873.2020.9342168>.
7. A. Utsav and R. K. Badhai, "Design of Dual Band Monopole Antenna for WBAN Communication," 2021 6th International Conference for Convergence in Technology (I2CT), 2021, pp. 1-6, doi: <https://doi.org/10.1109/I2CT51068.2021.9417994>
 8. A. Abhishek, Z. Zeya, P. Suraj and R. K. Badhai, "Design of Beam Steering Antenna for 5G at 28GHz Using Butler Matrix," 2020 5th International Conference on Computing, Communication and Security (ICCCS), Patna, India, 2020, pp. 1-4, doi: <https://doi.org/10.1109/ICCCS49678.2020.9276492>.
 3. Ajit Kumar Keshri, "Chapter 4: A Twofold Mathematical Model to Study the Malware Attack of Compromised IoT Botnet on Targeted Networks", Understanding Cyber Threats and Attacks, Bimal Kumar Mishra and Jose R.C Piqueira (Editor), Nova Science, September 2020, pages 225, ISBN: 978-1-53618-336-8.
 4. S.K. Jha, P. Suraj and R.K. Badhai (2020) Bow-Tie Shaped Meander Line UWB Antenna for Underwater Communication. In: Gupta D., Khanna A., Bhattacharyya S., Hassanien A., Anand S., Jaiswal A. (eds) International Conference on Innovative Computing and Communications. Advances in Intelligent Systems and Computing, vol 1165. Springer, Singapore. https://doi.org/10.1007/978-981-15-5113-0_91
 5. Shahiruddin, Kamal Kant, Vishal Kumar, Dharmendra K Singh, M A Hassan, "Monitoring air pollution Based on Internet of Things (IoT) and Interfacing of Microcontroller with VGA display," Proceeding: International Symposium on 5G & Beyond for Rural Upliftment 2020, River Publishers Series in Information Science and Technology, e-ISBN: 9788770222174, July 2020, Denmark
 6. Shahiruddin, Tarannum Perveen, M A Hassan, Dharmendra K Singh, "Analysis of Optical Parameters of Hexagonal Solid Core PCF with Methanol filled inner Cladding ring," Proceeding: International Symposium on 5G & Beyond for Rural Upliftment 2020, River Publishers Series in Information Science and Technology, e-ISBN: 9788770222174, July 2020, Denmark

3.3 Book:

3.3.1 Chapter(s) in Edited Book

1. S Kumar, K P Tiwary (2021). ZnCdS Thin Film: Preparation, Properties and Applications. Emerging Trends in Nanotechnology, Springer Nature, 185-219
2. Mayank Singh, R.C. Jha. A New Approach Based on Indicators for Demand Side Management in Multiobjective Framework. April 2021, In book: Advances in Smart Grid Automation and Industry 4.0, Select Proceedings of ICETSGAI4.0 (pp.729-738) DOI:10.1007/978-981-15-7675-1_73

SECTION 4

AWARD / PATENT / COLLABORATIONS

4.1 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	Dr. Upendra Kumar Dept. of CSE, BIT Patna	A System and a Method for Isolation of Distributed Denial of Service Attack in Internet of Things		May 2021
2.	Dr. Ajit Kumar Keshri	A System and a Method for Quarantine Epidemic Models	Patent No.: 2020103841 (Granted) Patent Office: AU (Australia)	January 2021



SECTION 5

ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

5.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-ordinator	Faculty Co-ordinator	Date / Duration
1.	Online Invited Lecture by Mr Asish Garg, Chief General Manager, ONGC, Tel Bhawan, Dehradun	Kishlay Raj	Dr S.K. Sinha	7th March 21
2.	Publication of Student's Magazine "Oculus 2020"	-	Dr S.K. Sinha	January 21
3.	Xordium (Technical fest organized by Technical club: Electronics and communication) Festivia (Website-Development Hackathon) Eureka (Technical Paper Presentation) E-sports tournament Aluminibes (Webinar on research and Higher studies given by BIT Alununes) YouTube Link - https://www.youtube.com/watch?v=D8BnKdIVc8Q Logic and the Universe	Mr. Harshit Naman	Dr. Ritesh Kumar Badhai	23-26 Jan 2021
4.	Farewell to 2017 Batch	Pushkar Raj, Nishant Kumar Singh & Sidhant Kumar	Dr. A. Mandal	20/06/2021
5.	Live Q&A Session with Soumitra Chakravarti & Arpan Singh	Vivaswan Kaushik & Saurav Kumar Sinha	Dr. Anish, Dr. A. Mandal	13/06/2021
6.	Webinar on Quality Control under good construction Practices in association with JK Cement Ltd.	Saurav Kumar Sinha & Vivaswan Kaushik	Dr. Anish, Dr. A. Mandal, Ms. B. Mahto	5/6/2021
7.	Webinar on Career in Civil Services by Amol Srivastava, IAS	Abhishek Datta	Dr. A Mandal, Ms. B. Mahto	9/2/2021
8.	Republic Day Celebrations & Release of SVADHYAYA (Vol 2)	Sidhant Kumar & Md. Farhan	Ms. B. Mahto	26/01/2021
9.	Workshop on Advanced Structural Analysis/ Finite Element Method by Er. Anjneya	Vivaswan Kaushik & Saurav Kumar Sinha	Dr. Anish	26/12/2020 to 27/12/2020
10.	Orientation Program of 2020 Batch	Saurav Kumar Sinha & Vivaswan Kaushik	Dr. Anish, Dr. A. Mandal, Ms. B. Mahto	25/11/2020
11.	Cultural Night	Rajat Kumar & Himanshu Raj	Ms. B. Mahto	14/11/2020
12.	151st Gandhi Jayanti Celebration & Launch of SVADHYAYA (Vol 1)	Sidhant Kumar & Md. Farhan	Dr. A. Mandal, Ms. B. Mahto	5/11/2020
13.	EDIFICE'20	Abhishek Datta & Manish Kumar	Dr. Anish, Dr. A. Mandal, Ms. B. Mahto	12/09/2020 to 13/09/2020
14.	Virtual Orientation of 2019 Batch	Abhishek Datta & Vivaswan Kaushik	Dr. A. Mandal, Ms. B. Mahto	23/08/2020



Sr. No.	Name of the Activity	Students' Co-ordinator	Faculty Co-ordinator	Date / Duration
15.	Management Colloquium-2021	Meharjabeen Yahya (MBA/15001/20) Anvesha Tannu (MBA/15019/20) Vivek Kumar Deepak (MBA/15021/20)	Convener- Dr. Vijay Agrawal Co. Convener Dr. Ashish Mohan Dubey & Dr. Sohini Ghosh	19/03/2021 & 20/03/2021
16.	Webinar on: Sales and Leadership	Vivek Kumar Deepak (MBA/15021/20)	Dr. Suni Kr. Pandey	27/02/2021
17.	Webinar on: Consumer Insight Towards Sales Orientation and Techniques Pre and Post Covid - 19	Kumari Vanshika (BBA/15009/18) Meharjabeen Yahya (MBA/15001/20)	Dr. Vijay Agrawal	24/10/2021
18.	Webinar on: Introduction To Derivatives Market – Forward and Future	Addena Fatima (BBA/15035/20) Meharjabeen Yahya (MBA/15001/20)	Dr. Vijay Agrawal	17/10/2020
19.	Webinar on: Leveraging Emerging Technologies in a Post Covid World	Arpita Raj (BBA/15030/20) Anvesha Tannu (MBA/15019/20)	Dr. Sohini Ghosh	10/10/2020
20.	Webinar on: Overview of Cyber Security In Present Context	Addena Fatima (BBA/15035/20)	Dr. Sohini Ghosh	03/10/2020
21.	Webinar on: Managerial Skills at Industry 4.0	Anvesha Tannu (MBA/15019/20)	Dr. Sohini Ghosh	26/09/2020
22.	Webinar on: How to Make The Most of Online Learning: Student's Perspective	Meharjabeen Yahya (MBA/15001/20)	Dr. Ashish M. Dubey	20/09/2020
23.	Webinar on: Demographic And Psychographic Analysis	Meharjabeen Yahya (MBA/15001/20)	Dr. Sohini Ghosh	12/09/2020
24.	Webinar on: Skills For Career Development In Post Covid World	Anvesha Tannu (MBA/15019/20)	Dr. Vijay Agrawal & Dr. Sohini Ghosh	05/09/2020
25.	Webinar on: How to Take the Best Out of Your Two Years at B-School	Meharjabeen Yahya (MBA/15001/20)	Dr. Vijay Agrawal & Dr. Sohini Ghosh	29/08/2020

5.2. List of Faculties

Sr. No.	Name	Designation	Teqip Sponsored
1.	Prof. (Dr.) Arbind Kumar	Professor & Director	No
2.	Dr. Anamika Nandan	Assistant Professor	No
3.	Ar. Ashutosh Kumar	Assistant Professor	No
4.	Ar. Nitish Chandra	Assistant Professor	No



Sr. No.	Name	Designation	Teqip Sponsored
5.	Dr. Kaushlendra Sharma	Assistant Professor	No
6.	Dr. Anubha Singh	Assistant Professor	No
7.	Prof. (Dr.) Balram Singh	Professor	No
8.	Dr. Anish	Assistant Professor	No
9.	Ms. Bandana Mahto	Assistant Professor	No
10.	Dr. Angshuman Mandal	Assistant Professor	No
11.	Mr. Bishwas Narayan Singh	Associate Lecturer	No
12.	Dr. Kanhaiya Lal	Assistant Professor	No
13.	Mr. Sujit Kumar Chatterjee	Assistant Professor	No
14.	Mr. Subho Chaudhuri	Associate Professor	No
15.	Ms. Sheel Shalini	Assistant Professor	No
16.	Dr. Ravi Shanker Pandey	Assistant Professor	No
17.	Dr. Subhash Chandra Pandey	Assistant Professor	No
18.	Dr. Ajit Kumar Keshri	Assistant Professor	No
19.	Dr. Ratnesh Mishra	Assistant Professor	No
20.	Mr. Shridhar Kumar	Assistant Professor	No
21.	Dr. Upendra Kumar	Assistant Professor	No
22.	Dr. Ayan Kumar Das	Assistant Professor	No
23.	Mr. Madhup Kumar	Associate Lecturer	No
24.	Mr. Adnan Mahmood	Associate Lecturer	No
25.	Mr. Sanjay Kumar	Assistant Professor	No
26.	Mr. Raj Kumar Mishra	Assistant Professor	No
27.	Mr. Kumar Nikhil	Assistant Professor	No
28.	Dr. Mayank Singh	Assistant Professor	No
29.	Dr. Shradha Kishore	Assistant Professor	No
30.	Mr. Asif Hasan	Assistant Professor	No
31.	Ms. Adhishree	Assistant Professor	No
32.	Dr. Shahiruddin	Assistant Professor	No
33.	Dr. Megha Dadel	Assistant Professor	No
34.	Ms. Shipra	Assistant Professor	No
35.	Mr. Atul Kumar Pandey	Assistant Professor	No
36.	Dr. Ritesh Kumar Badhai	Assistant Professor	No
37.	Dr. Sweta Kumari	Assistant Professor	No
38.	Dr. Priyadarshi Suraj	Assistant Professor	No



Sr. No.	Name	Designation	Teqip Sponsored
39.	Mr. Rajeev Ranjan	Assistant Professor	No
40.	Dr. Vijay Agarwal	Associate Professor	No
41.	Dr. Iftekhar Ahmad	Assistant Professor (Sr. Grade)	No
42.	Dr. Adhip Kumar Mahanty	Assistant Professor (Sr. Grade)	No
43.	Dr. Sweta	Assistant Professor	No
44.	Dr. Ashish Mohan Dubey	Assistant Professor (Sr. Grade)	No
45.	Dr. Sohini Ghosh	Assistant Professor	No
46.	Dr. Amit Raghuvanshi	Assistant Professor	No
47.	Dr. Sunil Kumar Pandey	Assistant Professor (Sr. Grade)	No
48.	Dr. Sushil Kumar	Asst. Professor	No
49.	Mr. Sultan Khan	Asst. Professor	No
50.	Dr. Rajnish Kumar	Assistant Professor	No
51.	Dr. Prakash Chandra Srivastava	Assistant Professor	No
52.	Dr. Premlata Singh	Assistant Professor	No
53.	Mr. Girish Pathak	Assistant Professor	No
54.	Dr. Anand Kumar	Assistant Professor	No
55.	Dr. Sudipta Kishore Pradhan	Assistant Professor	No
56.	Dr. Soumen Mandal	Assistant Professor	No
57.	Mr. Chandan Kumar	Assistant Professor	No
58.	Dr. Ravi Shankar Anand	Assistant Professor	No
59.	Dr. Amit Kumar	Assistant Professor	No
60.	Dr. Sanjay Kumar Sinha	Associate Professor	No
61.	Dr. Binay Bhushan	Assistant Professor	No
62.	Dr. Kamala Pati Tiwary	Assistant Professor	No
63.	Dr. Paramjit Kour	Assistant Professor	No
64.	Prof. (Dr.) Shree Prakash Lal	Professor	No
65.	Mr. Kapil Deo Prasad	Assistant Professor	No
66.	Dr. Manish Oraon	Assistant Professor	No
67.	Dr. Prashant Prakash	Assistant Professor	No
68.	Mr. Thakur Abhinav Amar	Assistant Professor	No
69.	Mr. Suresh Singh Yadav	Associate Lecturer	No

5.3 List of Adjunct Faculties



Sr. No.	Name	Designation	Affiliation
1.	Mr. R.A.Khan	Visiting Faculty	Patna University, Patna
2.	Mrs. Shalini Agarwal	Visiting Faculty	International Business Management, Patna
3.	Mrs. Garima Dubey	Visiting Faculty	Patna Womens College, Patna

5.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Vijay Agrawal	Associate Professor	Special Invitee

SECTION 6

OTHER INFORMATION

6.1 Student Entrepreneurship activities/Start-ups

Sr. No	Name of Student	Source of Funding	Title of Start up	Short Description	Mentor/In charge
1.	Devkanth	Govt. of Bihar Rs. 10,00000/- +2,00000/-	ELECTRODRIVE TECHNOLOGIES Private Limited (Automobile)	Three wheelers Electric and solar based vehicles.	Dr. Upendra Kumar
2.	Israrul Haque Khan	Govt. of Bihar Rs. 10,00000/- +200000	MAGSYS QUANTECH Private Limited	Purified watter for rural areas. (Purified machine to sell water)	Dr. Upendra Kumar
3.	Mrs. Arti Verma	Govt. of Bihar Rs. 10,00000/- +2,00000/-	MYHOMESTAY TRIPS private limited(Tourism)	Promote tourism in Bihar.	Dr. Upendra Kumar

6.2 Publication by students, if any

Publications in Journals :

1. Ananya Yadav, Shradha Kishore, Vishal-
'Intelligent Speed Control of DC Motor using
Fuzzy Algorithm' International Research Journal
of Engineering and Technology (IRJET) Volume
8, Issue 5. May2021.
2. Adnan Zafar, Shradha Kishore, Annu Priya
-'Modelling, Simulation of PV Array and MPPT
Control in A Solar Microgrid' International
Research Journal of Engineering and Technology
(IRJET) Volume 8, Issue 5. May2021.
3. Ayan Kumar Das, Sidra Kalam, Chiranjeev



Kumar, DitipriyaSinha. "TLCoV- An automated
Covid-19 screening model using Transfer
Learning from Chest X-ray images", in Chaos,
Solitons & Fractals, Elsevier, Vol. 144, doi:
<https://doi.org/10.1016/j.chaos.2021.110713>,
Impact Factor: 3.764, SCI Indexed.

4. Ayan Kumar Das, Sidra Kalam, NausheenSahar,
Ditipriya Sinha, "UCFL: User Categorization
using Fuzzy Logic towards PUF based Two-Phase
Authentication of Fog assisted IoT devices", in
Computers and Security, Elsevier, Vol. 97, doi:
<https://doi.org/10.1016/j.cose.2020.101938>,
Impact Factor: 3.579, SCI-E Indexed, Listed in
ABDC journal list, Category-A, 2020.

6.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Er. Ajeet Kumar (G.M./IRCON)	19/09/2020	
2.	Er. Kumar Anjaneya (Research Scholar, IIT Kharagpur)	26/12/2020	
3.	Amol Srivastava (IAS)	09/02/2021	
4.	Ajay Shah (Mentor, GSSCORE)	09/02/2021	
5.	Mr. Rameshwar Singh (DGM, Customer Technical Services, JK Cement)	05/06/2021	
6.	Mr. Prashant Singh (Assistant Manager, Customer Technical Services, JK Cement)	05/06/2021	



Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
7.	Er. Soumitra Chakravarti (Alumnus, BIT Mesra, Patna Campus)	13/06/2021	
8.	Er. Arpan Singh (MS Student, IIIT Hyderabad)	13/06/2021	

6.4 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Ankur Dhanuka 2006-10 Batch	Currently serves IOC in Senior Position
2.	Anand 2006-10 Batch	Currently serves NTPC in Senior Position

6.5 Any other relevant information

Sr. No	Particulars	Date	Department/ Co-ordinator
1.	COVID'19 Prevention & Awareness (Pledge ceremony as directed by the concerned department of Govt. of India)	08.10.2020	NSS/ Mr. Shridhar Kumar
2.	World's No Tobacco Day	31.05.2021	NSS/ Mr. Shridhar Kumar
3.	World Environment Day	05.06.2021	NSS / Mr. Shridhar Kumar
4.	International Yoga Day	21.06.2021	Jointly organised by NSS and PT & Games (Mr. Shridhar Kumar/ Mr. S.S. Yadav)
5.	Yoga Practice under FIT India Movement (AICTE)	15 Sessions on every Sunday till 21.06.2021	PT & Games/ Mr. S.S. Yadav
6.	Free On the Spot Registration & Vaccination Camp	04-12 June 2021	NSS / Mr. Shridhar Kumar & Ms. Trisha Kumar

6.6 Infrastructure / Equipment added during the year:

Department of ECE

Infrastructure / Equipment added during the year: total cost: 2454920/-

Maxwell Bridge kit

Industrial thermometer

Delta Modulation demodulation Kit

AM, FM, QPSK, 16 QAM kit

Cogenda TCAD software

IOT setup

Hall effect setup

Digital nanometer



Torque trasducer kit

ALU trainer kit

Resistance kit

70 MHz 4 channel oscilloscope

Semiconductor bandgap measurement setup

PAM, TDM, PCM, Analog sampling& reconstruction kit

6.7 Special Covid Initiatives, if any

1. BIT Patna provided a COVID CARE MEDICAL KIT to all its employees during the second wave of pandemic at their door-step.
2. A Whatsapp group was created under the guidance of Registrar, BIT Mesra and Director BIT Patna with medical officers of BIT Mesra to provide 24x7 assistance/counselling if needed by any employee concerned.
3. Dept. of NSS BIT Patna organized a free on the Spot Registration & Vaccination Camp for its employee, students and their family members from 04-12 June 2021.



