BIRLA INSTITUTE OF TECHNOLOGY

MESRA, RANCHI



ANNUAL REPORT 2019-20

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 वांच्छित फलं त्रैलोक्यनाथोहरिः।।

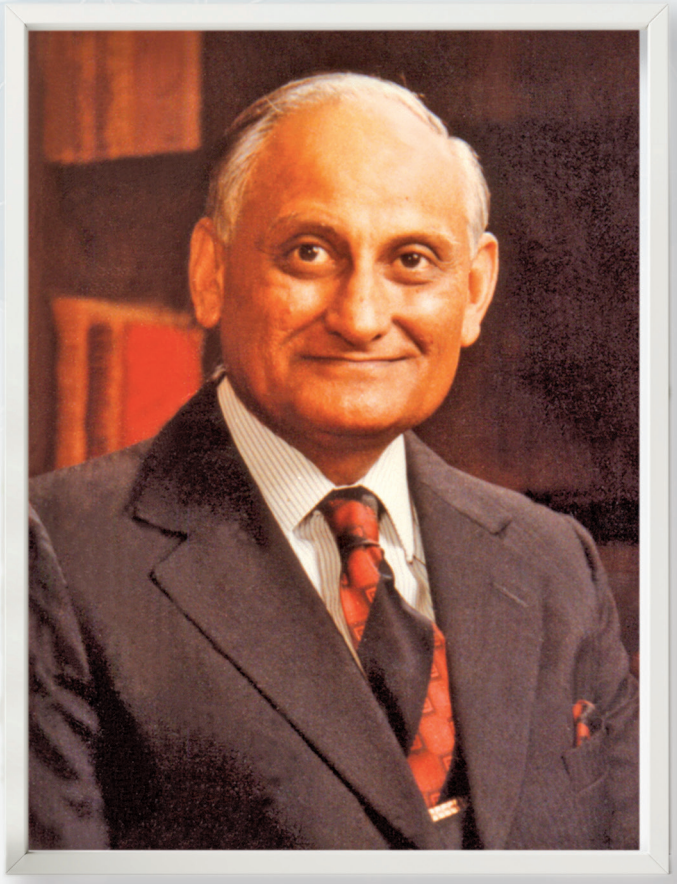
May the Lord of the universe, the remover of evil, whom devotees of Shiva worship as Shiva, the Vedantins as Brahman, the Buddhists as Buddha, the followers of the Nyaya philosophy who are clever in logic as representatives of those devoted to the Jaina doctrines as Arhan, the advocators of the Mimamsa 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 दरिद्र 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

ANNUAL REPORT
2019-20

BIRLA INSTITUTE OF TECHNOLOGY

(Deemed to be University)

MESRA, RANCHI - 835215, JHARKHAND, INDIA



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VICE-CHANCELLOR'S REPORT

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, by virtue of the quality of its academic programmes, has consistently been ranked amongst the leading technical Institutes of the country. The Institute offers academic programmes in 17 disciplines in the main Mesra campus and has 574 faculty members and over 12,000 students spread across various campuses.

The Institute has taken many initiatives to strengthen and expand the Teaching – Learning environment and to generate career opportunities for the students in reputed organizations. Some of these initiatives are the G P Birla Scholarship Scheme, Best Student's Project Award, Inter Hostel Indoor Sports Award and a strong campus placement programme.

A brief report on salient activities of the Institute, undertaken during the year 2019-20 follows.

1. BOARD OF GOVERNORS

- As approved in 64th Board meeting, Alumni Day is to be observed on a fixed day in the month of December every year.
- In the summer of the year 2019, 9 students were sent to Illinois Institute of Technology, 5 students to Carnegie Mellon University and 3 students to Georgia Tech under Immersive Summer Research Experience (ISRE) Program. The program had been immensely successful. The value addition in the thoughts and concepts of the student was remarkable. There has been substantial interest in research related activities of the students. The employability of the students increased considerably, and a number of students became desirous of higher studies abroad.
- As per the direction of the Board in its 63rd meeting, Emeritus Professor position as approved earlier and consequent implementation of 7th pay commission, the compensation package shall be between Rs. 150000/- to Rs. 250000/- per month with free accommodation depending upon the credentials.
- Board in its 63rd meeting directed that the Institute can engage experienced professionals from the Industries and other organisations in various application areas. Eventhough such person may not have prescribed qualifications to teach e.g. PG or Ph.D. degrees but may possess practical experience in the industries, he/she can be engaged as Professor of Practice.
- Board in its 63rd meeting approved the proposal of establishment of Centre of Excellence in Water (CoEW) in BIT Mesra as a collaborative initiative with the Sustainable Water Infrastructure Management (SWIM) Center of Virginia Tech, USA. Participation of several Departments with appropriate expertise shall be involved. In addition, experts from state/ central government Departments may be also involved, if necessary.

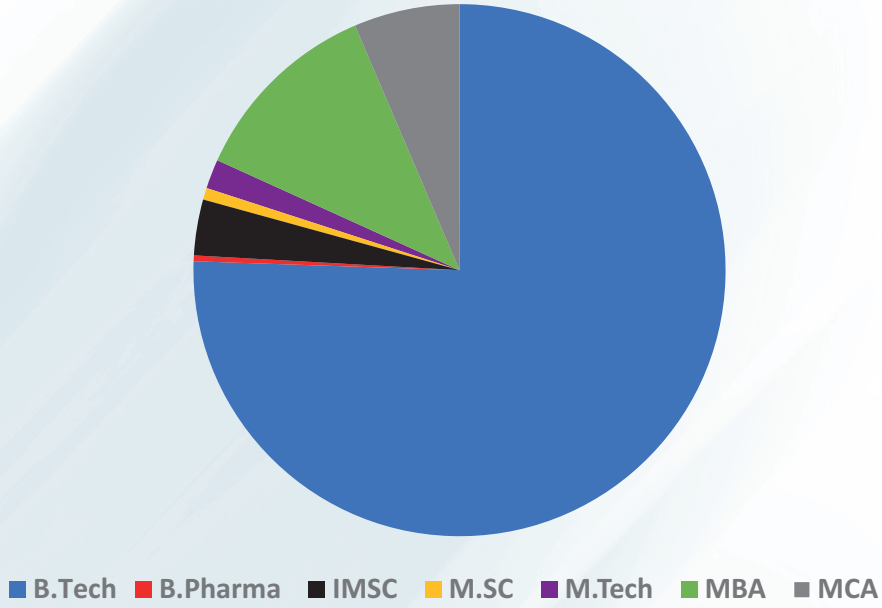
2. STUDENT PLACEMENTS

The Campus Recruitment Programme for students demonstrates the confidence of the Industry in the quality of graduates of BIT Mesra. During the **year 2019-20**, the Campus Recruitment Programme maintained its strong position with visits from 120 recruiters (FTE+Internship) across all campuses and by achieving an overall target of **831 job offers**. Numbers of Internship offers across different sectors of the industry was 378.

Major recruiters ranging from Investment Banks to Analytics & Consulting, Automobile to Heavy Engineering and Infrastructure, IT Product to IT Services visited the campus for placement. A total of **95 companies** visited the campus for placements, however the Major Recruiters were **Walmart Labs, Samsung R&D, Cognizant, Infosys, Amdocs, IBM, Microsoft India Development Centre, Tata Steels and Wipro**.