University Polytechnic

SECTION 1

DEPARTMENTAL PROFILE

1. About the Department / Campus

With a vision to prepare students of Jharkhand as skilled personality, University Polytechnic, BIT Mesra Ranchi was established in 2001 in collaboration with Govt of Jharkhand. The objective of this Polytechnic is to foster curiosity, creativity, sound knowledge of education, imagination in young minds and to inculcate skills such as design mindset, computational thinking, adaptive learning, physical computation etc to become the best student, employee

or entrepreneur in future. The University Polytechnic has Diploma in Engineering Program in six disciplines and Bachelor in Medical Lab Technology Program. This Polytechnic has well equipped laboratories besides very lively library, vibrant Training & Placement cell, National Social Service wing and Sports & Games facilities. The Faculties and Staff members are bound to create conducive atmosphere for imparting quality education through active participation for all round development of students.

SECTION 2

RESEARCH PROJECTS

2.1 Sponsored Projects (Research and Consultancy)

a) Ongoing Projects

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Unnat Bharat Abhiyan	Mr Manoj Kumar Jha	MHR	1st September 2018	2 lakh	2 years

SECTION 3

SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses Conducted

Sr. No.	Title of Seminar/ Conference/ Short Term Training Courses/ Workshop	Coordinator	Faculty Members involved	Date of Event	No of Registered staff of BIT Mesra/Date of Event
1.	Mechanical workshop (Skill development Program)	Mr Prabhat Ranjan Mahto	Mr Rakesh, Mr Ramkesh, Mr Manoj Kumar, Mrs Rekha Kumari	2ndFeb 2021 To 26Feb 2021	30
2.	Computer Science workshop (Skill development Program)	Mr Niraj Kumar	Dr G M Ansari, Mr Abhay Kumar, Mr Ramnish Sinha, Mr Rajender Mahto	2ndFeb 2021 To 26Feb 2021	69
3	Electrical workshop (Skill development Program)	Mr NK Mukherjee	Dr Meena Singh, Mrs Nirupam, Md M Hossain	2ndFeb 2021 To 26Feb 2021	54
4	Civil workshop (Skill development Program)	Mr. Abhay Kumar, Dr. Chanchal Kumar Mishra		2ndFeb 2021 To 26Feb 2021	41



Sr. No.	Title of Seminar/ Conference/ Short Term Training Courses/ Workshop	Coordinator	Faculty Members involved	Date of Event	No of Registered staff of BIT Mesra/Date of Event
5	Automobile workshop (Skill development Program)	Mr. Shankar Kumar	Mr. RK Prasad	2ndFeb 2021 To 26Feb 2021	39
	Total Trained staff				233
	Title of Seminar/ Conference/Short Term Course/Workshop	Coordinator	Funding/ Sponsoring Agency	Date of Event	
6	Solar Water Pumping	Mr Prabhat Ranjan Mahto, Mr Rakesh, MR Ramkesh	MSME TDC PPDC Meerut and NISE	16th March 2021 to 9th April 2021	

3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. (Mrs) Neeru Singh	In Silico Approaches in Drug Delivery	AICTE	Department of Pharmaceutical Sciences and Tech. BIT Mesra	Online	11th June – 17th June 2021
2	Dr Sumna Kumari	Learn by Doing using Simulation Software: Ansys Mechanical & CFD		ARK Infosolutions Pvt. Ltd.	Online	3rd June 2021
3	Mrs Rekha Kumari	Inculcating Universal Human Values in Technical Education.	AICTE	AICTE	Online	26thApril to 30thApril
4	Dr Sumna Kumari	Technology Commercialisation		Turnip Innovations	Online	15th Feb 2021
5	Dr. Trilok Kumar Parashar	Faculty Development Programme (FDP) on Entrepreneurship		Xavier Institute of Social Service (XISS),	Online	1stFeb to13th Feb 2021
6	Dr. Satish Kumar	Naya Bharat E-Series	Ministry of Education, Govt. of India	IIT, Delhi	Online	25th Nov to 9th May 2021
7	Dr. Meena Singh & Dr. Trilok Kumar Parashar	Modern Pedagogy for Engineering Teachers in Making Digital India	AICTE-ISTE	Bhartiya Institute of Engineering & Technology, Sikar.	Online	23rd Nov. to 28th Nov. 2020
8	Dr. Meena Singh & Dr. Tilok Kumar Parashar	Modern Pedagogy for Teaching and Research Methods	AICTE-ISTE	Bhartiya Institute of Engineering & Technology, Sikar.	Online	2nd Nov. to 7th Nov. 2020



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
9	Dr. Satish Kumar	A One Day National Level Webinar on Selective Transformation of Biomass-Derived Substrates to Chemicals	Dr.M.G.R Educational and Research Institute	Department of Chemistry, Dr. M.G.R Educational and Research Institute	Online	9th October 2020.
10	Dr Shambhu Sharan Kumar	One Week Online Short Term Training Program on "Emerging Tools and Technologies in Material Sc. and Engg";		Applied Phy. Dept. Jabalpur Engg. College, Jabalpur (M.P.) India.	Online	21stSep to 25Sep2020
11	Dr. Satish Kumar	Faculty Development Programme on Trends in Chemical Sciences: Challenges and opportunities in the coming decade.	Central University of Jharkhand Ranchi.	Deptt of Chemistry Central University of Jharkhand	Online	21st to 26th September 2020
12	Dr. Satish Kumar	Webinar of Unnat Bharat Abhiyan	Govt. of India	NIT, Jamshedpur	Online	12thSeptember 2020
13	Dr. Satish Kumar	Webinar on "Impact of COVID-19 on mental health and well being".	TEQIP	Department of Bioengineering, Birla Institute of Technology, Mesra, Ranchi	Online	8th August, 2020

SECTION 4

RESEARCH PUBLICATIONS

4.1 Publications in Journals :

- Ashish Kumar, Jayprakash Pandey, Satish Kumar (Nov2020) Biosorptive removal of Arsenate by Ficus Benghalensis Stem Powder from Aqueous Medium, Indian Journal of Advances in Chemical Science, Volume 8, Issue 4, 206-215. [ISSN 2320-0928]
- Ashish Kumar, Jayprakash Pandey, Satish Kumar, (Nov. 2020)Biosorptive removal of arsenite and arsenate from aqueous medium using Dalbergia Sissoo Stem Powder: kinetics, thermodynamic and Mechanistic Aspects, International Journal of Engineering and Science Invention, Volume 9, Issue 11,41-50. [ISSN: 2319-6734]
- Wael A. Mahdi, Afzal Hussain, Mohammad A. Altamimi, Sultan Alshehri, Sarah I. Bukhari, and Mohd Neyaz Ahsan (2021). Experimental Solubility, Thermodynamic/ Computational Validations, and GastroPlus-Based In Silico Prediction for Subcutaneous Delivery of Rifampicin. AAPS PharmSciTech 22 (3):116, 2021
- Sultan Alshehri, Afzal Hussain, Mohd Neyaz Ahsan, Raisuddin Ali and Mohd Usman Mohd Siddique (2021). Thermodynamic, Computational solubility parameters in organic solvents and In silico Gastroplus based prediction of ketoconazole. ACS Omega, Vol. 6, P.No. 5033-5045

**SECTION 5****ACTIVITIES/ FACULTY MEMBERS / DOS / DAS****5.1 Departmental Students' Activities**

(Please arrange in reverse chronological order: Latest first)

Sr. No.	Name of the Activity	Students' Co-ordinator	Faculty Co-ordinator	Date / Duration
1.	Project on E-commerce website on line marketing	Subham Kumar	Dr. GM Ansari	January 2021 to April 2021

5.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. S.S Solanki	Professor and Director	No
2.	Mr. Devendra Kumar Jain	Assistant Professor	No
3.	Dr. Shambhu Sharan Kumar	Assistant Professor	No
4.	Mr. Ramkesh	Assistant Professor	No
5.	Dr. (Mrs.) Meena Singh	Assistant Professor	No
6.	Dr. G.M. Ansari	Assistant Professor	No
7.	Mr. Abhay Kumar	Assistant Professor	No
8.	Dr. (Mrs.) Sandhya Rani	Assistant Professor	No
9.	Dr. Satish Kumar	Assistant Professor	No
10.	Dr. T. K. Parashar	Assistant Professor	No
11.	Dr. (Mrs.) Neeru Singh	Assistant Professor	No
12.	Mr. Pradeep Toppo	Assistant Professor	No
13.	Mr. Ramnish Sinha	Assistant Professor	No
14.	Mr. Rajendra Mahto	Assistant Professor	No
15.	Dr. (Mrs.) Sumana	Assistant Professor	No
16.	Mrs. Rekha Kumari	Assistant Professor	No
17.	Dr. Mohd. Neyaz Ahsan	Assistant Professor	No
18.	Dr. Chanchal Kumar Mishra	Assistant Professor	No
19.	Mr. Manoj Kumar	Assistant Professor	No
20.	Mr. Niraj Kumar	Assistant Professor	No
21.	Ms. Nirupam	Assistant Professor	No
22.	Dr. Rohit Kamal Chatterjee	Assistant Professor	No
23.	Mr. Rakesh	Associate Lecturer	No
24.	Mr. N. K. Mukherjee	Associate Lecturer	No
25.	Mr. Maqubool Hossain	Associate Lecturer	No
26.	Mr. Narendra Kumar Singh	Physical Training Instructor	No



Sr. No.	Name	Designation	TEQIP Sponsored
27.	Mr. Sanjay Jha	Teaching Assistant	No
28.	Mr. Shankar Kumar	Teaching Assistant	No
29.	Mr. P.R. Mahto	Teaching Assistant	No

5.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Prof. (Dr.) S.S. Solanki	Director(Ex-Officio)	Chairman
2.	Mr. Manoj Kumar	Assistant Professor, Automobile Engineering	Internal
3.	Mrs. Rekha Kumari	Assistant Professor, Mechanical (Production) Engineering	Internal
4.	Mr. Ramkesh	Assistant Professor, Mechanical (Production) Engineering	Internal
5.	Mr. Rakesh	Assistant Professor, Mechanical Engineering	Internal
6.	Mr. P. Toppo	Assistant Professor, Automobile Engineering	Internal
7.	Dr. D.P. Mishra	H.O.D., Mechanical Engineering, B.I.T. Mesra	External
8.	Dr. Joyjeet Ghose	H.O.D., Production Engineering, B.I.T. Mesra	External
9.	Mr. Pradeep Kr. Gupta	DGM, TATA MOTORS LTD., Jamshedpur	External
10.	Mr. Pranay Kant Prasad	DGM, TATA MOTORS LTD., Jamshedpur	External
11.	Mr. Dhiman Das	MindTree, Tatisilwai, Ranchi	External
12.	Dr. S. Chakraborty	H.O.D., Electrical & Electronics Engineering, B.I.T. Mesra	External
13.	Dr. Vandana Bhattacharyya	H.O.D., Computer Science Engineering, B.I.T. Mesra	External
14.	Prof. (Dr.) S.S. Solanki	H.O.D., Electronics & Communication Engineering, B.I.T. Mesra	External
15.	Dr. S. Ganguly	H.O.D., Pharmaceutical Sciences & Technology, B.I.T. Mesra	External
16.	Mr. Randhir Prasad	DGM, TATA Motors Ltd., Jamshedpur	External
17.	Mr. N.C. Aggarwal	CEO, Meditron, Ranchi	External
18.	Mr. Praveen Kumar	Admin & T M, BSNL, Ranchi	External
19.	Dr. K.K. Das	CCL, Head of Path., Gandhinagar Hospital	External
20.	Dr. Meena Singh	Assistant Professor, Electrical & Electronics Engineering	Internal
21.	Dr. Sumana Kumari	Assistant Professor, Electronics & Communication Engineering	Internal
22.	Dr. G.M. Ansari	Assistant Professor, Computer Science Engineering	Internal
23.	Dr. Neyaz Ahsan	Assistant Professor, BMLT	Internal



SECTION 6

OTHER INFORMATION

6.1 Achievements of Student

Training & Placement Cell (Diploma)

Company	Project on E-commerce website on line marketing
Spicer (Gala) India Ltd	05
Mahle Filter, Chennai	14
Ceat Tyre, Halol, Gujrat	28
Gabriel India Ltd, Gurgaon	40
Bajaj Auto Limited	25
Mahle Anand Thermal System, Noida	08
Mahle Anand Thermal System, Pune	06
Gabriel India Ltd, Hosur (TN)	02
Total	128

Campus Placement 2021 (BMLT)

Placement/Name of Organization	Number of Students Placed
T & M Service consultancy Pvt. Ltd., RIMS, Ranchi	03
Pulse Diagnostic, Bariatu, Ranchi	01
Blood Bank, Medanta, Irba, Ranchi	02
Rani Hospital, Ranchi	02
CORE Diagnostic, Medical College, Palamu	02
CORE Diagnostic, Medical College, Hazaribagh	01
Pathkind Laboratory, Near Kokar, Ranchi	01
Total	12

6.2 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Suchit Kumar Singh BMLT (2015-18)	Established two Pathological labs at Ranchi (2020) and at Chatra (2021)
2.	Saurabh Suman BMLT (2015-18)	Forensic Expert in Crime Team, Delhi Police after completing Master in Forensic Science
3.	Dr Dipen Kr Rajak Diploma (2005-08)	<ul style="list-style-type: none"> PhD from ISM Dhanbad (2017) 70 Publications 08 Patents & 02 Designs 02 Books & 10 Book Chapters Young Scientist Award (2019) Presently working at Sandeep Institute of Technology & Research Center, Nashik Best session Paper award in International Conference(2015) in Thailand.



Sr. No	Name, Batch and Affiliation	Short Description
4.	Ashish Ranjan Diploma in Comp Science (2004-08)	<ul style="list-style-type: none"> B.Tech Employed with TCS, Oracle Presently Team Leader @ Oracle
5	Nilesh Kr Rajwar Diploma in Automobile	<ul style="list-style-type: none"> B.E, Assistant Executive Engineer in T.V.N.L
6	Mayank Pahan Diploma in Computer (2007-11)	B.E, CSE Employed at Nath Cor Pvt Limited. Team Leader.
7	Sanjay Kumar Diploma in Mechanical (2004-2008)	B. Tech Team leader in Accenture India Pvt Ltd.
8	Kaushik Suman Diploma in EEE (2011-15)	B.E in Electrical Developer in Cognizant Technology Solution

6.3 Any other relevant information

Construction Work Completed.

1. "Centre for Automotive Training and maintenance" in the area of 8000 Sq ft
2. Microbiology Lab in 1200 Sq ft area for BMLT programme
3. Clinical Chemistry Lab in 1200Sq ft area for BMLT programme
 - Dr Shambhu Sharan Kumar has been nominated as Member of Editorial Board: for International Journal of Engineering and Applied Sciences- IJEAS, ISSN: 2394-3661.
 - Dr. Satish Kumar served as an Joint Organizing Secretary in an International webinar titled "Recent Advances of Science and Technology during Coronaviruses Pandemic", organized by Department of Chemistry, Birla Institute of Technology, Mesra, Ranchi from July 18-20, 2020.
 - Dr. Satish Kumar appointed as Reviewer of International 'Journal of Colloid and Interface Science' published under ELSEVIER (Impact Factor-7.489).
 - Dr. Satish Kumar appointed as Reviewer of International Journal 'Environmental Monitoring and Assessment' published under SPRINGER (Impact factor-1.959).
 - Dr. Satish Kumar appointed as Reviewer of National Innovation Foundation, Gujrat (2021)
 - Dr. Satish Kumar selected as an Expert of two national level committees 1. Water quality and treatment, 2. Waste water treatment and reuse, constituted by Indian Water Work Association, Mumbai.
 - Invited talk on "Java and Web Technologies" and "Cyber Security" by Mr. Ashish Ranjan, Team Leader, World Pay on May 31,2021 and June 01,2021 respectively organized by departments of CS, ECE and EEE.
 - Invited talk on "How to be a part of any PSU or Government Organisation?" by Ms. Pooja Prasad, Junior Electrical Engineer, Bihar State Power Holding Company Limited on June 06, 2021 organized by departments of EEE, ECE and CS.
 - Invited talk on "Complexity Analysis of Algorithms" by Mr. Nitish Bhardwaj, Senior Software Engineer, Service Now on June 20, 2021 organized by departments of ECE, EEE and CS .
 - Workshop on "Overview of PCB Designing" by Mr. Niraj Kumar, Assistant Professor, CSE on June 29, 2021 organized for the students of ECE, EEE And CS.
 - Dr Neeru Singh has organized Plantation drive, International Yoga day, Speech on Independence day, Poster making competition, debate and Essay Competition under NSS in online mode.

BIT DISPENSARY



About the Dispensary

The present BIT Dispensary is 20 bedded including 8 bedded two isolation wards, a fully functional Health Care Centre providing facilities to BIT students, faculty, staff members and their families and also to villagers around the Campus. The Dispensary functions in all the 3 shifts (Round the clock 24x7) including Sundays & Holidays and attends to all Out Patient Department, In-Patient Department & Emergency Cases. Presently, it is manned by 4 Allopathy & 1 Homeopathy Doctors who work in general shift along with 20 paramedical staff.

We also have an Eye Specialist, a Dentist, a Physiotherapist, a Dermatologist and Gynecologist as visiting

specialists every week for health care service. The workforce, as per the need and work-load is quite insufficient and we are in the process of appointing and adding up few more Doctors & Paramedics to provide better services. The Dispensary essentially functions as a primary health centre and patients who need specialized treatment or hospitalization are referred to multi specialty hospitals.

All students and staff members & their two dependent children are covered under Mediclaim Policy by SBI General Insurance Company. The Health Centre is equipped with 4 Ambulances, available in all the 3 shifts fitted with Oxygen Cylinders & First Aid kits.

Details of Dispensary Staff Members

S.N	Dispensary Staffs	Contact No
Medical Officers		
1.	Dr. Mona Deepa	7763855564
2.	Dr. Anju Kumari	7319905831
3.	Dr. Madhu Pramanik	9546745091
4.	Dr. Dharmendra Kumar	9576174033
Visiting Specialists		Specialization
1.	Dr. Rishi Raj	Dentist
2.	Dr. Renu Sinha	Gynaecology
3.	Dr. R.P. Choudhary	Skin Specialist
Visiting Specialists		Specialization
4.	Dr. Promod Kumar	Physiotherapist
5.	Dr. M.E. Asraf	Eye Specialist

6.	Dr. Subhodh Kumar	Psychiatrist
Homeopathy Physician		Contact No
1.	Dr. P. Mohanty	9430118376
Pharmacists		Store Keepers
1.	Mr. A.K. Tarun	Mr. Mahesh Kumar Sinha
2.	Mr. B.P. Yadav	Mr. Rajeev Ranjan
3.	Mr. Umesh Prasad	
Nursing Staff		X-Ray Technician
1.	Mrs. Renu Kumar	Mr. Kaleshwar Mahto
2.	Ms. Suman Lovely Tigga	
3.	Mr. Ram Egbal Singh	Lab Technician
4.	Mrs. Sanju Devi	Mr. Surendra Kumar Singh



वार्षिक प्रतिवेदन 2020-2021

5.	Mrs. Pinki Kachhap	
	Dressing Staff	Office Attendant
1.	Mrs. Janki Devi	Mr. Bhuneshwar Munda (Peon)
ATTENDANTS		
1.	Mr. Radhe Shyam Mahto	Medical Lab Attendant- (IV)
2.	Mr. Saurav Kumar	Attendant-(IV)
3.	Mr. Jitendra Kumar	Ward Attendant-(A-IV)
4.	Mr. Akash Kumar	Ward Attendant-(IV)
5.	Mr. Bijay Kumar Lakra	Office Attendant-(IV)
6.	Mrs. Sunita Pallai	Ward Attendant-(IV)
7.	Mrs. Nupur Tigga	Attendant-(IV) Nursing
8.	Mrs. Parmila Devi	Attendant-(IV)
8.	Mrs. Aruna Goswami	Ward Attendant-(V)
9.	Mrs. Pramila Devi	Attendant-(IV)
10.	Mr. Anil Kumar	Attendant-(IV)
Sweepers		
1.	Mrs. Gita Devi	Safai Karamchhari (A-V)
2.	Mr. Rajendra Munda	Safai Karamchhari (A-V)
3.	Mr. Mukesh Ram	Safai Karamchhari (A-V)

Facilities and Services:-

1. Out-Patient Department Services including part time specialists viz. Skin Obs/Gynecologist, Dental Surgeon & Physiotherapist.

2. In-Patient Service for minor ailments.
3. Emergency Services
4. Homeopathy Clinic
5. Dental Clinic
6. Physiotherapy Unit
7. X-Ray Unit
8. ECG Unit
9. Isolation Ward 02 (One each for male & female Patients)
10. Dressing unit
11. 02 Ventilators are available
12. 03 Oxygen concentrators & portable oxygen cylinders are available.

Service Details

Total Number of patients :	21888
Number of outdoor patients treated & supplied medicines:	18820
Male :	11069
Female:	7751
Student:	375
Staff members & their Dependents:	17665
Non-entitled cases:	880
Number of patients admitted & treated:	139
Number of patients referred :	170
Number of ECGs :	50
Number of X-Rays :	52
Number of Covid -19 Vaccinations:- Till Date -	2684



COVID CASE REPORTING

SL. No.	Description		BIT MESRA		Vaccinated in campus till date	TOTAL			
1	Total cases till date	Faculty	33		2684	53			
		Staff	20						
		Family Members of Faculty/ Staff	17						
2	Number of Active Case Load	Faculty	00			2684	00		
		Staff	00						
		Family Members of Faculty/ Staff	0						
3	Number of Recovered	Faculty	30				2684	48	
		Staff	18						
		Family Members of Faculty/ Staff	17						
4	Number & Name of Deceased	Faculty	02	1) Dr. Sankha Bhaduri (Mechanical) 2) Santosh Kr. Jha (Bio Engineering)				2684	05
		Staff	03	1) Arun Singh (Mechanical) 2) Rajeev Sharma (Remote Sensing) 3) Naween Jha (General Store)					
		Family Members of Faculty/ Staff	01	1) Mr. N.K. Ghose					



National Cadet Corps

1. About NCC:

The 3 Jhar CTC, NCC BIT Mesra provides the enrolled cadets with training equivalent to army training for intellectual, physical, emotional & social development of the cadets.

The cadets are taught and groomed to inculcate qualities of leadership along with feelings of patriotism.

No. of units in NCC: 3 JHAR COMPO TECH COY, NCC BIT MESRA

2. No. of students enrolled:

2019 – 70

2020 – 66

Total Students: 136

Boys:

K19 – 59

K20 – 57

Girls:

K19 – 11

K20 – 09

3. Activities:

- Flag Hoisting ceremony on Republic Day and Independence Day (i.e., 26th January and 15th Aug 2021)
- Actively participated in the Yoga Diwas event (21 June 2021).
- Participated in a Painting Competition organized by the Indian Army (1 Jul – 31 Aug 21)
- Virtual Meeting with Lt. Col Amit Kumar on the occasion of Kargil Vijay Diwas (i.e., 26 July 2021).
- Participated in Online Poetry Competition (10th Aug 2021) on the occasion of Azadi ka Amrit Mahostav
- Participated in online Rashtriya Gan on the Flagship of Azadi Ki Amrit Mohastav in the Month of July-August 2021
- Participated in online Painting Competition by the Indian Army in the month of July, 2021

NCC Team:

Sr. No	Rank	Name of Faculty Member / NCC Officer	Department / NCC	Designation
1	LT. COLONEL	Praveen Thakur	NCC	CO
2	LT	Dr. Kishore Kumar Senapati	CSE	ANO
3	SUB	Shashi Kumar	NCC	Sr. JCO
4	NB. SUB	SK Sahoo	NCC	JCO
5	CHM	Suresh Chandra	NCC	OR
6	HAV	Sudeep Tyagi	NCC	OR
7	HAV	Ishwar Singh	NCC	OR

5. Two recent color Photograph (High Resolution)



Independence Day



A Talk with LT Col. Amit Kumar on Kargil Diwas



National Service Scheme

About the National Service Scheme

The National Service Scheme (N.S.S) is a Central Sector Scheme of Government of India, Ministry of Youth Affairs & Sports. It provides opportunity to the student youth to take part in various government and community service activities & programs. The sole aim of the N.S.S is to provide hands on experience to young students in delivering community service.

Aim of N.S.S BIT Mesra

The program aims to develop a student's personality through community service. The main objective of this program is to instill social welfare in students and to provide service to society without bias. N.S.S volunteers work to ensure that everyone who is needy gets help to enhance their standard of living and lead a life of dignity. BIT Mesra offers N.S.S as an elective subject in all undergraduate programs for 1st and 2nd year students. N.S.S, BIT Mesra organises regular and

special activities in the ten adopted villages namely Rudia, Panchauli, Kenduatoli, Humbai, Mesra East, Mesra West, Neori, Chuttu, Kedal and Nawatoli.

Total number of NSS units: 07

Total number of Volunteers enrolled: 676

- | | |
|------------|-----|
| a) Boys - | 484 |
| b) Girls - | 192 |

Achievements

1. Volunteer Mr. Shivam Kumar selected for the 2021 Republic Day Parade at Rajpath, New Delhi.
2. Secured 4th Position in India to make our Campus Cashless under Digital India Mission and for this our Four Volunteers Mr. Prashant Kumar, Mr. Nitin Agarwal, Ms. Shalini Lala & Mr. Ravi Kumar got Best Volunteers Award by the MHRD at Vigyan Bhavan, New Delhi.

Team N.S.S

S.No	Name of Faculty Member	Department	Designation
1.	Dr. O.P. Pandey	Mechanical Engg.	Program Coordinator
2.	Dr. Abhijeet Nag	Mechanical Engg.	Program Officer
3.	Mr. Pranjal Kumar	Hotel Management and Catering Technology	Program Officer
4.	Dr. Praveen Srivastava	Hotel Management and Catering Technology	Program Officer
5.	Dr. Sanjeet Kumar	Electronics and Communication Engg.	Program Officer
6.	Dr. Prabjot Kaur	Mathematics	Program Officer
7.	Dr. Syeda Darakhshand Jabeen	Mathematics	Program Officer

Student Representatives

S.No	Name of the Student	Position
1.	Mr. Sameep Raj	President

1. Van Mahotsav Week (01.07.20-07.07.20)



A video showcasing the importance of tree plantation was posted on different social media platforms, which garnered wide views and appreciation from all. During this week, NSS Executive Committee members planted the saplings of different medicinal plants like 'neem', 'tulsi', 'aloevera' etc. near their homes and spread awareness regarding the immense benefits such plants provide.



2. International Literacy Day (08.09.20)

A video emphasizing the significance of "LITERACY FOR ALL" was streamed on YouTube. The video that garnered about 250 views, brought into light the tireless efforts of VEP volunteers of NSS BIT Mesra that strive hard to impart free of cost quality education to the less privileged students of the adopted villages.

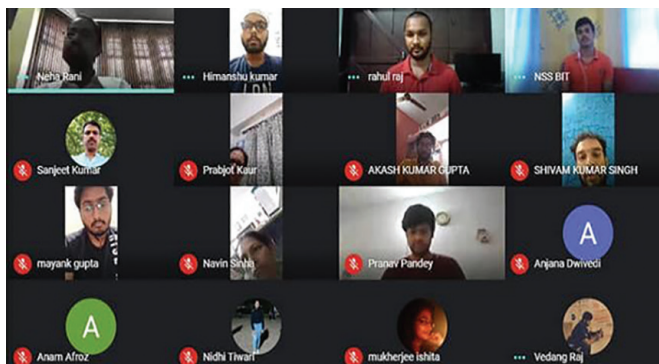


3. Webinar on Blood Donation (08.08.20)

NSS BIT Mesra, in association with Blood Connect Foundation, organized a webinar on the topic "Importance of Blood Donation" on Google Meet platform. The event witnessed a participation of more than 65 NSS volunteers and faculty members and was honoured by the presence of Mr. Vinay Kumar, Regional Director and Dr. Brajesh Kumar, State Coordinator of NSS Unit, Bihar and Jharkhand.



4. Webinar on Health Standards (10.08.20)





A webinar was hosted on the topic "Health Standards During COVID-19 Pandemic" on Google Meet platform by NSS, BIT Mesra. The guest speaker was Dr. Prashant Kumar, MD, D.M (Cardiologist, RIMS). The event was attended by over 50 people. Our health expert shared important measures we should take to improve our health and immunity. He also discussed about the ways to control the spread of COVID-19.

5. Independence Week (08.08.20-15.08.20)

Celebrating the flagship event of Independence Day, following events were conducted by NSS, BIT Mesra

*Chain of Videos by Executive Body members (08.08.20-14.08.20)



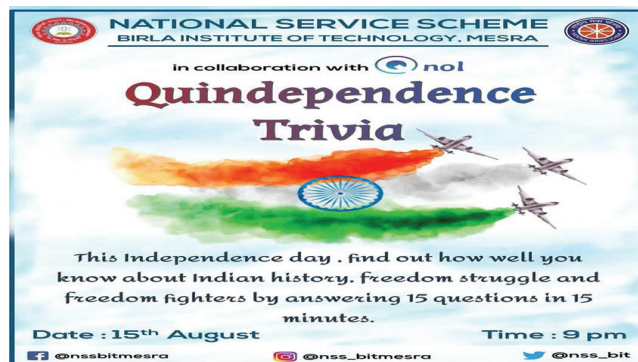
Executive Members filmed videos on different wars fought by India after Independence and how the Indian military forces have strived to preserve our sovereignty and Independence for 75 long years.

*Quiz Competition (15.08.20)

*Webinar on "Atmanirbhar Bharat" (15.08.20)

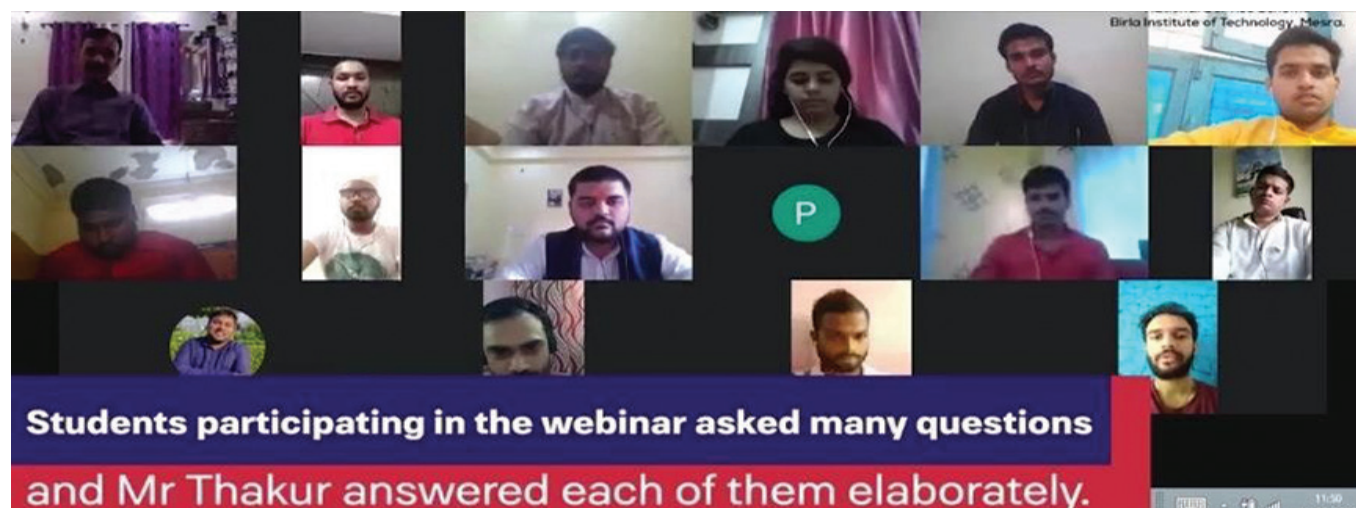
With the Goal of "Atmanirbhar Bharat", NSS, BIT Mesra organized a webinar on the "Role of youth in the making of Atmanirbhar Bharat" on Google Meet platform. Our honourable chief guest Mr Shambhu Thakur, IPS and former IG, Jharkhand Police imparted us with his words of wisdom. There were over 50 participants from various disciplines attending the webinar

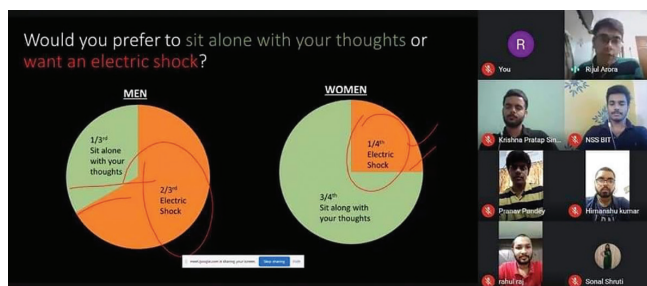
A quiz was conducted by NSS BIT Mesra named "Quindependence Trivia" in collaboration with Qnol about Indian history, freedom struggle and achievements, with a 15 minute-15 questions quiz on 15th August on D2C platform.



R6. Webinar on 'Being a healthy digital citizen' (22.08.20)

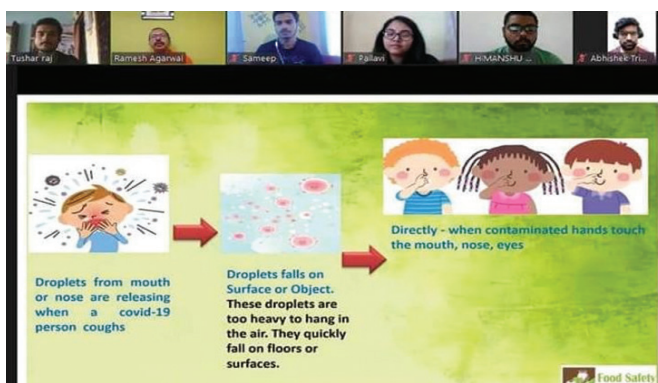
On 22nd August, NSS BIT Mesra organized a webinar on the topic of 'Being a healthy digital citizen' on Google Meet platform. Mr. Rijul Arora, Associate Consultant at EY, a BITS alumnus and an honoured TEDX Speaker was the keynote speaker at the virtual event. The webinar informed about an audience of 50 about the aspects of technology in our lives and was followed by a question-answer session where the audience got their doubts clarified.





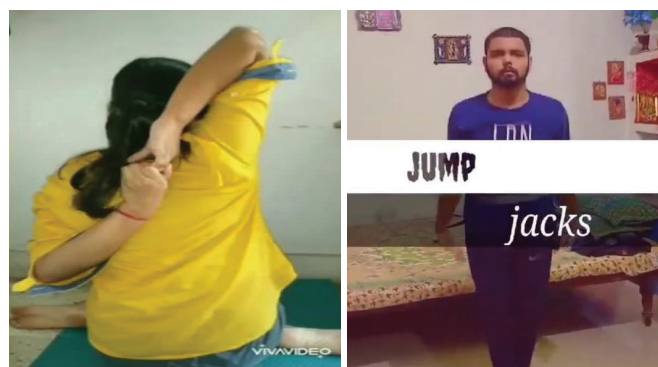
7. Webinar on Food Safety Standards (29.08.20)

NSS BIT Mesra, on 29th August, held a talk on 'Food safety standards during Covid era and immunity' with the guest speaker Mr. Ramesh Agarwal, Co-founder and Chief Operating Officer at Food Safety Works. It was conducted on Zoom Meetings platform. The talk highlighted the topic of immunity in relation to food safety standards which was the need of the hour during the dire situation of Covid. The hour-long talk explained the importance and ways of improving the food safety standards with certain know-hows and thus boosting immunity to protect against infection possibilities. The footfall was over 70.