The Highest and Average Salary for various programmes are: B.E – INR 49.76 L/annum and INR 11.76 L/annum; M.Tech - INR 9.0 L/annum, 6.31 L/annum; M.B.A - INR 8 L/annum, 4.29 L/annum; M.C.A - INR 8.1L/ annum, 6.09L/annum; B. Pharm - INR 7 L/annum, 6.5L/annum & IMSc – INR 9.07L/annum, 7.73L/annum.

Programme wise Campus Placement



3. GP BIRLA SCHOLARSHIP AND OTHER INITIATIVES

- It is my pleasure to mention that during the period GP Birla Scholarships worth INR 2.69 Crore were awarded, and INR 35.02 Lakhs have been provided to fund the best BE & ME Projects.

4. ACADEMIC & RESEARCH ACTIVITIES

- **Dr. Raju Poddar** filed a patent for his innovation titled "A method and apparatus for imaging of vasculature of human eyes adapting an intensity disparity field subtraction optical coherence technique" E-1/39303/2019-KOL, 2019
- **Dr. Joyjeet Ghose**, **Dr. Vinay Sharma** & Dr. Surendra Kumar were granted patent for their innovation titled "Aluminium Metal Foam and a process for Preparation thereof Aluminium Metal Foam and a process for Preparation thereof" vide Indian patent no. 338236.
- Cohen, Jacob., **Das, Sudip**., JSAC, LLC were granted European Patent on Method and Cavity for Suppression of Cavity Flow Oscillations and Acoustic Loads using Curved Rear Face (EP 3411598 B1- 21/8/19).

5. CONSULTANCY

- Dr. Ashoke Sharon Received Consultancy work from Dr. Reddy's Laboratory PVT. Ltd., Hyderabad.

- Dr. Kirti Avishek completed a consultancy work on Catchment Area Treatment Plan for Chandil Dam (Subarnarekha River Basin), Jharkhand worth 6lacs from Sigma Consultants.
- Dr. Indrajit Roy obtained Consultancy work related to Slope stability study of Wani area, Wani North area, Umrer area & Pench area worth 30.44 lacs.
- Dr. Indrajit Roy obtained Consultancy work related to Slope stability study of Mata-no-Madh, Umarsar, Panandhro lignite opencast mine, GMDC, Gujrat.
- Dr. T. Ghosh obtained a consultancy work on Validation of electrical design of 5000 MT cold storage from SPECON Engineering Consultant, Jamshedpur
- Dr. Priyank Kumar pursued a consultancy work on CFD Analysis of Metal Casting Process worth 1.20lacs from Intocast Hitech Jamshedpur.

6. R&D ACTIVITIES OF THE INSTITUTE

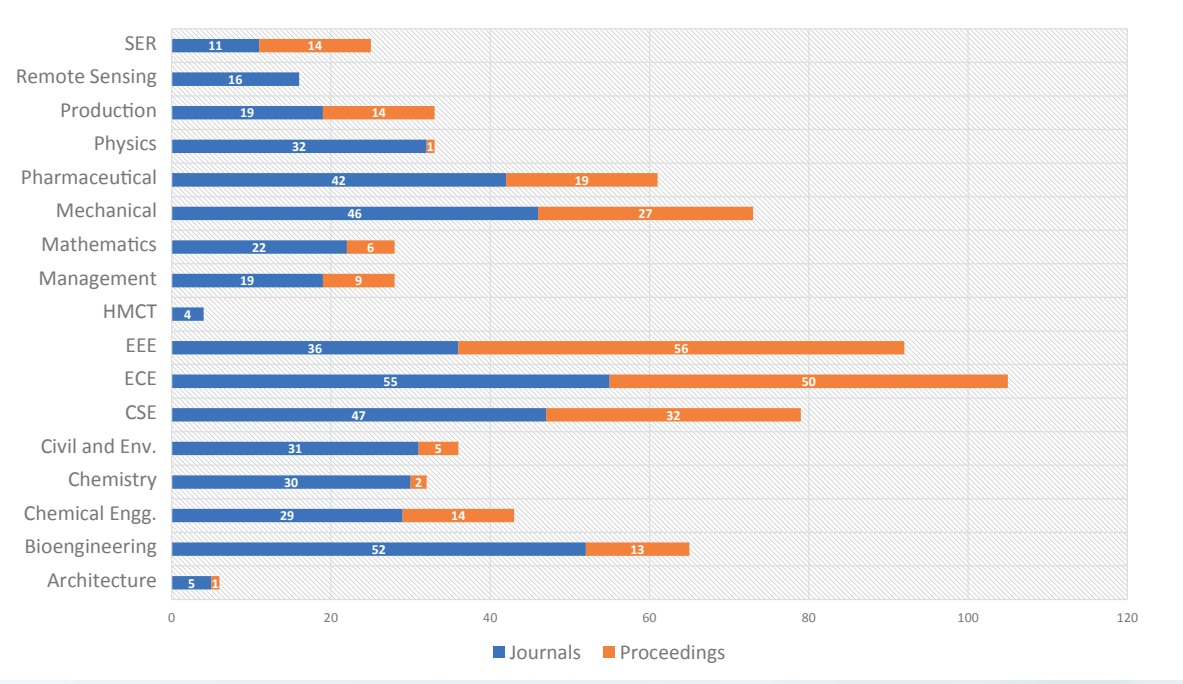
The Institute is committed to high-end R & D activities and supports it through Seed Money, Institute Fellowships and Travel Grants for National & International seminars, symposia, and conferences.

During the period of July 2019 to June 2020, 236 faculty members were supported by the Institute to attend National Seminars, and many faculty members were supported financially to attend International Conferences. INR 35.02 Lakhs have been provided to fund the best BE & ME research Projects. A total of 67 students were provided with research fund.

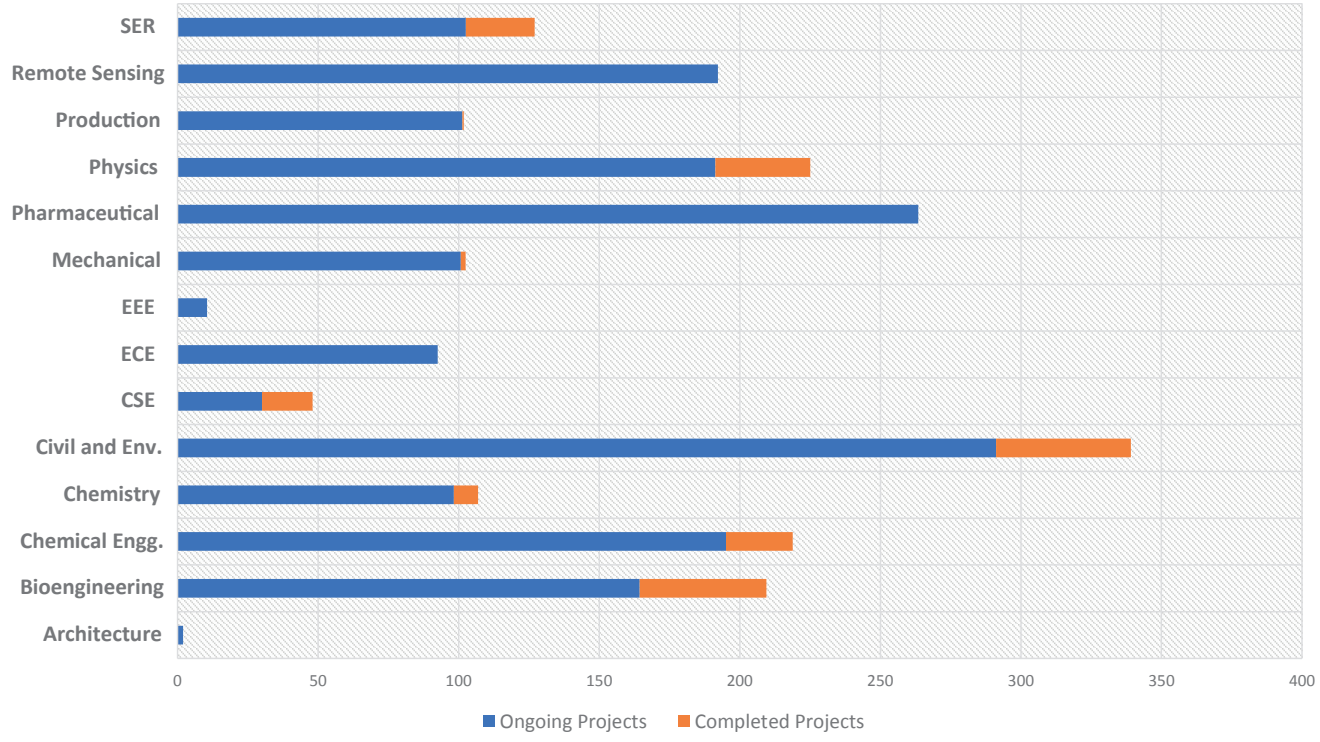
The high Level of Research conducted at BIT Mesra has led to grants from National / International agencies like UGC, CSIR, DST, DAE, BRNS, ISRO, DRDO, ARDB, DBT, AICTE, NAMPET, C-DAC, ICAR, Govt. Of Jharkhand, BMBF through sponsored projects and consultancies.