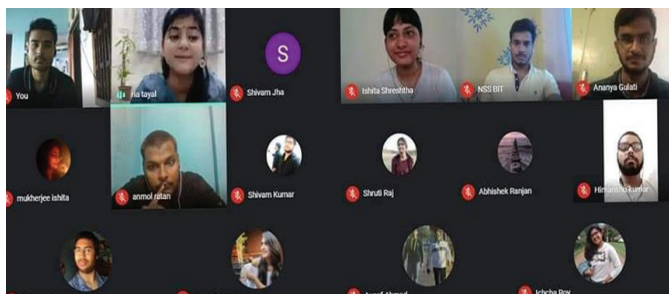
8. Fit India Movement (29.08.20-03.09.20)

Videos were filmed by different NSS Executive Committee members on different types of physical activities and sports that help keep the body fit.



9. Webinar on 'Importance of Mental Health' (05.09.20)

Mental health is important at every stage of life and NSS BIT Mesra upheld this notion about mental health during the trying times of the pandemic by organizing a webinar on 5th September with Ms. Ria Tayal, a social worker and public speaker as the orator at the event to enlighten the spirits of the audience about the significance of mental health in the present scenario. The interactive session was held to help students and all attendees to find ways to cope with the pressure and mental strains aggravated by the outbreak and subsequent conditions. It was attended by over 45 people and was conducted on Google Meet platform.



10. Gandhi Jayanti (02.10.20)

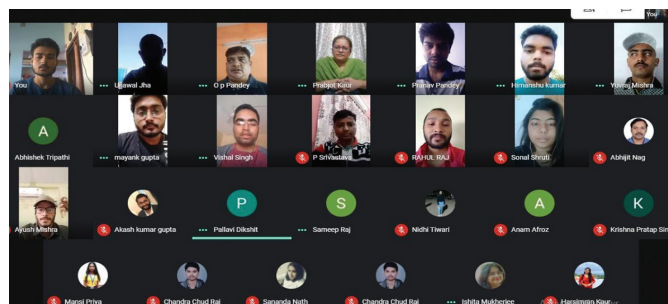
On the auspicious occasion marking the 151st birth anniversary of Mahatma Gandhi, also revered as the 'Father of the Nation', NSS BIT Mesra organized a group discussion on the topic 'Have the dreams of freedom fighters been realised after 75 years of Independence' on Google Meet platform. The discussion instated with remembering the contributions and visions of our freedom fighters and what they stood for. The students participated in the discussion by highlighting Mahatma's prime vision of cleanliness and how it has almost come to fruition but the disparity with the final goal still remains. The discussion concluded with the message of carrying the torch of the dreams of the men and women who laid their lives for our freedom, forward. Footfall was over 70.



11. Group Discussion-'Ek Bharat Shreshth Bharat (31.10.20)

Commemorating the unity legend of our country, the birth anniversary of Sardar Vallabhbhai Patel was celebrated as the National Unity Day on 31st October, NSS BIT Mesra organized an online group discussion session with the students of the institute on the topic 'Ek

Bharat Shreshth Bharat' on Google Meet platform where the interactive session witnessed the ideas of unity people from all over the country carry and also the expression of opinions on how to upkeep these feelings of togetherness alive and keep the ties that bind us all, as a means of getting through the hard times.



12. Special Camp (08.11.20-12.11.20)

With the motive of helping others in need, NSS BIT Mesra organised a special camp which included distribution of basic necessities throughout a week. This included the following-

*Mask and Sanitizer Distribution (06.11.20 & 07.11.20)

The special camp started with a mask and sanitizer distribution in the adopted village of 'Kedal' for 2 days. People of the village were enlightened about the important role of masks and sanitizers in preventing the spread of Corona virus and were encouraged to use them while stepping out.



*Sanitary Napkins Distribution (08.11.20 & 09.11.20)

For the next 2 days, sanitary napkins were distributed amongst the women of Mesra Panchayat. Awareness was spread on the importance of clean menstrual practices and women were encouraged to maintain personal hygiene during menstruation in order to maintain sound health.



*Plantation Drive (10.11.20&12.11.20)

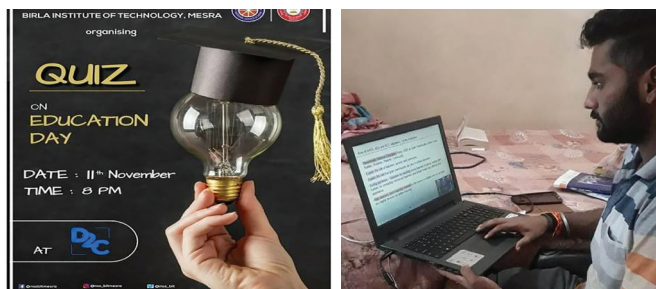
The Special Camp concluded with a plantation drive that was carried out near Hostel-2 in the Institute campus. Over 120 saplings were planted. This was followed by a pledge to conserve the environment by the program officers and Executive Committee members.



*National Education Day (11.11.20)

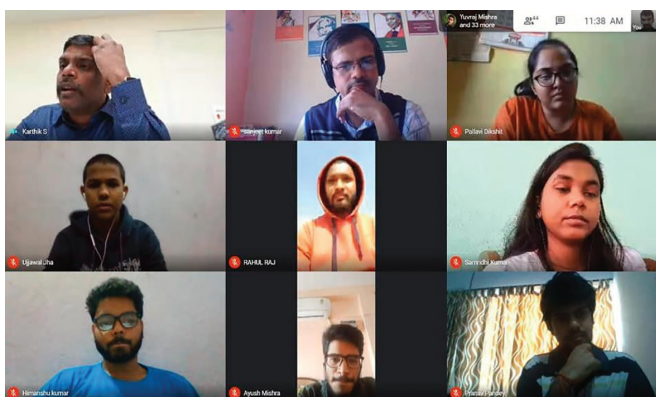
On 11th November, NSS BIT Mesra conducted a quiz competition on the occasion of National Education Day to commemorate the birth anniversary of Maulana Abul Kalam Azad, the first Education Minister of independent

India. The quiz was organized on the Dare 2 Compete platform wherein over 150 participants were questioned based on their knowledge about topics like education in India, it's history and major reforms. The winning participants were acknowledged on NSS BIT Mesra's social media handles.



13. Panel discussion on 'Cyber security and Cyber Education'(22.11.20)

Cyber security is one of the biggest concerns of this century and hence to spread awareness on the topic, NSS BIT Mesra organized a panel discussion on the topic 'Cybersecurity and Cyber Education' on Google Meet platform with the keynote speaker Shri. Karthik S. (IPS), SP Police, Hazaribagh. Three panels took part in the discussion and put forward their views on the topic. With an increase in the number of cyber-crimes, the audience was educated on the ways these crimes are committed and ways to mitigate one directed towards oneself. The audience was also welcomed to interact with the speaker and get doubts about their online habits and manners clarified. The turnout for the event was over 75.



14. Eye Check-up Camp (26.12.20)

Covid-19 also affects the retina. S.S. B.I.T. Mesra organized a free eye check-up camp in collaboration with Conta-care eye Hospital on 26th December '2020. This Campaign was headed by our Programme Coordinator, Dr. O. P. Pandey and more than 200 villagers were benefited.



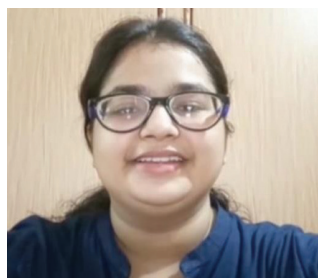
Ayushman Bharat card making Camp:

On 27th December'2020 under the guidance of our Programme Coordinator, Dr. O. P. Pandey, N.S.S. B.I.T. Mesra organised a free Ayushman Bharat card making camp in which more than 100 villagers make their golden card and were made aware about its benefits and usage.



15. Armed Forces Flag Week (01.12.20-07.12.20)

Week-long celebration of the Armed Forces Flag Day was observed by NSS, BIT Mesra to commemorate the efforts and sacrifices of the brave and undeterred line of defence working valiantly to protect the peace and integrity of the nation. NSS executive body members filmed videos spreading awareness about the 7 CAPFs and 3 Military Forces that play a formidable role in maintaining the internal as well as external security of the country.



16. The Slogan Stomer (18.01.21-23.01.21)

NSS BIT Mesra organised a slogan brainstorming event, 'The Slogan Stomer: Hold Your Slogan' from 18th to 23rd January, 2021. The footfall was around 100. The participants prepared a slogan inclusive with a creative artwork on one of 5 topics given beforehand. The audience was also involved in the judging process with weightage given to the support it gathered on social media platforms which upheld the notion of democracy – the perfect feeling for the occasion.



17. Republic Week Celebration (22.01.21-26.01.21)

On the occasion of the 72nd Republic Day, VEP, NSS BIT Mesra celebrated Republic Week by hosting events including speeches and creative work thought up and displayed by the village children. The celebration began with the motive of spreading awareness and igniting patriotism in the village kids on 22nd January and concluded on 26th January during which the works of the kids were shared on social media platforms.



18. Republic Day (26.01.21)

To honour the brave soul Dr. Bhim Rao Ambedkar, who stands as an idol for patriotism, NSS

BIT Mesra organized a 'Republic Day' live event on 26th January on YouTube featuring the life of the legend spoken with pride by an NSS member. The event that covered the story of Dr. B.R Ambedkar garnered over 300 views. The programme was concluded with the National Anthem.



19. Webinar on NEP'20 (14.03.21)

NSS, BIT Mesra organized a webinar on the 'National Education Policy' on 14th March, 2021 on Google Meet platform. The guest speaker, Mr. Sudhakar Upadhyay, Researcher TISS Mumbai enlightened the audience about the directives of the new policy and how it is aimed at improving the quality of Indian education system and answered the questions in the end. Around 60 participants showed up for the event.



20. Azadi Ka Amrit Mahotsav (02.04.21-04.04.21)

A 3-day long observance, 'Azadi Ka Amrit Mahotsav' celebrating the 75 glorious years of Independence was held from 2nd to 4th of April. During the three days of celebration the following events took place:

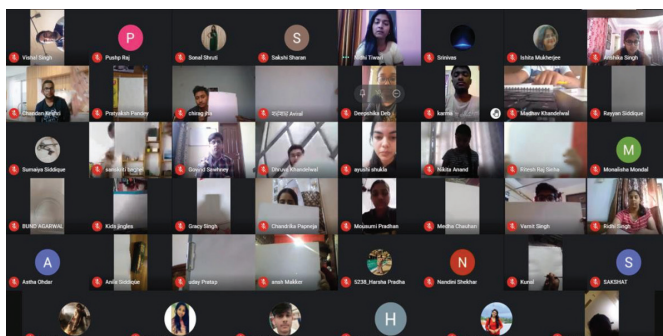
*Webinar (02.04.21)

On the 2nd of April, the programme was inaugurated with an engrossing webinar. The guest speaker was Mr. Aditya Ranjan, CEO JSLPS, who enlightened the audience on the progress the country had made so far. With an attendance of 120+listeners, the programme, held on Webex Meet, was an interactive one with question answer session. The audience got insights into the government system and was also guided on how to be a good citizen and help the country to prosper.



*Patriart (03.04.21)

'PATRIART: The Carnival of Creativity' was the second event of the triad hosted on 3rd April on Google Meet. On account of the significant milestone of entering the 75th year of Independence, NSS BIT Mesra held this visual arts competition. The number of registrations was over 80 and the participants created stunning and surprising art unleashing their creativity on the canvas.



*Abhivyakti (04.04.21)

On 4th April, the concluding event, which was an extempore event was held on Google Meet where students from many different colleges came together to take part in 'Abhivyakti: An extempore competition'. The registrations were over 120 and the participants



performed exceptionally and enthusiastically. This concluded the triad of events under Amrit Mahotsav and made it an unsurprising success.

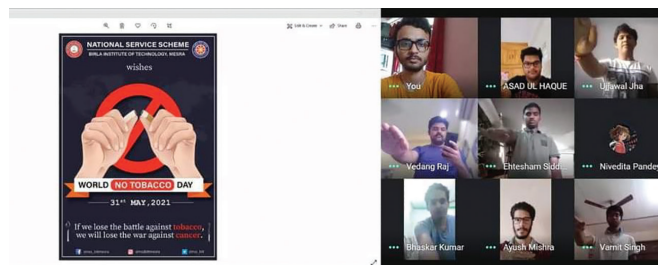
21. Plasma Donation Drive (07.05.21-18.05.21)

NSS BIT Mesra launched an online Plasma Donation Drive from 7th to 18th May wherein an infographic video was published on social media platforms educating the audience about the benefits of being a blood/plasma donor and a form accepting the details of possible donors to reach out to in case of emergencies was also distributed. The total entries were over 30 which were then used for relief purposes.



22. World No Tobacco Day (31.05.21)

On 31st May, NSS BIT Mesra organized a virtual pledge ceremony on Google Meet platform which was attended by well over a 100 students and included the Program Officers, Program Coordinators and Student Executives. The audience was educated about the ills of tobacco consumption and ways to mitigate its influence isolated environments as well as workspaces. The ceremony concluded with a pledge and the audience participated with enthusiasm.





Physical Education and Sports

Sports complex of the institute covers around 1 lakh 10 thousand square meter, approximately (24 acres). The students who are residing inside the campus are using the sports complex for physical fitness, mental fitness, social interaction, and recreation purposes. The facilities provided in sports complex are:

Athletic Track 400-meter	- One
Badminton Courts (Indoor)	- Three
Badminton Courts (Outdoor)	- Two
Basketball Courts	- Three
Cricket Ground	- One
Football Ground	- Two
Hockey Ground	- One
GYM Hall	- One
Multi GYM	- One and Two in girl's hostel
Kabaddi	- Two
Kho-Kho	- One
Table Tennis	- All hostel (Boys & Girls)
Chess	- In all hostel (Boys & Girls)
Lawn Tennis	- Three Moram and three clay
Net Ball	- One
Handball	- Two

GYM hall has dimension of 80 feet x 50 feet used for PT & Games classes during Monsoon & Spring session.

Multi Gym area is 1400 square feet having 'A' class facilities with latest equipment's. Badminton Indoor Hall is used for practice & conducting the Inter hostel & University Tournaments.

Physical Education & Sports Department organizes Inter Hostel tournaments and conducts Annual Athletic Meet every year.

The Department takes the responsibility of preparing the teams for Intramural & Extramural Tournaments. Institute teams also participates in Inter University AIU sponsored tournaments every year at various places.

Physical Education & Sports Department organizes Chetan Devraj East Zone Inter Technical Memorial Cricket Tournament in which only technical institutions are allowed to participate. The department also organizes Sports festival, 'Vajra' every year.

Institution Details		Sports Specific Infrastructure				
1	2	3	4	5	6	7
Name	Play Ground	Sports Complex	Gymnasium/ Fitness Centre	Indoor Stadium	Swimming Pool	Yoga Centre
BIT Mesra Ranchi	Athletic Track 400 (meter) - 1 Football - 2 Hockey - 1 Cricket - 1 Volleyball - 3 Basketball - 3 Lawn Tennis - 3	1	1/1	2	Nil	1

STUDENT'S ACTIVITIES




AEROSPACE SOCIETY

Aerospace Society, BIT Mesra is the official aero-modelling and drone research team of BIT Mesra. It is an interdisciplinary organization of about 70+ undergraduate, postgraduate and PhD students with a mission to innovate, learn by applying theoretical concepts and create attractive opportunities for research and interaction with industry professionals.

ACHIEVEMENTS



1. Secured First position in Design Fabrication Report.
2. Overall Ranked 8th position in the Micro Class Category.

5

"AEROTALK" Webinars
featuring various Industry Professionals

20+


Reports

1st

IN
Design Fabrication Report
SAE AERODESIGN 2021

5

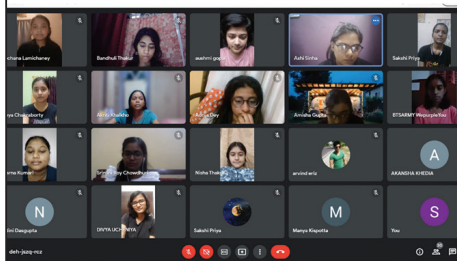
DS SOLIDWORKS
Workshops



DANCE CLUB BIT MESRA

Started in 2006, the Dance Club of BIT Mesra brings out the dancer within every individual in It encourages the students to venture into newer styles from across the world, while honing and polishing their unique styles at the same time.

Major Events & Footfall



Achievements

Springfest'19 IIT Kharagpur
(Group Dance Event) - 3rd Position

Rush'20 IIM Ranchi
(Group Dance Event) - 1st Position

6

Classical
Fusion

30

Dance Workshop

18

XLRI

20

Holi

July'20 - Dec'20
Jan'21 - June'21



DANCE CLUB BIT MESRA

Started in 2006, the Dance Club of BIT Mesra brings out the dancer within every individual in the club. It encourages the students to venture into newer styles from across the world, while honing and polishing their unique styles at the same time.

Major Events & Footfall



Achievements

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Fusion

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Holi

July'20 - Dec'20
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वार्षिक प्रतिवेदन 2020-2021



DHWANI-Music Club, BIT Mesra

Dhwani-Music Club, BIT Mesra is a society that unites people across the campus with their shared ardour and passion for music. Established in 1964, the club has seen tremendous growth in talent and the number of active members that take part in events dispersed throughout the academic year.



ACHIEVEMENTS

- # Mood Indigo'20 IIT BOMBAY- MI Idol- Hindi Solo- Finalist
- # SF'21 IIT Kharagpur- Rapmania- 2nd position
- # Kashiya'20 IIT BHU- Solo instrumental- 1st position, Acoustic unplugged- 2nd position, Solo singing- 3rd position

MAJOR EVENTS & FOOTFALL

100+
HYMN FOR THE WEEKEND

100+
AUDITIONS

1K+
NAAD

100+
MUSIC IN A MINUTE

100+
SHRED COLLAB
1.5K VIEWS

100+
Jee Lein Zindagi
DHWANI ORIGINALS
1.5K+ VIEWS

100+
PopNCore
7 WEEKS- 7 COVERS

100+
Obsolete Originals
6 WEEKS- 6 EPISODES

100+
Chained to the Rhythm
1 WEEK- 8 COVERS

100+
Alter Tunes
5 WEEKS- 5 COVERS

100+
Workshops
YEAR LONG

July'20- Dec'20 & Jan'21- July'21



Ehsaas Dramatics Society, BIT Mesra.

Ehsaas Dramatics Society is one of the most prominent cultural clubs of BIT Mesra. Being around for more than a decade, some promising and talented actors, writers and directors have been it's part. We are a team of drama and theatre enthusiasts engaging in a variety of art forms like stage play, street play, mime, musical skill, stand-up comedy and short film making.



Achievements

- Runner-up at Spring Fest'21 (Monoact)**
Spring Fest is the Biggest Cultural Fest in East India, organised by Indian Institute of Technology, Kharagpur (IIT-KGP).
- 2 Finalists at Manifest-Varchasva'20 (Monoact)**
Manifest-Varchasva is the Cultural Fest organised by the Indian Institute of Management, Lucknow (IIML).
- Runner-up at Mood Indigo'19 (Nukkad)**
Mood Indigo is the Biggest Cultural fest in Asia, Organised by Indian Institute of Technology, Bombay (IIT-B).
- Winners at Ensemble-Valhalla'19 (Nukkad)**
Ensemble-Valhalla is the annual Cultural, Management, and Sports fest of ALRI Jamshedpur.

Events & Footfall

150+
Funny Side Locked Down
150+ Attendees

150+
Ehsaas Yatra
550+ Likes

150+
Apoorv's Dramzest'20
1000+ Views, 55 Participants

150+
Ek Shaam Singles ke Naam
1.8k Views

150+
The Grump Show
100+ Attendees


150+
Beyond Lines
Ep 1 & 2
1.2k+ Views

150+
Piece de Theatre Workshop
95+ Attendees

150+
World Theatre Day
3k+ Views

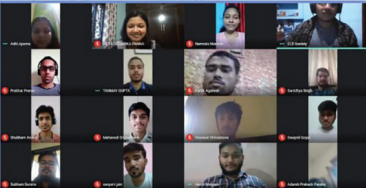
150+
Informal Session
75+ Attendees

July'20 - Dec'20 Jan'21 - June'21



Electronics and Communication Society, BIT Mesra

The Electronics And Communication Society, BIT Mesra is a group of Electronics enthusiasts who share the compassion of innovativeness and creativity. The society conducts various activities including quizzes and workshops in the college to arouse the interest of the students in the subject.



ACHIEVEMENTS

- We had spread awareness among students and peers about Electronics and its future across different platforms through webinars, events, etc with the participation of 150+ students.
- Our team participated in Eyantra, IIT Bombay, and Ranked AIR 7.

MAJOR EVENTS & NO. OF PARTICIPATION

150+
Pursue Career in
Electronics

150+
Gateway to
Analog

30+
Teach & Compete

July'20 - Dec'20 Jan'21 - June'21



**ABOUT
EEESoc**

EEESoc was established in the year 2013 to promote technical growth and overall development of the student of EEE department.

The first president of the society was Jaivardhan Shivam under the patronage of Dr. T. Ghose and the faculty advisor Dr. R.C. Jha.

Electrical & Electronics Engineering Society (EEESoc), BIT Mesra


EVENTS & FOOTFALLS

- Organised Summer Project Programme (SPP) - 60
- Organised Student Mentorship Programme (SMP) - 80
- Eeesoc Interview Experience - 20
- Organised Dev week - 50
- Webinar - 40

Achievements

- Alakshendra Singh along with his team under Aftab Alam Sir's guidance got selected for DST NIDHI PRAYAS conducted by IIT Roorkee and got a funding upto 10 lakh
- Zeeshan got selected for Gsoc
- Zeeshan and Akshat were a part of team in Eyantra and went up to semi finals

Entrepreneurship Development Cell, BIT Mesra

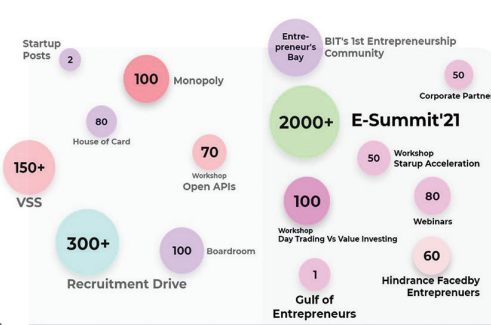


Achievements

Organized East India's Largest E-SUMMIT
Organized One of the Largest E-Summit in Eastern India and got collaboration with 60+ corporate partner and Tier 1 Institutes

Started in 2007, Entrepreneurship Development Cell has fostered and celebrated innovation in college. The cell provides a platform and mentorship to student entrepreneurs in the college.

Major Events & Footfall



Event	Footfall
Startup Posts	2
Monopoly	100
House of Card	80
VSS	150+
Recruitment Drive	300+
Boardroom	100
Workshop Open APIs	70
Workshop Day Trading Vs Value Investing	100
Gulf of Entrepreneurs	1
Workshop Startup Acceleration	50
Webinars	80
Hindrance Faced by Entrepreneurs	60
E-Summit'21	2000+
Corporate Partners	50
Entrepreneur's Bay	50

July'20 - Dec'20 Jan'21 - June'21

Our Team



The Environment Protection and Awareness Club of BIT Mesra, known by the sobriquet of EPAC is a club whose sole motive to instigate the students of our campus to proactively contemplate about the detrimental effects on our environment in the current scenario. It has been observed in past years, that deleterious actions have been undertaken by the humans which has led to a global environment crisis. We, as a student body aim at, improvising the existing systems which lay in the favour of nature.

ENVIRONMENTAL PROTECTION & AWARENESS CLUB, BIT MESRA

Major Events & Participations



Event	Participation
Jharkhand Science and Environment Fest	500+
Van Mahotsav	500+
Jumanji	70+
Escape into Nature	70+
EVs	50+
Pen and Pallette	40+
Green Gotts	40+

2020-2021



वार्षिक प्रतिवेदन 2020-2021

Finance Club BIT Mesra

Finance Club conspicuously is a club that strives to create a community of members with advanced skills, zeal, knowledge and networking related to finance and investment, with an aim to make today's naive, inexperienced and intuitive students into tomorrow's leading business tycoons. By engaging like minded peers, in collaboration with both industry and academics, the club aims to provide a forum for finance domain to foster highest standard of learning among BITians.

MAJOR EVENTS AND FOOTFALL

Behind The Stumps

600+ registrations
120+ campuses
Cash Awards

Team of 60+ members

7 Webinars within 6 months

Spare The Sensex

600+ participants
Cash Awards

5+ corporate sponsors

HIGHLIGHTS

- 1) Conducted two successful events with over 600+ participants from various reputed technical and non-technical Indian institutions, with the likes of IITs and IIMs also marking their presence.
- 2) Conducted 7 fruitful and widely appreciated webinars in just 6 months since the inception of the club, with around 150 participants in each seminar.

"We plan to build a community of like-minded finance enthusiasts in college"

APRIL 2021 - JUNE 2021

Fine Arts Society is the most creative club of BIT Mesra consisting of multi-talented Artists and creative people. Our mission is to promote art, craft and design among the students and help them brush up there skills in this field. Being the design team of PANTHEON - The Technical Fest and BITOTSAV - The Cultural Fest, we are responsible for decorating the whole campus and embellish the environment.

Major Events and Footfalls

<p><i>Hastkala Shastri</i></p> <p>50</p>	<p><i>Sketch Workshop</i></p> <p>89</p>	<p><i>Spectra</i></p> <p>50</p>
<p><i>Hasthmanji</i></p> <p>86</p>	<p><i>Rangsaji</i></p> <p>80</p>	<p><i>Art Freak</i></p> <p>30</p>
<p><i>Rangkari</i></p> <p>82</p>	<p><i>Art Clash</i></p> <p>45</p>	<p><i>Junky</i></p> <p>35</p>

OUR ACHIEVEMENTS

Aditi Katherine Panna - 3rd in Art Clash 2021
Anurag Pathak - 3rd in Junky and 3rd in Mukimono(Spectra)
Ridhi Priya - Consolation Price in Mukimono(Spectra)
Saket Kumar Sinha - Participation in School Drawing Competition
Chirag Jha - Team member achieved 3rd position in Spectra 2021
Atreyee Chatterjee - 1st in national based art contest by instagram and 1st in Mandala art contest held through insta mode
Khushi Bhardwaj - 3rd in Deeprangini(Rangsaji) and 1st in Mukimono(Spectra)

FIREBOLT RACING is the official off-road racing team of Birla Institute of Technology, Mesra, India. A team of undergraduate automobile enthusiasts, taking 11 years of legacy forward, fueled up with passion and love for speed to make All-Terrain Vehicle and participate in BAJA SAE, the world's largest amateur off-road racing championship. All the members are from multi-disciplinary engineering streams, putting the team into world's top 20 best off-roading racing teams.

ACHIEVEMENTS

BAJA SAE INTERNATIONAL IN INDIA

1st

BUSINESS PRESENTATION

2nd

COST EVENT

8th

OVERALL BUSINESS PRESENTATION
BAJA SAE INTERNATIONAL

14th

OVERALL COST EVENT
BAJA SAE INTERNATIONAL

8th

OVERALL SALES PRESENTATION
BAJA SAE INDIA

MAJOR EVENTS AND FOOTFALL

BAJA SAE India: 350+ Teams
BAJA SAE International: 200+ Teams



The Institution Of Engineers (India)
Birla Institute Of Technology, Mesra, Ranchi

IEI CIVIL is a student's chapter of BIT MESRA. Basically a club of engineering students who have a common interest in civil engineering, its innovation and the idea of sustainability. It aims to provide all civil engineering students guidance, help them to develop technical skills, while also helping the students improving their soft skills by hosting multiple events and workshops and interactive sessions.

MAJOR EVENTS (JUL 2020 - AUG 2021)

- Workshop on CV and cover letter
- Webinar on preparation strategy for UPSC
- Interview with Anish bagaa [ES AIR 4]
- AutoCAD workshop
- Webinar on balancing upsc preparation with college studies
- Know your Campus
- Guest Lecture by DR Susmit Roy

IET ON CAMPUS, BIT MESRA

IET ON CAMPUS, BIT MESRA IS THE ARM OF THE INSTITUTION OF ENGINEERING AND TECHNOLOGY, A GLOBAL ORGANIZATION INSPIRING, INFORMING AND INFLUENCING THE ENGINEERING COMMUNITY.

WE TEND TO LEARN AND IMPLEMENT NEW TECHNOLOGIES TO DRIVE INNOVATION. WE ARRANGE INTERACTIVE WORKSHOPS OF EVERY SOUGHT AFTER TECH-FIELD ALONG WITH THE INTERESTING TECHNICAL EVENTS. THE IET ON CAMPUS, BIT MESRA HAS BEEN AN ARDENT SUPPORTER OF THIS CAUSE, WITH ITS INDEFATIGABLE EFFORTS TO DELIVER INFORMATION TO THE MASSES ABOUT THE LATEST CUTTING EDGE TECHNOLOGIES AND SCIENTIFIC ADVANCEMENTS. AT THE SAME TIME, WE TRY TO STIMULATE AND ROUSE INNOVATION AND CURIOSITY IN THE MINDS OF STUDENTS.

MAJOR EVENTS

- INTRODUCTION TO GIT AND GSOC (65 PARTICIPANTS)
- PYTHON WORKSHOP (115 PARTICIPANTS)
- GIT FREEZE (55 PARTICIPANTS)
- LINUX NETWORKING (65 PARTICIPANTS)
- WEB DEVELOPMENT WORKSHOPS (150 PARTICIPANTS)
- HACK-A-DUCK (200 PARTICIPANTS)

ACHIEVEMENTS

- WINNER- HACK 36 (MNNIT ALLAHABAD)
- FIRST- MEGAPROJECT (NITR)
- AMONG 76 SCHOLARS IN ASIA- GOOGLE APAC WOMEN

IEEE Students' Chapter Birla Institute of Technology, MESRA

At IEEE, we believe in disseminating what we know and learning what we don't. IEEE Global and its members aim at a better tomorrow through its more than 420,000 members in over 160 countries, and its highly cited publications, conferences, technology standards, professionals and educational activities.

MAJOR EVENTS

- 100+ Git Workshop
- 24+ L.E.A.D. 1.0
- 20+ IEEE Day
- 600+ IEEE Podcast
- 150+ Educational CP Contest
- 200+ C/C++ Workshop
- 150+ Megaproject
- 100+ L.E.A.D. 2.0
- 101 Members Count

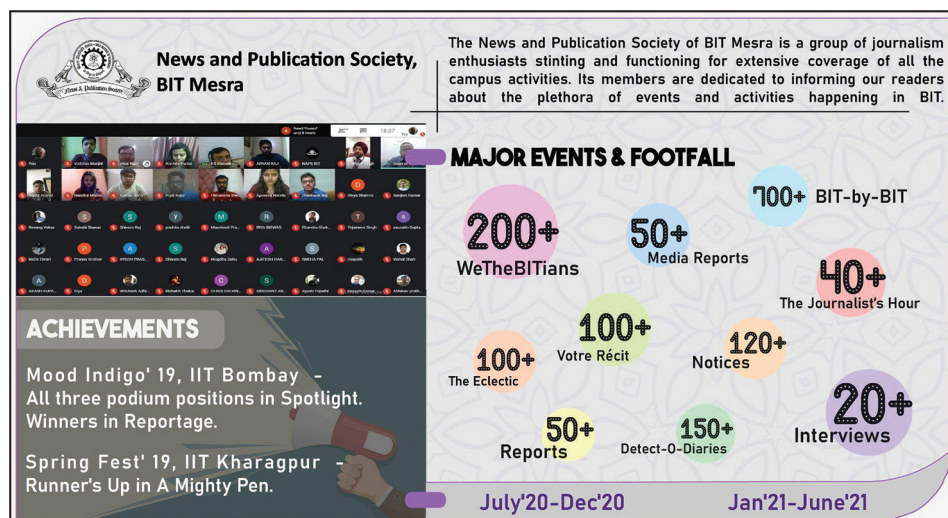
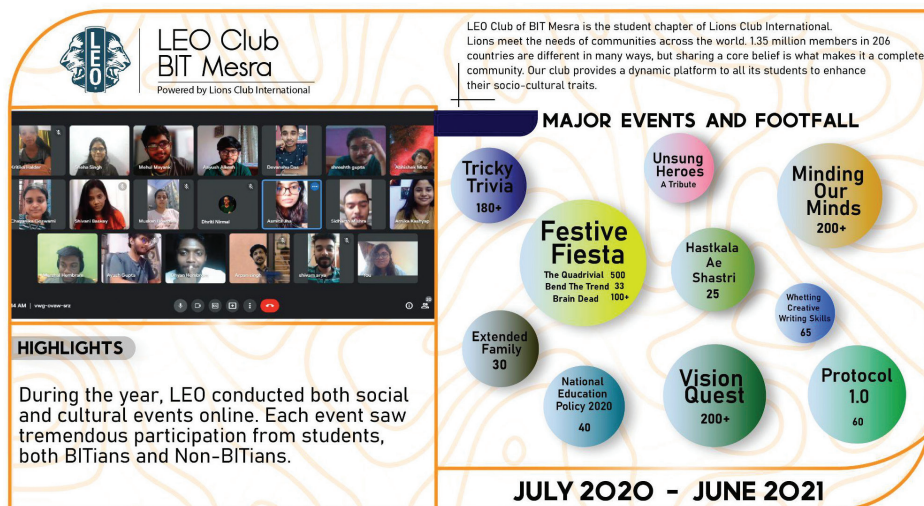
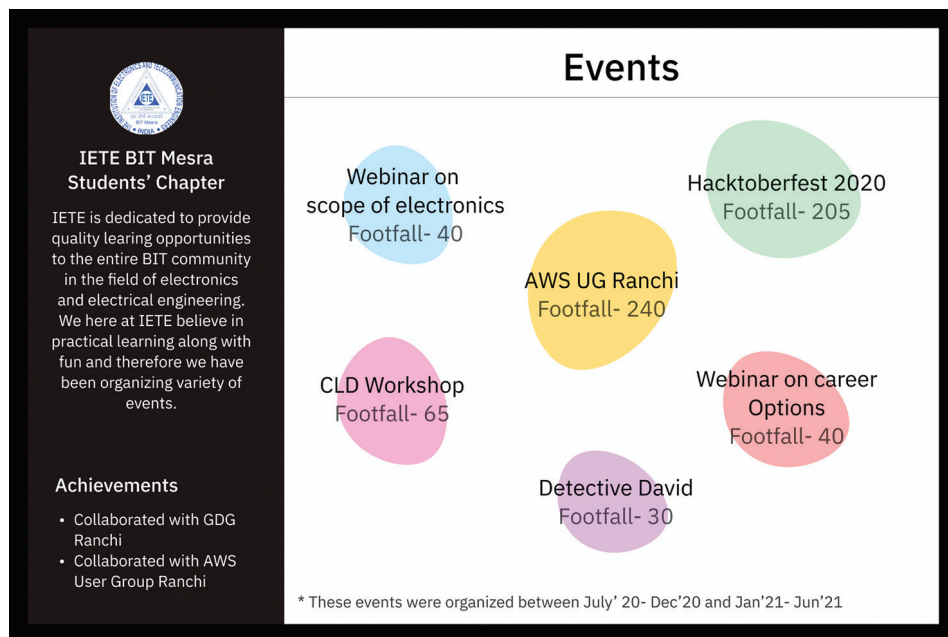
July'20 - July'21

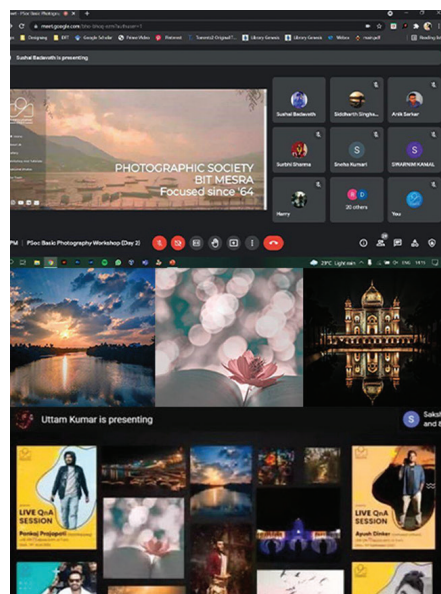
IEEE AT A GLANCE

IEEE BIT Mesra believes in a constant endeavor to inculcate among students the requisite knowledge to catchup with their peers across the global community. The club ensures this through quality workshops on contemporary topics and through events which are aimed at sharpening cognition among participants and organizers alike. The members of the student branch have access to a plethora of options where the club opens up before them various platforms for their specific field.