The Institutes's research achievements are reflected by the following data:

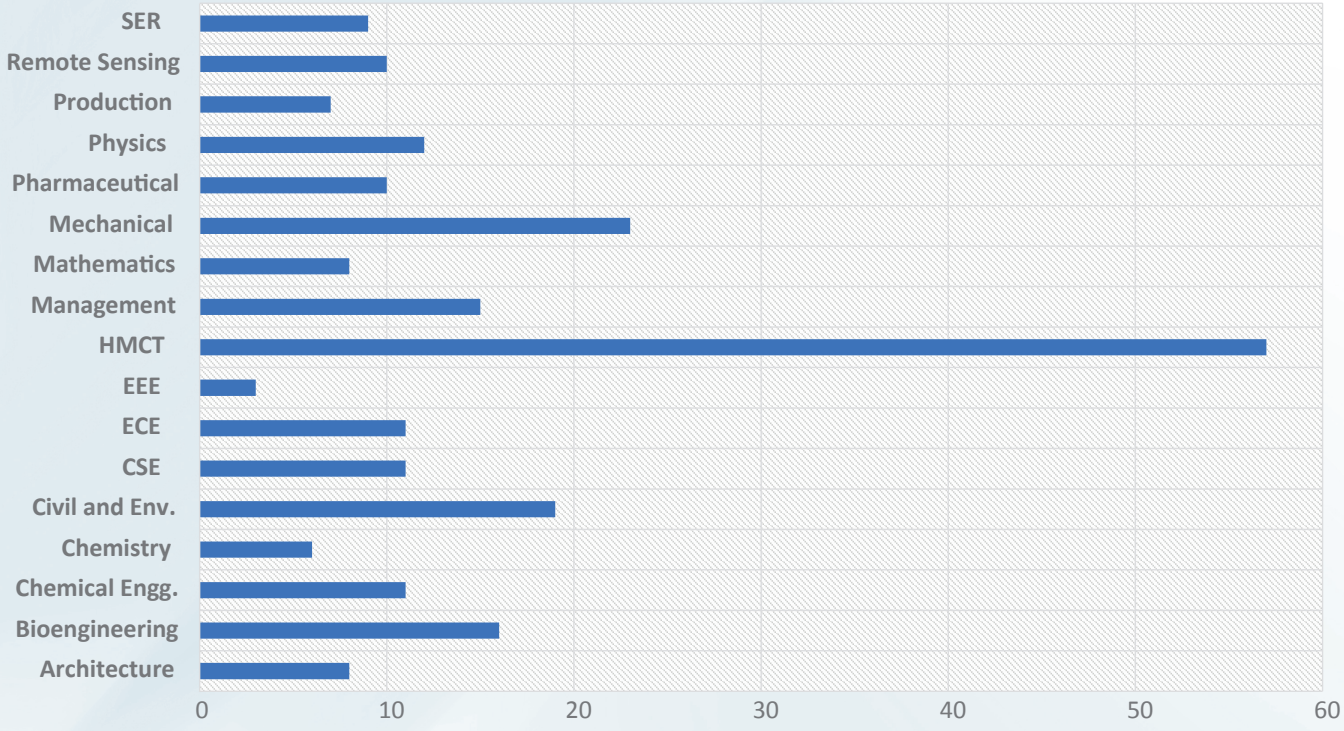
Department wise Publications



Research Projects in Lacs



Seminars Attended by Faculties



Publication in Journals	:	496
Publication in Proceedings/Books/Chapters	:	263
On-Going R&D Projects	:	1835.83 Lacs
R&D Projects Completed	:	203.76 Lacs
National / International Seminars / Conference Attended	:	236

During the last few years there has been a lot of thrust on improving the quality and quantity of research by faculty members of the Institute. This has resulted in an improvement in the number of publications and research fund.

6.1 Citation in Sci-Expanded, SSCI, A&HCI, ESCI (Source: WoS)

Year	Total no. of citations per year	No. of publications
2016	3370	240
2017	3713	227
2018	4361	244
2019	5304	308
2020 (Till Date)	4388	244

6.2 Seminars/ Symposia/ Short Term Courses Organised

The Institute organized various seminar, conferences and even e-FDP and webinar in the COVID time. The list of some of these seminar/ webinar/ conferences organized by the Institute is as under:

- Institute Organised a Faculty Development Programme for Student Induction (Universal Human Values) during 13th – 15th Dec., 2019 sponsored by AICTE.
- Department of Architecture organized "Street Junction Design" in collaboration with WRI on 22nd August 2019.
- Department of Architecture organized "Energy Conservation and Building Codes" in collaboration with Govt. of Jharkhand on 23rd August 2019.
- Department of Architecture organized "Sustainable Future" on 9th – 10th September '2020.
- Department of Architecture organized "Autodesk Revit" from 15th – 17th September '2020.
- Department of Architecture organized "How to Festival" in collaboration Locator, Bengaluru on 23rd September 2019.
- Department of Bio-Engineering conducted "Foldscope workshop for the teachers and students of aspirational districts of Jharkhand" sponsored by DBT, Govt. of India on 22nd and 23rd Oct.2019.
- Department of Chemical Engineering conducted a seminar on "Awareness camp for school Children: Starch, resistant starch and diabetes" with the support of DST on December 18th 2019.
- One Day workshop on Coal chemistry and Health Impacts due to Coal was organized with support from TEQIP Phase III.
- Excellence in Pedagogy and Quantitative Research, sponsored by TEQIO, phase – III, 26th – 31st August 2019.
- One-week STTP on 5G Mobile Communication Networks from 9th Dec. – 13th Dec. 2019.
- International conference on Emerging Trends for Smart Grid Automation and Industry 4.0 (ICETSGAI4.0), sponsored by TEQIP & TYPHOON HIL from 5th – 7th Dec. 2019.