वार्षिक प्रतिवेदन 2020-2021





Major Events



Achievements

Manfest-Varchasva
IIM Lucknow 2021 | Runner Up
in Reels of Change

ROBOLUTION BIT Mesra

Team Robolution is a group of 35 ingenious students from different branches with a common purpose-"DEXTERING ROBOTICS". Our aim is to instil Robotics temperament among our fellow students and for this we get them involved

50+
PARTICIPANTS

ARDUINO WORKSHOP

60+
PARTICIPANTS

LOCKATHON

60+
PARTICIPANTS

IMAGE PROCESSING WORKSHOP

80+
PARTICIPANTS

GATEWAY TO ROBOTICS

- Participated providing solution to smart glasses for visionless people, stood 2nd on national level, winning a cash prize of 1.5 lacs.

- One team was ranked AIR 7 (out of 3500 teams) in E-YANTRA Robotics Competition.

Rotaract Club of BIT Mesra is the official students' chapter of Rotary, aimed at organizing various socio-cultural events and nurturing managerial skills. The purpose is to provide opportunity for young people to enhance and address the physical and social needs of communities.

MAJOR EVENTS

Meme Regime 2.0
60+

Bharat Darshan
3k+

Yaaro ki Yaari
40+

One Step One Change
80+

Flood Donation

Covid 19 Resources Help

AWARDS AND ACHIEVEMENTS:

- the "Best Project Under Professional Service" Award
- the "Sustainable Livelihood Promotion Award"

ROTARACTORS 80





Society for Industrial Management and Engineering

INNOVATE, INCULCATE AND INSPIRE

#CreateADifference

Achievements

1. 2nd rank in Campus Innovathon 2020 (Organized by Gilbarco Veeder Root India)
2. 2nd rank in Institute Innovathon Contest 2020 (Organized by BIT Mesra's Institute Innovation Council) - an initiative of GOI
3. Top 5 finish in Hero Campus Challenge season-5
4. A paper published in WeenTech Proceedings in Energy, International Conference on Innovative Development and Engineering Applications'21

The Society for Industrial Management and Engineering, BIT Mesra is a platform for students with an affinity for industrial science and technology. The objective of the society is to construct a self-perpetuating technical learning and innovation ecosystem for students of our institute through various activities and projects.

Events

Anvil
30+ Quizzers

Art of Research Paper Writing
50+ participants

Automobile and IC Engine workshop
60+ participation

Insights Edge

Spark by SIME
10+ publications

Weekend Tea With Achievers

Code Industry Challenge
70+ Registrations

Unfolding Industry 4.0
5 Blog posts

Asta di Autos
50+ Registrations

Projects

Fuel Station Touchpoints Minimisation

Six Sigma Analysis of Coffee Manufacturing & Call Center

COVID 19 Drug Recommender App

Automobile Energy Recovery System

Tennis Racket Analysis

Economic Ground Chair

Simulation and Analysis of Falling Asteroid



ACTIVITY REPORT 2021

Society of Biotechnologists is the departmental club of Biotechnology at BIT Mesra. Members of the society interact, contribute and suggest ideas related to biotechnology. Activities, webinars and alumni interaction are organised by the members of the society to benefit the members and the field.

SAMVAAD
50+

WEBINAR
60+

Webinars that were conducted on every weekend that dealt with the interaction between Alumni and students about their ideas, experiences and views on industry. Alumni were Priyam Raut, Md Shamim, Anupam Sharan, Vishal Singh.

It was the relevant activity of the society as it dealt with the post on social media (fb, insta, linkedin etc) about the new technologies/inventions/ideas/research in the field of biotechnology.

It was so as to interact with the seniors discussing the demand of CV/resume and about how to apply for internships.

The major idea behind this activity was for startup ideas and actions that should be undertaken for the start-up that might be helpful for us.

WEEKLY TRIVIA
200+ Views

STARTUP TRIFLES
200+ Views



SPORTS & ADVENTURE CLUB

The Sports and Adventure Club of BIT Mesra is a group of sports enthusiasts eager to see life through sports. In these hard times indulging in various activities even on the online platforms have been a good stress buster.



ACHIEVEMENTS

Motivating people to value health as work and other assets.

Working towards engaging people in different game and fitness activities to help fight anxiety of these tough times.

MAJOR EVENTS

50+
What Happened Next

400+
Dugout

300+
Playera

80+
Fantasy League

100+
Command and Conquer

150+
Blitz

July'20-Dec'20
Jan'21-June'21



TEAM SRIJAN, BIT MESRA

Team Srijan is the Formula Student team of Birla Institute of Technology MESRA, that has been growing steadily since 2007. We are a group of 35 undergraduate students from various engineering streams who have come together to conceive, design and manufacture and test an Electric Formula-Style race car to participate in various national and international Formula Student events held across the globe.

EVENTS, ACHIEVEMENTS & FOOTFALL

- FORMULA BHARAT 2021**
 - Winner of innovative business concept award
 - 4th in Business plan event
 - Overall 10th position
- FSEV 2020**
 - Overall 17th position
- SUMMER PROJECT**
- FORMULA BHARAT RULE QUIZ**
 - 4th position

5000+

Footfall

Nov - Dec 2020

2500+

Footfall

July 2020

100+

Participants

May 2020

The Literary Society

Birla Institute of Technology, Mesra

JUNE '20 - DEC '20

- 40 Dakiya
- 100 Words World
- 30+ Scripsi
- 100+ Du Coeur
- 100+ Literary Workshop
- 50+ Akshar Manjari
- 400 Down & Across (Crossword)
- 300 Vad-Vivad
- 300 Secret Santa (Informal Event)

JAN '21 - JUNE '21

- 40 Haiku
- 25+ Coalesce (Prompt Writing)
- 200+ Regular Posts
- 25+ Symposium
- 50 The Talk Show
- 100 Elocution Competition
- 100 Preet Ragini (Kavi Sammelan)

The Literary Society, BIT Mesra Student Body

The Literary Society, BIT Mesra, is an oasis for those who feel and express through words and seeking beauty in them. Members believe in learning through sharing their works and help others to discover their hidden love for literature. It is like a Young Writers' -and-Speakers' Club which takes care of the events, resources, and management pertaining to the literary events taking place in the institute.

Achievements

- Second runner up in National Online Writing Competition 2020.
- Leading writer in the national magazines - वागर्थ, पक्षी, बहुमत, कथादिश, कथाक्रम, परिकथा जनसेवेर टाईम्स, अमिनव इमरोज।
- Winner at "Team Green Dharbhanga" Writing Competition.

UNESQUO, BIT, Mesra

UNESQUO is a body which comprises of the elite-most orators, debaters and quizzers. It is critically acclaimed for hosting quality events which set examples and are indeed a class apart. These incredibly fun yet intellectual events range from debates, JAM sessions, Turn a Coat, Silence of the Champs, quizzes and much more.

Achievements

Quizzing:
 Tata Crucible'19
 Quiz-a-thon'19
 BIZ_Quiz'19
 Tech_Quiz'19
 Kshitij_Techquiz'19
 SBI Numero Yono 2020 Quiz

Oratory:
 Valhalla - JAM
 Mood Indigo - JAM and Debate

Major Events & Footfall

65+

WEEKENDER-1
ASIAN PARLIAMENTARY DEBATE AND INDIA QUIZ

50+

WEEKENDER-2
MELA QUIZ, NYPD QUIZ AND THREESOME IN A BOAT

40+

INFORMAL RHETORIC

150+

GENESIS

45+

BITMUN

40+

INFORMAL QUARK

July'20 - June'21

Environmental Initiatives and Energy Conservation

The Institute has facilities for Alternate Sources of Energy for Energy Conservation and Management:

1. Solar Energy – The Institute has solar energy generation capacity of upto 1MWp from roof tops of academic as well as hostel buildings. Solar water heaters are used in student hostels
2. Biogas Plant – a prototype biogas plant installed near the Mechanical Engineering Department is utilized for production of biogas from bio-degradable waste
3. Sensor Based Energy Conservation – Smart Classrooms are equipped with sensor –based lighting system for energy conservation
4. Energy Efficient Lighting System – the major lighting load comprises LED bulbs and LED tubelights. The Institute administrative building is equipped with Variable Refrigerant Flow (VRF) based air-conditioning system , Low Loss Transformers and underground cable based distribution system to enhance power efficiency

Solar Energy Panels



Water Conservation

The Institute conserves water through the following measures:

1. Rain Water Harvesting
2. Borewell/Open Recharge -
3. Tanks and Bunds
4. Maintenance of Water Bodies and Distribution System in the Campus

Green Campus Initiatives

1. Restricted entry of automobiles

Use of motor vehicles by students is prohibited inside the campus and the entry of other vehicles is restricted

2. Use of Bicycles and/ Battery Powered Vehicles

Bicycles and e-vehicles are widely used by students and staff members for commuting inside the campus.

3. Pedestrian Friendly Pathways

Pathways and sidewalks lined by trees have been built to facilitate ease of movement for pedestrians

4. Plastic Free Green Campus

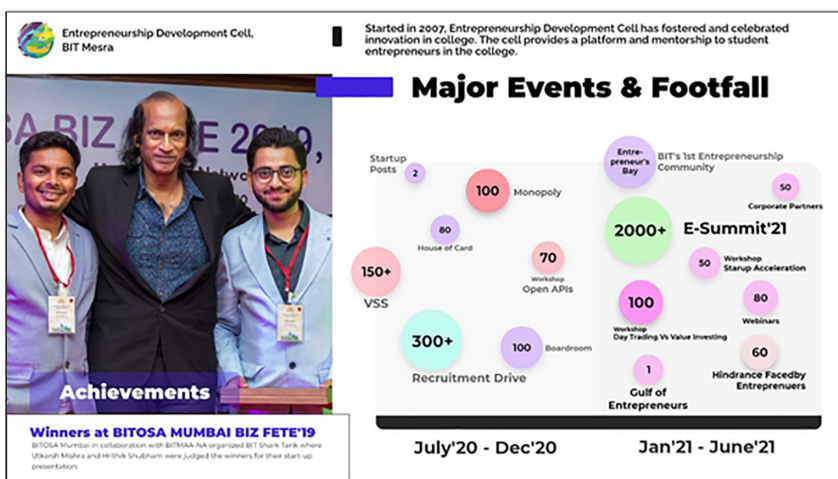
The usage of plastics is discouraged by students, shops and establishments inside the campus

Landscaping with Trees and Plants





Entrepreneurship Development Cell, BIT Mesra



The Entrepreneurship Development Cell was founded in the year 2007 by students Amit Chaudhary and Ankit Jain with Dr B.M Karan as Mentor to foster the spirit of entrepreneurship among students. EDC's prime objective is to be a steppingstone for students who want to take the unconventional path and start their own enterprise. To gather the required expertise for them and help them to approach Venture Capitalists (VC's), investors and banks are the major areas of focus. EDC also plays a vital role in encouraging entrepreneurship among students of the Jharkhand region through workshops, activities, and guest lectures by eminent personalities. The Institute is governmentally recognized as Nodal Centre for Entrepreneurship in the state of Jharkhand.

The major events held for the duration July'20 – June'21 included The Annual Entrepreneurship Summit which accounted for a footfall of more than 2000 young and budding entrepreneurs looking to take part in a series of challenging events & be a part of guest talks from renowned industry moguls. Events like Wolf of Birla Street which garnered participation from top IIMs and B-schools challenged participants to design an all-weather portfolio based on a given model. Auctions mimicking IPL & Football league were the major highlights of informal events along with Crypto Trading & Monopoly which required the users to generate as many cashflows as possible. Business Plan attracted young start-up founders from all over India who came and pitched their business models to take home cash prizes. Boardroom gave participants a feel of what it's like to run a company from a CEO's perspective whereas Storage Wars saw the participants facing off in a hardcore series of bidding garages. With Moneyball, the participants first-hand experienced international goods trade, & House of cards made them put on their

thinking caps and come up with a solution to the case studies. For those who wanted to start in this domain pitch please presented a perfect opportunity to come and pitch their ideas to judges and take-home exciting prizes. The total prize pool for the entire summit was a whopping 2.5 crore thanks to a strong sponsorship from a variety of brands.

E-Summit also hosted honourable speakers and moguls from various industries. Aman Dhatarwal, one of the most famous Indian YouTubers with a social media following of more than 5 million people worldwide motivated the attendees to hustle more while in college. Sanjeev Mohanty, the managing director of the world-famous clothing company Levi's gave an insight into the importance of having a positive & productive mindset. Pawan Kumar Rai, an alumnus of BIT, Mesra & an IIM-Ahmedabad graduate discussed his bootstrapped start-up Finshots and the adversities and enjoyments of being an entrepreneur. Ayush Jaiswal, the CEO of Pesto Tech & a renowned entrepreneur in his industry talked about understanding the intricacies of life and work. Entrepreneurs from the Ed-tech domain like Sreedhar Jeyachandran, CEO and Founder of Crio. Do gave an insight into the young nature of the ed-tech domain & how to navigate the entrepreneurial life. Abhinav Sinha, an exceptionally recognized alumnus of our Institute, BIT Mesra shared his insightful experience as an entrepreneur & also discussed business prospects in the current age of automation.

E-Summit had strong backing from renowned sponsors & corporate partners like Angel Broking, IDFC First Bank, Barbecue Nation, BMW, Pizza Hut, Nikon, Jet Brains, Bisleri & the list goes on. Overall E-Summit was an overwhelming plethora of events, speakers & the entrepreneurial vibe.



Apart from the E-Summit, Entrepreneurship Development Cell also hosted individual one-off events like Virtual Stock Simulation which simulated a stock trading environment wherein participants with the highest profits at the end were hailed the big bulls.

Fostering the young entrepreneurs, the new and young members of the cell hosted a unique corporate case study, Gulf of Entrepreneurs with prizes worth 5K, which required the participants to submit a marketing solution as a case study for the preliminaries. This was followed by the finale, which consisted of 6 teams going head-to-head in solving tricky case studies.

This was followed by a community server release on Discord, which gives a fair chance to all the students to challenge and foster their entrepreneurial fire.

Expansion of the cell to further generations is as important, and therefore the recruitment drive was carried out, which tested the student's various skills and knowledge domains. In the end, EDC recruited 50 talented individuals full of ideas and willing to put in the work and hustle in life.

Brief details about different workshops and activities conducted by EDC, BIT Mesra to contribute and promote Entrepreneurship among students of BIT Mesra.

- a. Boardroom: The Boardroom is a simulation game that simulates the situation in which a company is in panic and the board of directors has to decide about future actions of the team to not only better the current situation but also to turn the table against all opposites.
- b. Workshop on Open APIs: Open APIs are the future of Trading. EDC BIT Mesra in collaboration with Angel Broking organised a workshop that witnessed a footfall of 70+ participants to learn more about Open APIs and its future in stock market.
- c. Monopoly- It is a fun event that was conducted in E-Summit'21 which aims for business strategies to gain a monopoly in the market against other competitors.
- d. Entrepreneurs Bay: BIT Mesra's 1st ever student

entrepreneurship community has a sole aim to help budding entrepreneurs to get a platform where they can find different resources that will help them in their entrepreneurial journey. It includes various peer support, educational materials, and guidance from our Alumni. This community also aims to create awareness among different students within BIT Mesra and its off-campus. This community will also help students, entrepreneurs, to find a team and for others to gain experience working with an early-stage startup.

- e. Hindrance faced by Entrepreneurs: The journey of Entrepreneurs is not a path full of roses, but the path can be made easy with the help of proper guidance. For enlightening aspiring entrepreneurs about the potential hindrances that can be faced by them in their journey, EDC BIT Mesra conducted an interactive seminar with Mr Nitin Jain, founder of INDIBNI and also an alumnus of BIT Mesra Jaipur campus. He guided students with his life journey as an entrepreneur and what challenges he faced in past 9 years.
- f. Workshop on Day Trading vs Value Investing: Trading and Investing are two major aspects of financial trading. Each of them plays a vital role in our life. Still today only 5% of the population invests in the stock market in India. EDC BIT Mesra in collaboration with Angel Broking had a session with Mr Prabhakar Tiwari, CMO Angel Broking to enlighten students about different aspects of the market, investment and trading. This session witnessed a footfall of more than 100 students.

Not only this, EDC BIT Mesra has developed long term relationships with more than 50 corporate partners including Angel Broking, Aspiration, IDFC First Bank, Get Mega, Barbeque Nations, Chatur Ideas, and many more. Also, institute partners include IIT Kharagpur, IIM Lucknow and IIM Ranchi.

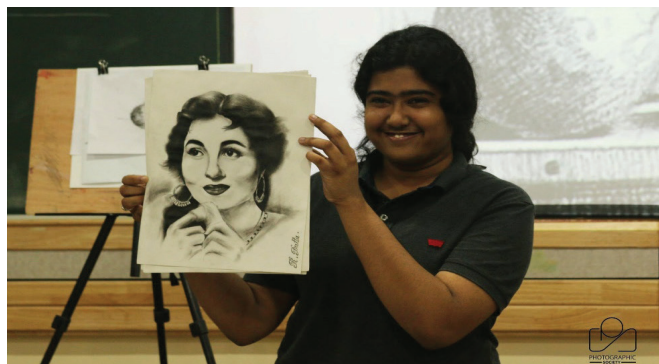
We have also conducted numerous sessions on Entrepreneurship, Business Development, Marketing, Finance and Technical skills that have helped many students to enhance their skills and excel in their careers.

CREATIVE ARTS

CREATIVE ARTS



"A creative man is motivated by the desire to achieve, not by the desire to beat others." –Ayn Rand



Creative arts as the name suggest is related to the art of creativity with the knowledge of skill that is taught in this subject. Here this subject is divided into two categories comprising of music and fine arts. This subject is included in the curriculum of BITS MESRA for various branches like architecture, imh, iph, btech, Bpharma, etc to make students more effective in their performance and make them free from the stress

With the hands on practical session on Indian classical music, western music and fine arts subject we also

FINE ARTS & MUSIC



learn about different artists and their contribution to the various fields. To assess students' progress Creative Arts also organizes events like Bharatmahotsav that is celebrated in the month of February or March. During the Independence day and Republic day students of this subject also participate in different musical events. This subject not only helped students in relaxing mind but also teaches various aspects that can be applied to day to day life



SANSHRAY

(Rekindling Hope)

Department of Management in association with National HRD Network and Pratigya, an NGO, are working on Project "SANSHRAY" (Rekindling Hope) since June, 2021. Sanshray aims to provide the best career counselling to students at different early education stages to make them informed decisions about their career paths. In these difficult times where optimism is everything one needs, the MBA students, with the help of Pratigya, have chosen to be the guiding light for underprivileged children.

24 MBA students are working on the project.

The students have been divided under following teams:

- Program Implementation – One to one career counselling of selected students studying in class X, XII and Graduation. Pratigya provided profiles of 33 students who were assigned to the team equally for mentorship.
- Research and Documentation – Secondary research to prepare potential convergence schemes, development institutes and a compendium comprising all necessary details for different job roles.
- IT Support- Creating database, dashboard, MIS and templates as per program requirements.
- As the Covid- 19 pandemic has shifted the entire world to an online space. Therefore, Sanshray adheres to the new normal and is being conducted online until things become normal.



The image shows a screenshot of the Sanshray website and a project poster. The website header includes the Pratigya logo and the tagline "...to build nation through education". The main navigation bar contains links: Home, Donate, Programmes, Gallery, Join us, About us, and Contact us. Below the navigation bar is a large banner image of a person working in a field, with the text "SANSHRAY rekindling hope" overlaid. Below the banner are five buttons: About Sanshray, How we work, Interventions 2020, Beneficiaries, and Partner with us. The main content area is titled "About the Programme" and contains text about the project's goals and objectives. The poster below the website screenshot is titled "SANSHRAY: REKINDLING HOPE" and features five circular icons representing different aspects of the project: Sustainable livelihood development, Career Counselling, Facilitation of livelihood based on technical and job oriented education, Promotion of farm and non farm based livelihood, and Facilitate recruitment drives for skilled and unskilled labours. The poster also includes logos for Pratigya, Sanshray, and the National HRD Network (NHRD) Ranchi Chapter.

Pratigya ...to build nation through education

Home Donate Programmes Gallery Join us About us Contact us

SANSHRAY rekindling hope

About Sanshray How we work Interventions 2020 Beneficiaries Partner with us

About the Programme

Pratigya, in partnership with **National HRD Network- Ranchi Chapter**, initiated "Sanshray" - Rekindling Hope in 2020. In the first year where Sanshray facilitated livelihood support in association with **Indian Institute of Management, Ranchi**. In the second year it has initiated mentorship and livelihood linkages to youth in association with **Birla Institute of Technology, Mesra, Ranchi**.

In this time of adversity, the country faces unprecedented challenges in terms of the absence of job creation. Sanshray aims to channelize the efforts of development institutions and the mainstream population towards sustainable livelihood development for unprivileged youths.

The foreground of the program is to generate awareness for livelihood options through career counseling of children studying in 9th, 10th, 12th, UG and PG. Convergence with technical education courses and short-term skill development courses that will enhance livelihood options for targeted youths. Furthermore, Skill development and financial linkage for youth entrepreneurs. It also aims to facilitate recruitment drives for skilled and unskilled laborers. We are promoting farm and non-farm-based livelihood in coordination with NABARD. Mobilization of youth volunteers from mainstream academic institutes and ensure their participation in the achievement of program goals.

The post-COVID-19 era will witness a gamut of new job roles, which would demand a new set of knowledge, skills, and abilities. Sanshray has designed reskilling and upskilling modules according to the recent recruitment trends to make the existing skilled population competent and job-ready.

SANSHRAY: REKINDLING HOPE

Pratigya

Sustainable livelihood development of under privileged youths with the help of volunteers from academic institutions.

Career Counselling of students for higher education with different technical and skill development courses and livelihood promotion.

Facilitation of livelihood based on technical and job oriented education like diploma, ITI, para-medical, nursing and other courses such as software related task NSDC, SDC.

Promotion of farm and non farm based livelihood in coordination with NABARD

Facilitate recruitment drives for skilled and unskilled labours.

SANSHRAY rekindling Hope

IN ASSOCIATION WITH

NHRD Ranchi Chapter

IIM Ranchi

Birla Institute of Technology Ranchi



Training and Placement

The Campus Recruitment Programme of BIT has been strengthening and nurturing value-added relationships with recruiters across a wide spectrum of industries over the years. Every year new milestones are achieved which speak for the strength of the BIT student community as well as the diversity in academic programmes. One of the key factors which bring BIT into limelight, as an institution of high repute, is its campus recruitment.

In the Campus Recruitment Programme of 2020-21, around 120 recruiters from different sectors visited for full time recruitment and internship, achieving an overall target of 539 job offers.

The Mesra campus boasts of an average package of INR 10.34 lakhs per annum and the highest national salary of INR 51.76 lakhs per annum for BE Programme.

List of Company and Number of Offers (Full Time)

Table below shows the Student placed in various Departments of BIT Mesra

Name of the Recruiters	BE	M.SC.	IMSC	B.PHARMA	M.PHARMA	M.TECH	MBA	MCA	MUP
Accenture Services Pvt. Ltd	11								
Actcorp	1								
Addverb	1								
Aditya Birla Group	2								
ADROSONIC IT Consultancy Services Pvt Ltd	3		1						
Amazon Development Centre India Pvt. Ltd.	4								
Amdocs	7					1		3	
Amnex						1			
Anand Group	1								
Anchanto	6							1	
Atlassian	3								
AU Small Finance								2	
Axis Bank	7						1		
Axxela Advisory Services LLP	2								
Bajaj Auto	1								
Barco	1								
Baxter				2	2				
Black N Green	1								
Bonace							1		
Britannia	1								
Byjus	14						1		
Cactus Communication					1				
Century Metal Recycling	2								



Name of the Recruiters	BE	M.SC.	IMSC	B.PHARMA	M.PHARMA	M.TECH	MBA	MCA	MUP
CGI	11								
CodeJEE	2								
Cognizant	20					5		9	
Cognizant GCN	1								
Collabera							2		
Deloitte Consulting India Pvt Ltd	26		4			1		1	
DRL	7				4				
Ericsson	3								
ESAF Small Finance Bank							1		
EXL Service	7								
Fastenal India Sourcing, IT & Procurement Pvt Ltd	5		1						
FICO	2							2	
Flipkart							2		
Flipkart Internet Private Limited	1								
Forsys	5								
Futures First Info Services Pvt. Ltd	6		1						
GEP	11								
Godrej & Boyce	2								
Goldman Sachs	3								
Great Learning	2								
Hero Moto	6								
HireTale							1		
HPCL Mittal	1								
ICICI Bank							22		
ICICI Prudential							4		
ICICI securities							2		
Infineon Technologies	1								
Infoedge	5								
Infosys	1		2			1		2	
Infrd	1								
Interra	1								
ITC	4								
JSPL	3								
JSW	5								



वार्षिक प्रतिवेदन 2020-2021

Name of the Recruiters	BE	M.SC.	IMSC	B.PHARMA	M.PHARMA	M.TECH	MBA	MCA	MUP
JUSCO	1								
K12 Techno	1			2		1	2		
L&T Construction	2					1			
Logic Fruit	3								
Lowes India Services			2						
Makemytrip	8								
Maq Software	8							1	
Maruti	1								
Microsoft India Development Centre	7								
NEI	2								
Nestle			2	1					
Nxp	3								
Oracle	8					2			
Orient Electric	1						3		
OYO Rooms	8								
Paytm	10								
Pigeon Education	1								
Pinnacle									
Planet spark							1		
PWC	17		1						
Rodic									2
Scanpoint		1							
Skilrock Technologies								2	
Societe General	10								
Tata Atutocomp							1		
Tata Power	2								
Tata Steel	12								
Tata Steel Long Products	1								
Transrail Lighting	1								
Truminds	1								
Utkarsh S.F. Bank			1			1	5		
Vedanta	7								
Vedanta -ESL		2	6						
Vedantu	1						1		



Name of the Recruiters	BE	M.SC.	IMSC	B.PHARMA	M.PHARMA	M.TECH	MBA	MCA	MUP
Visa Steel	2								
Vodafone	1								
Walkaroo							2		
Walmart Labs	12								
Wellsfargo India Solutions	7								
Wipro	13		10						
Yellow Class	3								
Zeta	1								
Zs Associates India Pvt. Ltd.	14								

List of Company and Number of Offers (Internship)

Recruiter's Name	Pre-Final Year	Final Year
D. E. Shaw India Software Pvt. Ltd.	2	
Walmart Labs	5	12
Microsoft India Development Centre	21	7
Wells Fargo	4	
Goldman Sachs	7	
Atlassian		3
Amazon Development Centre		5
Infoedge		4
Intuit	1	
Anchanto		7
Flipkart		2
Samsung R&D Institute Bangalore	6	
Oyo		8
Nvidia		2
Indus Valley Partners	1	
Yellow Class		3
MAQ Software		8
HyperVerge		1
INTEL		9
NXP		7
Infineon Technologies		12
ZS Associates		11
Fastenal		6



वार्षिक प्रतिवेदन 2020-2021

Recruiter's Name	Pre-Final Year	Final Year
GEP	1	6
Oracle		1
Fico		4
PwC	8	
Schlumberger	3	
Mentor Graphics		2
Samsung R&D Institute Noida		6
ENTE		1
AB-InBev		8
Axis Bank	6	
Deloitte		3
Addverb		1
Ericsson		3
viacom18		3
Sapient		4
Futures First		6
PayTM		10
Logic Fruit		2
Tata Steel Long Products	1	
ODA Classes		9
Times Internet		2
Steradian Semiconductor		2
Cropin		5
Dr Reddy's Labs (Engg.)		34
Salt Pe		7
Verzeo		18
PhableCare		5
Wipro Turbo	1	
Dr Reddy's Labs (Pharma)		10
Motorhaat	5	
TRUMINDS	3	1
ISWPL	3	
Tenhard	14	
Praedico Global Research	7	
NJ India Invest	5	
ileadHR	1	



Central Library

Introduction

The Central Library strives to evolve into a model and leading technical university library. The library contributes and supports BIT in building an internationally top ranked academic & research driven institution by establishing a knowledge hub. Library automation has been completed through LibSys and koha software. The collection comprises of print and electronic documents in the field of basic science, engineering, pharmacy, management and hotel management. Online journals like IEEE, Science Direct, Springer, IOP, ASME, ASCE and others subscribed through Institute fund & e-ShodhSindhu Consortium. E-Library section consisting of a number of networked terminals to access e-journals, e-books and other e-reference resources to the library users under Intranet and Internet environment.

Print Books

Total Volumes	:	1, 51,790
Total Titles	:	49,239
Online Books	:	3, 42,930

Online Journals, Conference

Proceedings, Standards	:	14,285
Print Journals/Magazine	:	153

Print Journals

Indian	:	140
Foreign	:	00
Magazine	:	13
Indian	:	11
Foreign	:	02
CD/ DVD	:	4,400

Bound Volumes

Library home page : <http://bitmesra.ac.in/library/default.asp>

Library Services :

- Bibliographic services
- Document Lending Services
- E Document Delivery Services
- Inter Library Loan
- Language Laboratory
- Literature search
- New arrivals
- News clippings
- Off Campus Service
- ON/Off line database search
- Reference
- Referral
- Reprographic



Library Membership

The library serves more than 5000 members, including students, research scholars, faculty, project engineers, and staff.

Description	No. of Books	Period of Loan
Teaching Faculty	08	One Month
Non-Teaching Staff	04	One Month
All Under Graduate and Post Graduate students	05	15 Days
All Under Graduate and Post Graduate SC/ST students	10	One Semester
All Under Graduate and Post Graduate OBC student	5	One Semester
Research Scholars	05	One Month
Books from Textbook Section for All Categories	1	1 Day

Library Consortium/Membership

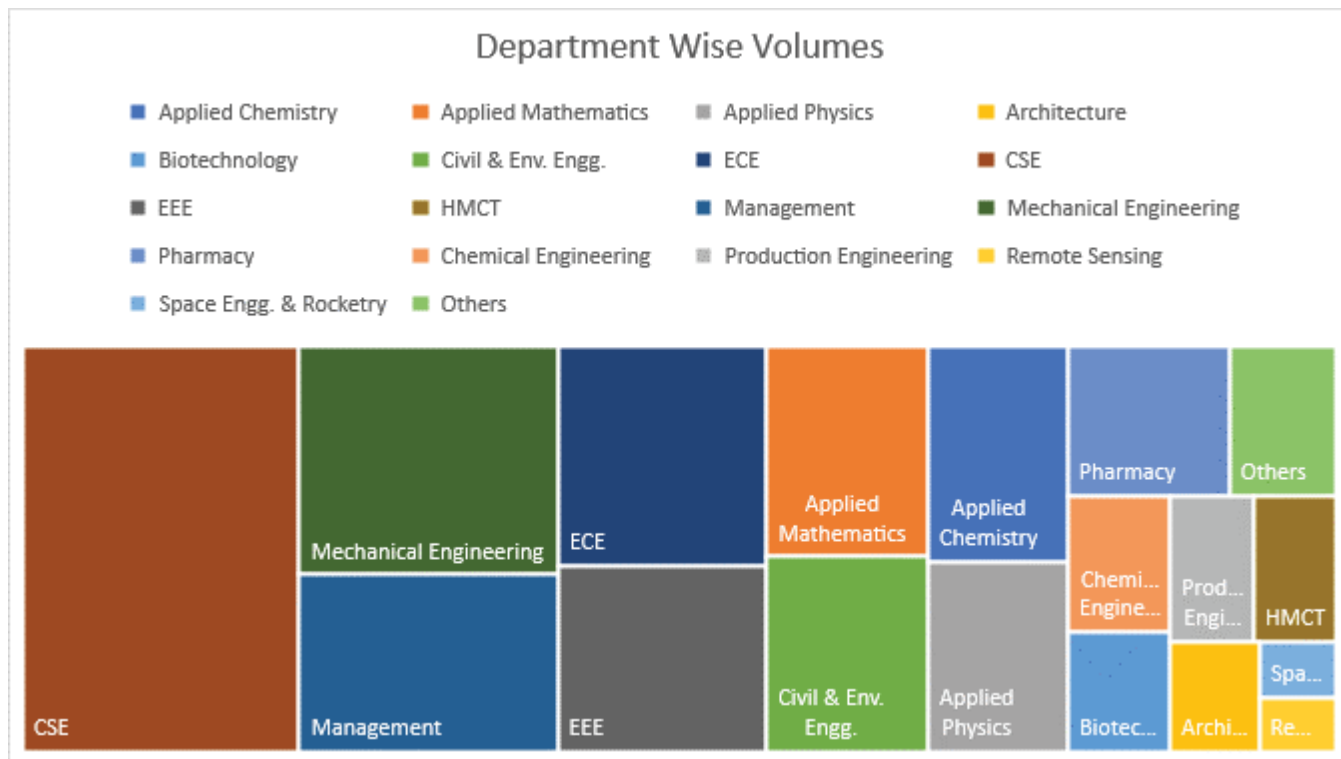
Central library enrolled its membership for following consortium

- e-ShodhSindhu Conso`rtium
- NDL India



Library Statistics

Total Books Added	:	Title - 312 & Volumes – 1,324
Total Journals Procured	:	Print - 140 & Online – 14,285
Total Online books Procured	:	3, 42,930
Total Number of Membership enrolled	:	1,522
Total Number of Books Issued	:	2,621 – Pandemic period
Total Number of Books Returned	:	1,001 – Pandemic period



Details of Online Journals/books/thesis & dissertations

SI.No.	Publishers	Web Link
1.	ABI/Inform (Management Collection)	http://search.proquest.com
2.	American Chemical Society	http://pubs.acs.org
3.	American Institute of Physics	http://www.aip.org
4.	American Physical Society	http://www.aps.org
5.	Annual Reviews	http://www.annualreviews.org
6.	ASCE Journals	http://ascelibrary.org/
7.	ASME (including AMR)	http://asmedigitalcollection.asme.org/
8.	Bentham Science	http://benthamscience.com//ben
9.	Cambridge Online Books	http://ebooks.cambridge.org
10.	Cambridge University Press	http://journals.cambridge.org



SI.No.	Publishers	Web Link
11.	EBSCO Databases (Art & Architecture, Hospitality & Tourism Complete)	http://web.ebscohost.com
12.	Economic & Political Weekly	http://www.epw.in
3.	Elsevier's Science Direct	http://www.sciencedirect.com
14.	Emerald (Management)	http://www.emeraldinsight.com
15.	Grammarly (Online Grammar & Spell checker)	http://www.grammarly.com/edu
16.	IEEE/IEL Online	http://ieeexplore.ieee.org/Xplore
17.	Institute of Physics	http://iopscience.iop.org/journals
18.	ISID (Bibliographic Database)	http://isid.org.in
19.	JCCC (Bibliographic Database)	http://www.jccc-ugcinfonet.in
20.	McGraw Hills Access Engineering	www.digitalengineeringlibrary.com
21.	Oxford University Press	http://www.oxfordjournals.org
22.	Project Muse	http://muse.jhu.edu/browse
23.	ProQuest Dissertation & Theses	http://search.proquest.com
24.	Royal Society of Chemistry	http://www.rsc.org
25.	SciFinder Scholar (Bibliographic Database)	http://cas.org/products/scifindr/index.html
26.	SIAM	http://epubs.siam.org
27.	Springer Link	http://www.springerlink.com
28.	Taylor & Francis	http://www.tandfonline.com
29.	Turnitin Ant plagiarism Tools	http://www.turnitin.com
30.	Web of Science (Bibliographic Database)	http://apps.webofknowledge.com
31.	Wiley-Blackwell	http://onlinelibrary.wiley.com
32.	Ebrary online Books	http://site.ebrary.com/lib/bitranchi/home.action

In October, 2019 B.I.T Mesra Library automated with full RFID technology using Open source Software "KOHA".