- e-FDP on "Outcome Based Education and online Learning-Teaching" was organized by Department of Management and Hotel Management & Catering Technology form 29th June – 3rd July '20.
- Webinar on Impact of Pandemic (COVID – 19) on Hospitality Industry: Shifting challenges and opportunities was organized by Department of Hotel Management & Catering Technology from 28th – 29th May'20.
- FDP (Excellence in Pedagogy and Quantitative Research) was organized by Department of Management, sponsored by TEQIP from 26th August to 30th August 2019.
- A Green Therapeutic Approach Towards Cancer, sponsored by AICTE-QIP from 7th Feb to 20th Feb. '20.
- Application of Recent Innovations in Industry and Hospital Pharmacy, sponsored by AICTE-QIP from 21st Feb to 5th March '20.
- Application of Modern Analytical Techniques in Drug Discovery and Development, AICTE – QIP, from March 6th – March 19th 2020.
- One day Seminar (Webinar) cum workshop on Antimicrobial Resistance, by Department of Pharmaceutical Science and Technology on 16th April 2020.
- A webinar series on Antitubercular Drug Design & Development, by Department of Pharmaceutical Science and Technology on 26th May 2020.
- COVID-19 Webinar Series Vaccine and Therapeutics Research on COVID-19 by Department of Pharmaceutical Science and Technology on 29th May 2020.
- One Day Workshop on "Intellectual Property Rights", NRDC, New Delhi, on 7th Sept. 2019.
- Introduction to Web-GIS and Geoportal Development using Open Source Tools, organized by Department of Remote Sensing on 16th and 17th May 2020.
- National Brainstorming Workshop on Modelling Fault Zone Induced Surface Mass Transport in Himalayan Orogenic Terrains for the Study of Fault Related Hazards in Himalayan Towns, sponsored by Ministry of Earth Sciences, Government of India, on 16th and 17th March 2020.

7. NATIONAL AND INTERNATIONAL EXCHANGE PROGRAM

Immersive Summer Research Experience (ISRE 2019): Seventeen (17) students of undergraduate engineering program (6th Semester) were sent to reputed US universities in the summer of 2019 under the ISRE program:

- Illinois Institute of Technology, Chicago - 9 Students
- Carnegie Mellon University, Pittsburgh - 5 Students
- Georgia Institute of Technology, Atlanta - 3 students
- Dr. Sukalyan Chakraborty is the recipient of **Fulbright Specialist Program Grant (USEFI and World Learning Centre, USA).** Prof. Robert Finkelman, University of Texas at Dallas, USA visited BIT Mesra under this Program.
- Dr. Indrajit Roy received a German Intern through **DAAD-RISE programme**.
- Dr. S Dutta was selected for 'STUDY TOUR TO UK' sponsored by AICTE and British Council under **UKERI-AICTE** Program.

8. INFRASTRUCTURE DEVELOPMENT

Institute continues to build a state of art infrastructural resources to support academic and extracurricular activity. A few of them are as follows:

- Individual faculty chambers provided in several Departments
- Complete Renovation of the Guest House, Administrative Offices and Staff Club.
- The Department of Management established a Business Analytics (BA) Lab to create the required infrastructure for the newly introduced BA specialization in the MBA programme. Suitable space was allocated to accommodate the following Hardware and Software: Desktop Computers: 5, Software: SPSS (10 User), AMOS.
- Department of Chemical Engineering developed Electrochemical workstation, Spiral Heat Exchanger setup, Bomb Calorimeter, Microwave Synthesizer Texture Analyser, GC Upgradation with FID detector, Cold Centrifuge, Cutting and Grinding machine with centrifugal washers, Computer lab with 23 workstation, COMSOL software package with CFD, Microfluidscs, Reaction Enginering Heat transfar, Battary and fuel cell module
- Department of Remote Sensing developed the infrastructure by having Handheld Spectro-Radiometer, Arc GIS 10.7 & LAI Meter.
- Space Engineering developed an anechoic chamber to test acoustics of supersonic free jets has been added in the Aerodynamics laboratory. Along with this other development of Space Engineering is as under :
- Updation of hybrid rocket experimental setup for combustion instability studies

  Experimental setup of hybrid rocket has been updated to study the combustion instabilities during the combustion by varying the fuel configuration or the other parameters. These modifications includes installtion of the piezo-electric pressure transducer (Model: 124A24 ICP Make: PCB Piezotronics, USA), water circulatory system for the pressure transducer.
- Department of Civil & Environmental Engineering completed renovation of the computer lab with high end computer systems for facilitating research facilities for faculties and scholars.
- 3 Equipments has been procured viz. CNC Lathe, CNC rinding and CNC Plasma Cutting machine.

9. MOUs / COLLABORATIONS

The Following MoU's are executed for the AY 2019-20

- Georgia Institute of Technology, Atlanta, USA
- Illinois Institute of Technology, USA
- Virginia Polytechnic Institute and State University, USA
- Kagoshima University, Japan
- LAB Automate Technologies, INC, NJ, USA
- Rajendra Institute of Medical Sciences, Bariautu, Ranchi
- Central Tassar Research and Training Institute, Ranchi, Central Silk Board, GOI
- Dr. Reddy's Laboratory PVT. Ltd., Hyderabad.
- UNICEF on Validation of Water, Sanitation and Hygiene.

- GIFI, & CTS, Aarhus University, Denmark
- Infineon for Training and Placement
- Synopsis for Training and Placement.
- SIR (CLRI)- Chennai , VIT Vellore
- University College of London, Birkbeck, UK
- Avankia Software Private Limited, Bangalore
- EPSA Space Application Center, ISRO, Ahmedabad
- ERLDC, Power System Operation Corporation Ltd, New Delhi
- Jharkhand University of Technology, Ranchi
- Lovely Professional University, Punjab

10. TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME PHASE -III

The Third phase of Technical Education Quality Improvement Programme (referred to as TEQIP-III) is fully integrated with the Twelfth Five-year Plan objectives for Technical Education as a key component for improving the quality of Engineering Education in existing institutions with a special consideration for Low Income States and Special Category States and support to strengthen few affiliated technical universities to improve their policy, academic and management practices. Based on the good performance in TEQIP-I and TEQIP-II and on the strength of our Institutional Development Proposal (IDP) for TEQIP-III, our Institute has been selected to participate in TEQIP-III.

Birla Institute of Technology is selected under sub-component 1.1 in which the Institute will receive Rs. 15 crores for Improving quality and equity in engineering institutions. BIT is under the twinning arrangements to Build Capacity and Improve Performance of the institutions in partnership with Institute of Chemical Technology, Mumbai.

Induction programme for the benefit of newly joined students of first year B. Tech, Workshops for pedagogy training, improve student learning, Graduate employability, Faculty and Staff development, Joint research projects, Research and Development, Mentoring/Twinning, Management Capacity Development, Industry-Institute Interaction etc., Establishment of Infrastructure for SWAYAM PRABHA, enhanced GATE participation rate and Joint activities with Industry are among the main objectives of TEQIP-III. Two hundred twenty-three faculty members were financially supported for attending seminar, conference, workshop, training programme etc. under TEQIP.