Annexure-I : List of Deans and Associate Deans

DEANS

Sr. No.	Name & Address	Designation
1.	Dr. (Mrs.) Vibha Rani Gupta Professor Department of Electronics and Communication BIT-Mesra, Ranchi	Dean of Undergraduate Studies
2.	Dr. (Mrs.) Nisha Gupta Professor Department of Electronics and Communication BIT-Mesra, Ranchi	Dean of Postgraduate Studies
3.	Dr. Kunal Mukhopadhyay Professor Department of Bioengineering & Biotechnology BIT-Mesra, Ranchi	Dean of Faculty Affairs
4.	Dr. Anand K. Sinha Professor Department of Civil and Environmental Engineering BIT-Mesra, Ranchi	Dean of Student Affairs
5.	Dr. C. Jeganathan Professor Department of Remote Sensing BIT-Mesra, Ranchi	Dean of Research, Innovation, Entrepreneurship
6.	Dr. (Mrs.) Manjari Chakraborty Professor Department of Architecture BIT-Mesra, Ranchi	Dean of Infrastructure and Planning
7.	Dr. Sudip Das Professor Department of Space Engineering & Rocketry BIT-Mesra, Ranchi	Dean of Admission, Accreditation and Coordination and Director (Internal Quality Assurance Committee)
8.	Dr. Utpal Baul Professor Department of Management BIT-Mesra, Ranchi	Dean of Alumni and International Relations

ASSOCIATE DEANS

Sr. No.	Name & Address	Designation
1.	Dr. Vinod Kumar Nigam Associate Professor Department of Bioengineering and Biotechnology BIT-Mesra, Ranchi	Associate Dean (Student Affairs)



Sr. No.	Name & Address	Designation
2.	Dr. K. Sridhar Patnaik Associate Professor Department of Computer Science and Engineering BIT-Mesra, Ranchi	Associate Dean (Student Affairs)
3.	Dr. Ritesh Kumar Singh Associate Professor Department of Production and Industrial Engineering BIT-Mesra, Ranchi	Associate Dean (Faculty Affairs)
4.	Mr. Vishal H. Shah Assistant Professor Department of Electronics and Communication Engineering BIT-Mesra, Ranchi	Associate Dean (Alumni and International Relations)
5.	Dr. Sujan Kumar Saha Associate Professor Department of Computer Science and Engineering BIT-Mesra, Ranchi	Associate Dean (Undergraduate Studies)
6.	Dr. Laxmi Narayan Pattnaik Associate Professor Department of Production and Industrial Engineering BIT-Mesra, Ranchi	Associate Dean (Postgraduate Studies)



Annexure II : Board of Governors

Sr. No.	Name & Address	Designation
1.	Shri C. K. Birla Birla Tower (9th Floor) 25, Barakhamba Road New Delhi – 110001	Chairman
2.	Shri Shailesh Kr. Singh, IAS Principal Secretary to the Governor Hon'ble Governor of Jharkhand Raj Bhawan Ranchi – 834001	Member (Nominee of Chancellor)
3.	Prof. Indranil Manna Vice Chancellor BIT-Mesra Ranchi - 835215	Member (Ex-Officio)
4.	Prof. Ajit K. Chaturvedi Director Indian Institute of Technology Roorkee - 247667	Member (Nominee of AICTE)
5.	Shri S. N. Agarwal Chairman Bhoruka Power Ltd. 48, Lavelle Road Bengaluru - 560001	Member (Nominee of HCT)
6.	Shri Rohit Saboo M/s National Engineering Industries Ltd. Khatipura Road Jaipur - 302006	Member (Nominee of HCT)
7.	Dr. P. Ghosh Executive Director Birla Institute of Scientific Research Statue Circle Jaipur - 302001	Member (Nominee of the General Council)
8.	Shri P.C. Agarwal	Member (Nominee of the General Council)
9.	Shri Aroop Zutshi 43804 Green Hills Wy Fremont, CA 94539 USA	Member (Nominee of the General Council)
10.	Dr. Arup Roy Choudhury Chief Commissioner West Bengal Right to Public Service Commission Kreta Surakha Bhawan 4th Floor, 11A Mirza Ghalib Street Kolkata - 700087	Member (Nominee of the General Council)



Sr. No.	Name & Address	Designation
11.	Shri K.K. Khandelwal, IAS Principal Secretary, DHTE Government of Jharkhand Ranchi - 834002	Member (Ex-officio)
12.	Dr. Nitin Madan Kulkarni, IAS Commissioner South Chhotanagpur Division	Member (Ex-officio)
13.	Dr. S.K. Ghorai Professor Department of Electronics and Communication Engineering BIT Mesra Ranchi - 835215	Member (Institute Faculty)
14.	Dr. (Mrs.) Itu Snigdha Assistant Professor Department of Computer Science and Engineering BIT Mesra Ranchi - 835215	Member (Institute Faculty)
15	Shri Yogesh Goenka Hon. Treasurer Birla Tower (8th Floor) 25, Barakhamba Road New Delhi - 110001	Invitee



Annexure III : Academic Council

Sr. No.	Name & Designation	Role
1.	Dr. Indranil Manna Vice Chancellor	Chairman
2.	Dr. (Mrs.) Nisha Gupta Dean of Postgraduate Studies	Member
3.	Dr. (Mrs.) Vibha Rani Gupta Dean of Undergraduate Studies	Member
4.	Dr. Sudip Das Dean of Admission, Accreditation and Coordination and Director (Internal Quality Assurance Committee)	Member
5.	Dr. Utpal Baul Dean of Alumni and International Relations	Member
6.	Dr. Kunal Mukhopadhyay Dean of Faculty Affairs	Member
7.	Dr. C. Jeganathan Dean of Research, Innovation and Entrepreneurship	Member
8.	Dr. Anand Kr. Sinha Dean of Student Affairs	Member
9.	Dr. (Mrs.) Manjari Chakraborty Dean of Infrastructure and Planning	Member
10.	Dr. Sanjay K. Jha Controller of Examinations	Member
11.	Dr. K. K. Senapati Controller of Admissions	Member
12.	Dr. Satyaki Sarkar Associate Professor and Head of Department Architecture and Planning	Member
13.	Dr. Rakesh Kumar Sinha Professor and Head of Department Bioengineering and Biotechnology	Member
14.	Dr. Gautam Sarkhel Professor and Head of Department Chemical Engineering	Member
15.	Dr. Ashoke Sharon Professor and Head of Department Chemistry	Member
16.	Dr. Sudeshna Chakravarty Professor and Head of Department Civil and Environmental Engineering	Member
17.	Dr. (Mrs.) V. Bhattacharjee Professor and Head of Department Computer Science and Engineering	Member



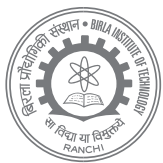
वार्षिक प्रतिवेदन 2020-2021

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Sr. No.	Name & Designation	Role
18.	Dr. S. S. Solanki Professor and Head of Department (Electronics and Communication) Director (University Polytechnic)	Member
19.	Dr. (Mrs.) Sarbani Chakraborty Professor and Head of Department Electrical and Electronics Engineering	Member
20.	Dr. Nishikant Kumar In-Charge Hotel Management and Catering Technology	Member
21.	Dr. Shradha Shivani Professor and Head of Department Management	Member
22.	Dr. Sheshadev Padhi Professor and Head of Department Mathematics	Member
23.	Dr. Dipti P. Mishra Professor and Head of Department Mechanical Engineering	Member
24.	Dr. Swastika Ganguly Professor and Head of Department Pharmaceutical Sciences and Technology	Member
25.	Dr. S. K. Sinha Professor and Head of Department Physics	Member
26.	Dr. Joyjeet Ghose Associate Professor and Head of Department Production and Industrial Engineering	Member
27.	Dr. A. P. Krishna Professor and Head of Department Remote Sensing	Member
28.	Dr. Mohan Varma Professor and Head of Department Space Engineering & Rocketry	Member
29.	Dr. Ramesh Chandra Professor Bioengineering and Biotechnology	Member
30.	Dr. (Mrs.) Sudipta Goswami Professor Chemical Engineering	Member
31.	Dr. (Mrs.) Usha Jha Professor Chemistry	Member
32.	Dr. P.K. Srivastava Professor Chemistry	Member
33.	Dr. J. P. Pandey Professor Chemistry	Member



Sr. No.	Name & Designation	Role
34.	Dr. Birendra Kr. Singh Professor Civil and Environmental Engineering	Member
35.	Dr. (Mrs.) Bindhu Lal Professor Civil and Environmental Engineering	Member
36.	Dr. Rajeev R. Sahay Professor Civil and Environmental Engineering	Member
37.	Dr. Sandip Dutta Professor Computer Science and Engineering	Member
38.	Dr. S. K. Ghorai Professor Electronics and Communication Engineering	Member
39.	Dr. Srikanta Pal Professor Electronics and Communication Engineering	Member
40.	Dr. D. K. Mohanta Professor Electronics and Communication Engineering	Member
41.	Dr. T. Ghose Professor Electrical and Electronics Engineering	Member
42.	Dr. (Mrs.) Vijaya Laxmi Professor Electrical and Electronics Engineering	Member
43.	Dr. S. K. Jain Professor Mathematics	Member
44.	Dr. (Mrs.) Manju Bhagat Professor Management	Member
45.	Dr. R. P. Sharma Professor Mechanical Engineering	Member
46.	Dr. P.R. P. Verma Professor Pharmaceutical Sciences and Technology	Member
47.	Dr. Shiveshwar Jha Professor Pharmaceutical Sciences and Technology	Member
48.	Dr. K. Jayaram Kumar Professor Pharmaceutical Sciences and Technology	Member
49.	Dr. B. N. Sinha Professor Pharmaceutical Sciences and Technology	Member



वार्षिक प्रतिवेदन 2020-2021

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Sr. No.	Name & Designation	Role
50	Dr. (Mrs.) Papiya Mitra Mazumder Professor Pharmaceutical Sciences and Technology	Member
51.	Dr. (Mrs.) S. M. Verma Professor Pharmaceutical Sciences and Technology	Member
52.	Dr. Subir Samanta Professor Pharmaceutical Sciences and Technology	Member
53.	Dr. S. Konar Professor Physics	Member
54.	Dr. Sanjeeb Kr. Rout Professor Physics	Member
55.	Dr.(Mrs.) Sunita Keshri Professor Physics	Member
56.	Dr. Nilanchal Patel Professor Remote Sensing	Member
57.	Dr. (Mrs.) P. Padmanabhan Professor Bioengineering and Biotechnology	Member
58.	Dr. R. N. Bhagat Professor Management	Member
59.	Dr. Soubhik Chakraborty Professor Mathematics	Member
60.	Dr. Balram Singh Professor Civil and Environmental Engineering BIT Patna	Member
61.	Dr. Shree Prakash Lal Professor EC-Patna	Member
62.	Dr. Abhinav Dinesh Director EC-Jaipur	Member
63.	Dr. R. C. Jha Director EC-Deoghar	Member
64.	Dr. Vinay Sharma Professor EC-Deoghar	Member



Sr. No.	Name & Designation	Role
65.	Dr. Arbind Kumar Professor EC-Deoghar	Member
66.	Dr. Asha Prasad In-charge EC-Noida	Member
67.	Dr. A. N. Jha Director (I/c) EC Lalpur	Member
68.	Dr. Arbind Kumar Director (I/c) EC-Patna	Member
69.	Dr. Ganesh Prasad Mishra Professor EC-Jaipur	Member
70.	Dr. Roopali Sharma Professor EC-Jaipur	Member
71.	Col. Sukhpal Singh Khetarpal (Retd.) Registrar	Member Secretary
72.	Dr. Laxmi Narayan Pattnaik Associate Dean Post Graduate Studies	Special Invitee
73.	Dr. Sujan Kumar Saha Associate Dean Undergraduate Studies	Special Invitee
74.	Mr. Md. Nadim Quaiser Asst. Registrar	Special Invitee



Annexure IV : Finance Committee

Sr. No.	Name and Address	Designation
1.	Shri C.K. Birla Birla Tower (9th Floor) 25, Barakhamba Road, New Delhi - 110001	Chairman
2.	Shri Shailesh Kumar Singh, IAS Principal Secretary to the Hon'ble Governor Governor Secretariat Raj Bhawan, Ranchi - 834001	Member (Nominee of the Chancellor)
3.	Shri Rohit Saboo M/s National Engineering Industries Ltd. Khatipura Road, Jaipur - 302006	Member (Nominee of HCT)
4.	Prof. Indranil Manna Vice Chancellor BIT-Mesra, Ranchi - 835215	Member (Ex-Officio)
5.	Shri Y. Goenka Hon. Treasurer Birla Tower (8th Floor), 25, Barakhamba Road, New Delhi - 110001	Member
6.	Prof. Jose Varghese Professor of Eminence Christ University (Deemed University) Hosur Road, Bengaluru - 560029	Member (Nominee of UGC)
7.	Shri P.C. Agarwala Birla Building 9/1, R.N. Mukherjee Road, Kolkata - 700001	Member (Nominee of the General Council)



Annexure V : Building Works Committee

Sr. No.	Name and Address	Designation
1.	Vice Chancellor	Chairman
2.	Honorary Treasurer	Member
3.	Registrar	Member
4.	Dr. Manjari Chakraborty Professor and Dean of Infrastructure Planning Department of Architecture	Member
5.	Deputy Finance Officer	Member
6.	In-Charge (Construction)	Member
7.	Asst. Registrar (Works)	Member Secretary



Annexure VI : List of Heads / In-charges of Departments

Sr. No.	Name	Designation	Department
1.	Dr. Satyaki Sarkar	Associate Professor and Head	Architecture
2.	Dr. Rakesh Kumar Sinha	Professor and Head	Bioengineering and Biotechnology
3.	Dr. Gautam Sarkhel	Professor and Head	Chemical Engineering
4.	Dr. Ashoke Sharon	Associate Professor and Head	Chemistry
5.	Dr. Sudeshna Chakravarty	Professor and Head	Civil & Environmental Engineering
6.	Dr. Vandana Bhattacharjee	Professor and Head	Computer Science & Engineering
7.	Dr. (Mrs.) Sarbani Chakraborty	Professor and Head	Electrical & Electronics Engineering
8.	Mr. Sandeep Singh Solanki	Professor and Head	Electronics & Communication Engineering
9.	Dr. Saral Kumar Jain	Professor and Head	Hotel Management & Catering Technology
10.	Dr. Shradha Shivani	Professor and Head	Management
11.	Dr. S. Padhi	Professor and Head	Mathematics
12.	Dr. Dipti Prasad Mishra	Professor and Head	Mechanical Engineering
13.	Dr. (Mrs.) S. Ganguly	Professor and Head	Pharmaceutical Sciences & Technology
14.	Dr. S. K. Sinha	Professor and Head	Physics
15.	Dr. Joyjeet Ghose	Associate Professor and Head	Production
16.	Dr. A. P. Krishna	Professor and Head	Remote Sensing
17.	Dr. Mohan Varma	Professor and Head	Space Engineering and Rocketry
18.	Dr. Gautam Sarkhel	Professor In-Charge	Central Instrumentation Facilities
19.	Dr. Mahender Kumar	Professor In-Charge	Physical Education & Sports



Annexure VII : Addresses of Other Campuses of BIT Mesra

Deoghar

BIT Mesra, Deoghar Campus
P.O. Ratanpur, Jasidih
Deoghar – 815142 (Jharkhand)
Phone – 9334654856/9308139037
Telefax: 06432-292565
Email: bitdeoghar@bitmesra.ac.in

Jaipur

BIT Mesra, Jaipur Campus
27, Malviya Industrial Area,
Jaipur – 302017 (Rajasthan)
Phone – 0141-4019798/4019819
Fax: 2751601
Email: bitjaipur@bitmesra.ac.in

Ranchi

BIT Mesra, Lalpur (Ranchi City) Campus
P.O. and P.S. – Lalpur,
Ranchi – 834001 (Jharkhand)
Phone – 0651-2531817/2531676
Fax: 0651-2531686
Email: bitlalpur@bitmesra.ac.in

Noida

BIT Mesra, Noida Campus
A-7 Sector – 1,
Noida – 201301 (Uttar Pradesh)
Phone – 91-0120-2553661
Fax: 91-0120-2554146/5323095
Email: bitnoida@bitmesra.ac.in

Patna

BIT Mesra, Patna Campus
Near Patna Airport,
P.O. – Bihar Veterinary College,
Patna – 800014 (Bihar)
Phone: 0612-2223538, 2223545
Fax: 0612-2227050
Email: bitpatna@bitmesra.ac.in



Annexure VIII : Internal Complaint Committee

Sr. No.	Name	Designation
1.	Dr. (Mrs.) Papiya Mitra Mazumdar Professor, Dept. of Pharmaceutical Sciences and Technology	Chairperson
2.	Dr. Venkatesan J Associate Professor, Dept. of Pharmaceutical Sciences and Technology	Member
3.	Dr. (Mrs.) Itu Snigdh Asst. Professor, Dept. of Computer Science and Engineering	Member
4.	Mr. Rahul Rai Deputy Registrar (Academic) General Office	Member
5.	Mrs. Kaushiki Sengupta	Member
6.	Mrs. Nidhi Jaiswal Asst. Registrar (Legal) General Office	Member Secretary



BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
बिरला प्रौद्योगिकी संस्थान, मेसरा, राँची