Improvement in Teaching, Training & Learning Facility:

- Horizon Material Testing Software with Dongle and Firmware for Old H100KT Universal Testing Machine and COMSOL Multiphysics software has been purchased through TEQIP-III for Mechanical Engineering Department
- Origin and Graph Pad Prism software has been purchased for Bioengineering Department
- Tensile Testing Machine, Autoclave, COMSOL software and workstations has been purchased for Chemical Engineering Department.
- FTIR Spectrometer, (Potentiometer with Electrodes {Pt- Electrode, Ag/AgCl & Sat. Calomel Electrode}, Digital Colorimeter, Gauss View 6 software, (FLAME PHOTOMETER, Benchtop Dissolved Oxygen M) and COD Meter has been purchased for Department of Chemistry.

- Thermal Conductivity Apparatus has been purchased for Central Instrumentation facility.
- Geo Studio Professional (Software), Centrifuge and Humidity Chamber has been purchased for Dept. of Civil & Env. Engineering.
- NetSim Simulation Software, Emulator, Computer based- Examination tools, Desktops & Workstations has been purchased for Department of Computer Science & Engg.
- Rsoft OptSIM v 2019, OptSIM Circuit add-on, ANSYS HFSS Academic CAE suite Software, Pupil's experiments with microwaves (One Set), Horn Antennas with connectors, 8085 Microprocessor kit and Microwave Active Components has been purchased for Department of ECE.
- NI ELVIS Rotary inverted Pendulum, ETAP Software and Micro Lab Box has been purchased for Department of EEE.
- Ref Management tools, Incites-Complete (Benchmarking and Analytics including JCR, e-books and RFID setup has been purchased for Central Library of the Institute.
- USB Data acquisition Card, Youngs Module, MedeA-VASP Software, origin software, LABVIEW software, UPS, Planck's constant set-up and Magnetron has been purchased for Department of Physics
- Ultrasonic Flaw Detector and Cubictek Manufacturing Process Simulation Software Kit has been purchased for Department of Production Engg.
- LAI Meter, Arc GIS software and Handheld spectroradiometer has been purchased for Remote Sensing Department.
- High Speed Camera has been purchased for Department of SE&R.
- Furniture's are also procured for some of the Departments.

11. EMINENT VISITORS/DELEGATION FROM OTHER ORGANISATIONS

- Ar. Sanjay Puri, Sanjay Puri Architects, Mumbai visited on 7th September 2019 in the Department of Architecture.
- Dr. Sandeep Agrawal, University of Alberta, Canada visited on 9th Dec. 2019
- Ar. Harshwandhan, Design Strategist, Ford, USA visited the Department of Architecture on 13th January 2020.
- Ar. Prapti Jha, Innovation catalyst, Ford, USA visited the Department of Architecture on 17th January 2020.
- Ar. Vivek Singh Rathore, Salient Designs, Kolkata visited the Department of Architecture on 22nd Feb. '2020.
- Dr. Mohd. Aslam, Scientist G, Adviser DBT, GoI, New Delhi visited Department of Bio-Engineering on 22nd October 2019.
- Dr. Pradip Munshi, Asst. Vice President (VP), Lead Scientist (Organic) Reliance Technology Group, visited Department of Chemical Engineering on 5th Sept. '19.
- Prof. Pralay Maiti, School of Materials Science and Technology, IIT BHU, visited Department of Chemical Engineering on 23rd Sept. '19.
- Prof. Robert Finkelman, University of Texas at Dallas, USA visited Department of Civil Engineering on 5th Dec. 2019.

- Somnath Mukherjee, Jindal Steel limited visited Department of Civil Engineering on 27th Jan 2020.
- Susmit Roy, MTI SAIL visited Department of Civil Engineering on 6th and 16th March 2020.
- Prof. A B Roy, FNA, FASc Retd as Emiritus Prof. of Presendency Univ. Kolkata, visited Department of Civil Engineering on 26th August 2019.
- Development of machine learning algorithms for the early diagnosis of delinquent behaviour of juveniles, CSRI, DST, Rs. 22,54,800/-.
- Automated vegetation stress detection from very high resolution multi-temporal spectral data to establish relationship using Artificial Intelligence, Sky Map Global (SMG) Pvt. Ltd., Singapore, Rs. 7,50,000/-.
- Shri P. K. Agarwal, Director and CISO, Power System Operation Corporation Limited (POSOCO) visited Department of EEE from 5th – 7th Dec. '2019
- Shri Pulkit Trivedi, Director, Google Pay – India, visited Department of Management on 24th January 2020.
- Mrs.Tuhina David (Manager Employee Engagement, Center of Excellence, Mahindra Finance) visited Department of Management on 24th October 2019.
- Mr. Shivesh Singh (Head Business HR, Bandhan Bank) visited Department of Management on 24th – 25th August 2019.
- Dr Tanmay Chattopadhyay (Principal Consultant at Littler Associates), visited Department of Management on 18th – 19th September 24th 2019.
- Prof. Saranjit Singh, Head, Department of Pharmaceutical Analysis of National Institute of Pharmaceutical education and Research, Mohali, Chandighar visited Department of Pharmaceutical Science and Technology on 6th March 2020.
- Prof. Vd. K.S. Dhiman, Director General, Central Council For Research In Ayurvedic Sciences, Ministry of AYUSH, Government of India, visited Department of Pharmaceutical Science and Technology on 7th Feb. 2020.
- Dr. Binay Kumar, Crystal Lab, Department of Physics & Astrophysics, University of Delhi visited Department of Physics on 12th July 2019.
- Dr. Arindam Chakraborty, Indian Institute of Science | IISC, Bangalore visited Department of Physics on 6th Aug. 2019.
- Dr. Amarendra Kumar Sarma, Professor, Department of Physics, IIT, Guwahati visited Department of Physics on 2nd Sept. 2019.
- Professor S.K.Gupta, Professor & Head, Environmental Science and Engineering, IIT-ISM, Dhanbad visited Department of Physics on 13th Sept. 2019.
- Dr. RAAJ Ramsankaran, Associate Professor, Dept. of Civil Engg., IIT, Bombay visited Department of Physics on 25th January 2020.
- Rohith Vinayaka, DHIO Research and Engineering Pvt. Ltd. Visited Department of Production Engineering on 12th – 13th Sept. 2019.
- Prof. Malay Mukul, Professor in Dept. of Earth Sciences in IIT- Bombay visited Department of Remote Sensing on 16th – 17th March 2020.

- Prof. G Bala, Centre for Atmospheric studies (CAOS), IISc Banglore visited Department of Remote Sensing on 28th January 2020.
- Dr. Debashish Mitra, Head & Scientist SG, IIRS, ISRO, Dehradun visited Department of Remote Sensing in February 2020.
- Padmashri Madhavan Chandradathan, Scientific Advisor to CM of Kerala State, Former Director, SDSC, VSSC ISRO, visited Department of Space Engineering & Rocketry on 11th Nov. 2019.
- Bijay K. Sultanian Founder & Managing Member of Takaniki Communications, LLC, USA visited Department of Space Engineering & Rocketry on 2nd March 2020.
- Sathya Narayana, Principal Scientist Experimental Aerodynamics Division, NAL, Bangalore visited Department of Space Engineering & Rocketry on 20th Sept. 2019.

12. AWARDS/DISTINCTION RECEIVED AND VISITS IN INDIA & ABROAD

- Dr. Satyaki Sarkar honored as Fellow -Indian Institute of Architects
- Dr. Ashoke Sharon nominated as consultant by Dr. Reddy's Laboratory PVT. Ltd., Hyderabad.
- Dr. Barnali Dasgupta Ghosh received the Outstanding Woman in Science award, 5th Venus International Women Awards - VIWA 2020.
- Dr. Kirti Avishek received the Excellence and Recognised Reviewer certificate from Elsevier.
- Dr. Sukalyan Chakraborty received the Fulbright Specialist Program Grant under USEFI and World Learning Centre, USA
- Dr. K.S Patnaik received the Believer, Discipline and Silver Medal Award from NPTEL.
- Prof. S. Pal received the Senior Member position at IEEE USA.
- Dr. D.K. Mohanta nominated as Editor, Associate Editor and Guest Editors for Taylor and Francis journals, IEEE Access, IET related journals, Springer and Wiley Publications.
- Dr. Praveen Srivastava nominated as Resource Person on e-FDP on "Moodle – Learning Management System". CIMAGE Professional College, Patna in association with Spoken Tutorials Project, IIT Mumbai, June 2020.
- Dr. S. Roy Awarded the Most Prestigious and Unique Post Doctoral Degree (By Thesis Submission) : D.Litt In Management (In Area Of Supply Chain Intelligence) by Sambalpur University-Burla, Odisha.
- Dr. S. Shivani nominated as Member of UGC Review Committee for Review of Deemed University status of: ICFAI University, Sikkim.
- Dr. S.Shivani Contributed as member of UGC working group for designing Curriculum and teacher's manual for Life Skills Programme for UG students across the country
- Dr. S.Shivani nominated as AICTE Evaluator for proposals seeking financial support from the agency.
- S. Jabeen received the SERB International travel grant for attending International Congress on Industrial and Applied Mathematics (ICIAM2019), Universitat de València, Valencia, Spain.
- Prof. S. Padhi nominated as Member of Editorial Board of the Journal "Functional Differential Equations", Ariel University and as the Editor of the "Proceeding on of FDEA2019", Springer Nature.

- Dr. Om Prakash is nominated as guest editor in Special issue on Renewable Energy for International Journal of Energy Technology in 2020. ISSN: Online: 2633-0717; Print: 2633-0709.
- Dr. D. Mahto has been nominated in international advisory board of 2nd International Conference on Future Engineering System and Technologies (FEST 2020).
- Dr. S. K. Dhiman, Reviewer of SCI Journal Paper: Elsevier Publication; Springer Publication Ltd.
- Dr. R.N. Gupta nominated as Core Expert Committee Member for prepation of 'Guidance Manual For compliance of Indian Pharmacopoiea. Indian Pharmacopoiea Commission, Govt. of India.
- Dr. R.N. Gupta nominated as Vice Chairman, Multidisciplinary Reserach Committee. RIMS.
- Dr. Dr. Venkatesan J nominated as Expert, Drug Discovery Hackathon 2020. Innovation. GoJ.
- Dr. C Jeganathan received the Samaj-Bandhu Award from M/s Prantik Care the Earth.
- Dr. C Jeganathan nominated as an Expert for the Scientific Selection Committee, North-Eastern Space Application Center (NESAC, Shillong), ISRO.
- Dr. C Jeganathan is the associate editor for Journal of Indian Society of Remote Sensing, Springer.
- Dr. N. Patel is the member editorial board for 6 reputed journals including those of Springer Journals. He is also an associate editor of Journal of Forestry Research (Springer).
- Dr. A.P. Krishna is a reviewer for the Project under the Scheme for Transformational and Advanced Research in Sciences (STARS), National Department of Higher Education, MHRD, GoI and IISC, Bangalore.
- Dr. A.P. Krishna is the Coordinator for the National Workshop (Sponsored by Ministry of Earth Sciences, Govt. of India.)
- Dr. Rajiv Kumar received the Honorary Rosalind Member of London Journals Press.
- Dr. Rajiv Kumar acted as Jury Member for INSPIRE Award-MANAK Scheme, District and State level.

13. STUDENTS' ACTIVITIES

The Institute promotes multi-dimensional growth in different facets related to students. The students showcased their talents and responsibilities by organizing, participating and being victorious in various programmes of social, cultural and technical in nature.

National Service Scheme

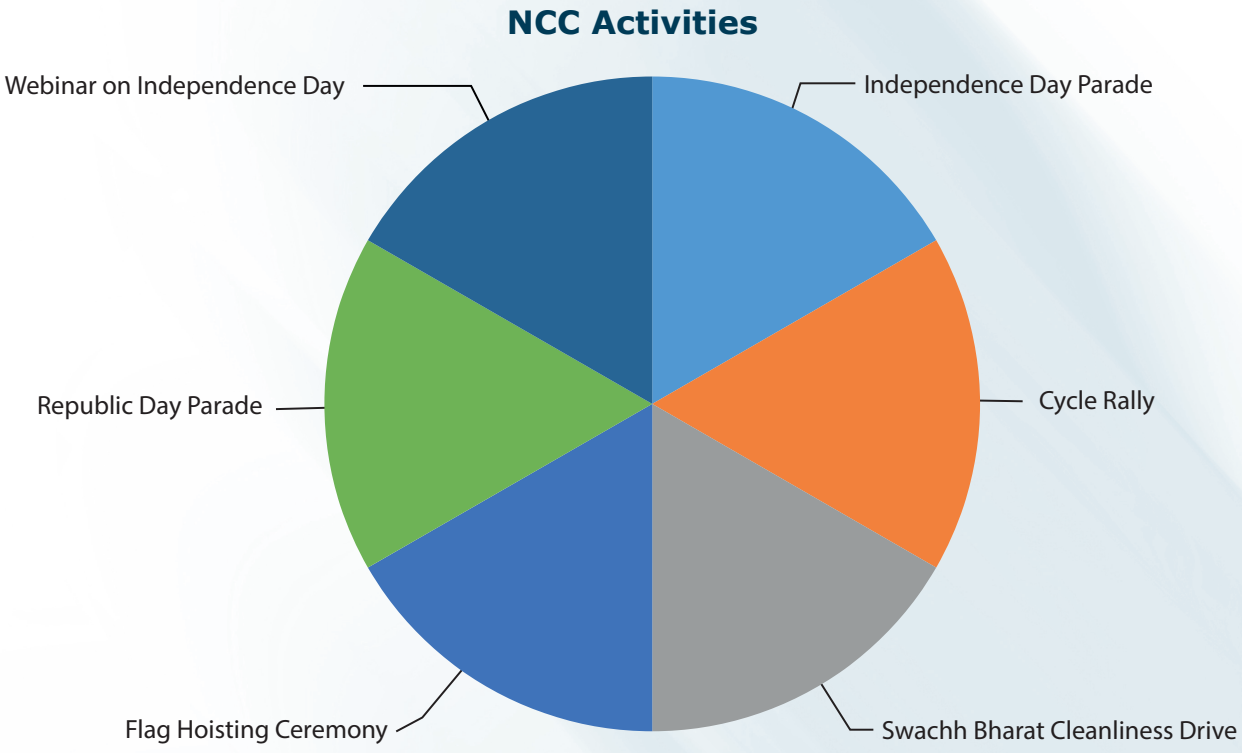
The National Service Scheme (N.S.S) is a Central Sector Scheme of Government of India, Ministry of Youth Affairs & Sports. It provides opportunity to the student youth to take part in various government led community service activities & programs. N.S.S, BIT Mesra organises regular and special activities in the ten adopted villages namely Rudia, Panchauli, Kenduatoli, Humbai, Mesra East, Mesra West, Neori, Chuttu, Kedal and Nawatoli. Total no. of NSS units: **07,** Total no. of volunteers enrolled : **702 (**Boys: **487,** Girls:**215)**

- 584 kilograms of relief-material was sent to Bihar to help the people affected by the floods.
- On the occasion of International Literacy Week (08th-14th July 2019), an awareness program was organized by N.S.S., BIT Mesra in the adopted villages of Pancholi and Nawatoli.

- N.S.S, B.I.T. Mesra organized an old-age home visit to D.A.V Nandraj Old Age Home on 7th September 2019 and distributed food packets.
- N.S.S, B.I.T. Mesra organized a plantation drive on 15th September 2019 in the adopted villages of Nawatoli & Mesra West. A total of 120 saplings were planted in this drive.
- On the occasion of 150th birth anniversary of Mahatma Gandhi, N.S.S, B.I.T Mesra organized a Plastic-ban awareness drive in the college campus followed by a Cleanliness drive with an unassailable spirit to keep up with the principles of Mahatma Gandhi.

National Cadet Corps

3 JHAR CTC NCC, BIT Mesra is the composite technical company imparting Army training to young student enthusiasts. **It has 100 SD Cadets and 30 SW cadets.**



Clubs and Societies

There are 23 Clubs and Societies in BIT Mesra that cater to the holistic development of the students. These clubs organize techno-cultural-social events help build the foundations of strong and responsible citizenship among the student fraternity.

BITOTSAV 2020 : The grand curtain raiser of BITs Annual Cultural Fest BITOTSAV'20 was marked by the Heritage Night. The Hon'able Chief Minister of Jharkhand, Mr. Hemant Soren graced the ceremony with his benign presence.

PANTHEON 2019: The Annual Technical Fest of BIT Mesra witnessed the presence of renowned speakers such as Professor Anandmayee Tej, Indian Institute of Space Science and Technology (Trivendrum) and Professor Soumen Mondal, SN Bose National Centre for Basic Sciences (Kolkata).

Vajra 2019: The Annual Sports Fest of BIT Mesra witnessed participation from across India in various Indoor and Outdoor Sports events. Overall Champion is BIT, Mesra, where as NIT Jamshedpur was first runner up. **Chetan Devraj Cricket Tournament** was also organized in which team from BIT Mesra were the winners of the tournament. **Body Building Competition** was also held at BIT Mesra.

14. AWARDS RECEIVED BY STUDENTS

- Ms. Archita Gupta, Dept. of Bioengineering received the best poster award at the 29th National Conference of SBAOI along with International Conference on Biomaterial in Tissue Engineering and Regenerative Medicine (BioTERM) 2019. IIT Kanpur.
- Pushprenu, Dept. of Bioengineering received the best poster presentation award at the Department of Biotechnology and Medical Engineering, National Institute of Technology, Rourkela-769008, India.
- Nandkishore Thombare from the Department of Chemistry received the Jawaharlal Nehru Award for outstanding doctoral research in agriculture & allied sciences. Ministry of Agriculture & farmers welfare, Govt of India.
- Mr. Aditya Jha, Department of Civil and Environmental Engineering received the "Best Paper Award" in the 1st International Conference on Water Security and Sustainability "Down To Earth 2019", Department of Civil Engineering, Sikkim Manipal Institute of Technology. Dec 2019.
- Ankur Dubey from CSE Department received second prize in Hackbit 2019.
- Abhilasha Sinha from CSE Department was among the top 5 finalist from Smart India Hackathon 2020
- D. Sukesh and Krishna Sai Kushal from ECE received the first position from CK Birla Hospitals and Amazon Web Services Academy, 2020.
- J Sudarshan from EEE received the C certification from NCC.
- Shorya Krishna from EEE received Rank 50 in GATE examination.
- Santosh Singh, Management received the 1st Runners Up, Business Quiz, "Trailblazers" at CUJ. 2020.
- Sunit Prasad from Management received Full Term Doctoral Fellowship of Indian Council of Social Science Research (ICSSR), 2019.
- Swati Jha from Management Featured on Prabhat Khabar Newspaper for Food Blogging. She has 10K followers on her Instagram Handle.
- Pratyay Das from Management received the Best Parliamentarian at Youth Lok Sabha Debate organized by Shining Youth Foundation, Agra.
- Dhirendra Sharma from Mathematics received the DST- Inspire Fellowship for pursuing full-time doctoral (PhD) Program.
- Satyam Shrivastava received the Best Presentation Award for the paper entitled "Monotone Iterative Methods for solutions of Fractional Differential Equations", 47th International Conference of Odisha Mathematical Society held at NIST, Berhampur.
- Akshat Kumar and P. Naggapaneni from Mechanical Dept. received the First Prize in paper presentation in National Science Day. BIT Mesra.
- Suparno Roy received the Best Oral Presentation and Medal of Honour in 5th IUPHAR World

Conference on the Pharmacology of Natural Products and 51st Annual Conference of Indian Pharmacological Society-2019. Indian Pharmacological Society & ICMR-NIN, Hyderabad.

- Prashanta Kumar Deb received the International Travel Award by INSA/CSIR/DAE-BRNS-CCSTDS and Polyphenol Society of Japan, to attend and present research article in "The 9th International Conference on Polyphenols & Health (ICPH2019).
- Ms Sumedha Sharma from Remote Sensing (M Tech 2k19 Batch) : was chosen as "Miss BITOTSAV 2020" in Feb 2020.
- Ms Sumedha Sharma : (M Tech 2k19 Batch) : 3rd Prize in Cyclothon 2020 organized by NSS, in the current year, in Feb 2020.
- Ms Sumedha Sharma : (M Tech 2k19 Batch) : 3rd prize in 100 x4m Relay Race, " in Feb. 2020.
- Ms Aadya: Kuer : (M Sc 1st year student)1st Prize on National Science Day for the topic entitled "Express your visionary views on Science in 2050".
- Ms. Swadhina Koley received Best Paper presentation award in "3rd World Clean Environment
- Summit 2019" conference organised by St. Xavier's College, Ranchi, Jharkhand.
- Atma deep Dutta from Remote sensing, received ESRI India Young Scholar Contest award on his project entitled, "Satellite remote sensing based assessment of total and tropospheric ozone".
- Md. Gulam Sarwar and Pawan Kumar Karn from Space Engineering and Rocketry received first prizes in different segments of paper presentation at First Research Scholars' Colloquium. BIT Mesra.
- Ms Pranata Hazra (Ph D Scholar) got 1st Prize for paper presentation in the 1st Research Scholars Colloquium sponsored by TEQIP-III and organized by BIT Mesra on 01-02 Sept. 2019.
- Mr Beependra Singh : (Ph D Scholar) got 3rd Prize for Poster paper presentation in the 1st Research Scholars Colloquium sponsored by TEQIP-III and organized by BIT Mesra on 01-02 Sept. 2019.

15. ALUMNI EVENTS

Golden Jubilee Reunion of Batch 1969

The alumni reunion for the 1969-1974 batch of Birla Institute of Technology, Mesra was held on 16th November 2019 in the CAT Hall by the Student Alumni Relations Cell (SARC).

Alumni Meet of 1977 Batch

The Student Alumni Relations Cell of Birla Institute of Technology, Mesra organized the Annual Alumni Meet for the 1977-78 batch on 21 December, 2019.

Alumni Portal launched

The long awaited Institute official Alumni portal has been launched in February 2020.

This platform offers amazing features that enables alumni to stay connected with their college friends as well as explore professional opportunities. Presently, the Institute has its own data bank of Alumni in the portal.

Immersive Summer Research Experience (ISRE 2019)

Seventeen (17) students of undergraduate engineering program (6th Semester) were sent to

reputed US universities in the summer of 2019 under the ISRE program:

- Illinois Institute of Technology, Chicago - 9 Students
- Carnegie Mellon University, Pittsburgh - 5 Students
- Georgia Institute of Technology, Atlanta - 3 students

RISE III (Annual Alumni Reunion jointly sponsored by BITMAA - NA and BITOSA SV)

The Vice Chancellor and the Dean -Alumni & International Affairs, as representatives of the Institute, attended 'RISE-III', the annual Alumni Reunion jointly organized by Birla Institute of Technology Mesra Alumni Association-North America (BITMA-NA) and Birla Institute of Technology Old Students Association Silicon Valley (BITOSA SV) in Silicon Valley, California, on 16th of November 2019. This visit was to strengthen alumni relationships as well as to explore possibilities of academic collaboration with reputed US Universities.

Sustainable Water Infrastructure Management (SWIM)

With the support of our alumnus, Dr Sunil Sinha, Professor, Virginia Tech University, a Center of Excellence in Sustainable Water Infrastructure Management has been initiated in the Department of Civil and Environmental Engineering of the Institute.

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.

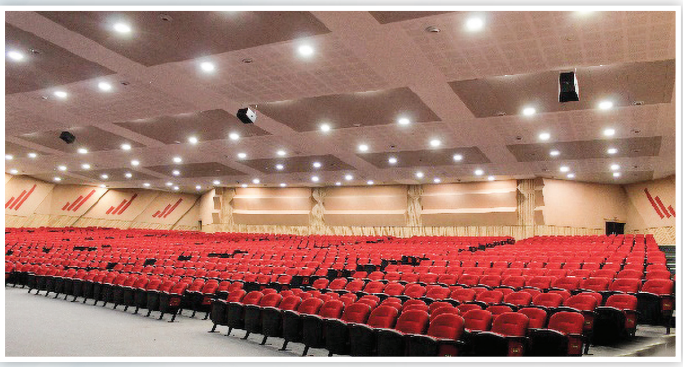
The Finance Committee gives financial advice to the Institute in matters relating to building work as well. The composition of these committees have been given and in Annexure-IV and V.

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.





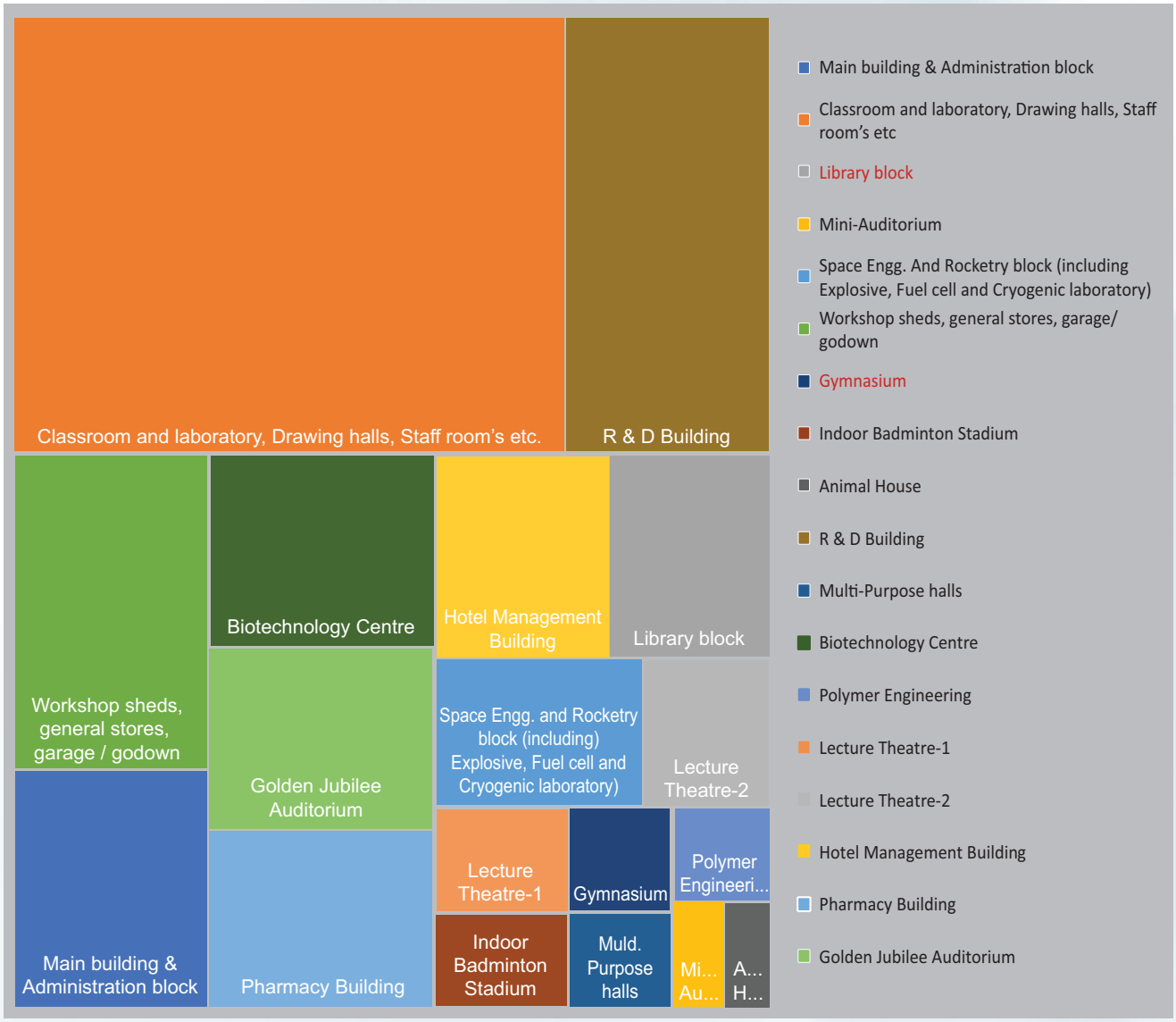
The G.P. Birla Auditorium

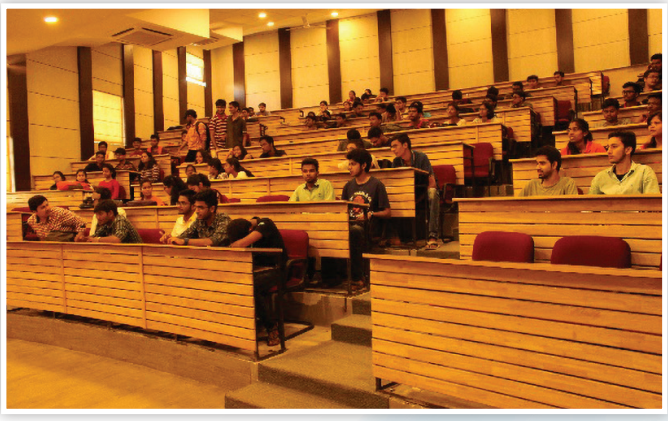
Institute Building	(Sq Mtrs.)
◆ Main building & Administration block	3700
◆ Classroom and laboratory, Drawing halls, Staff room's etc.	19300
◆ Library block	2600
◆ Mini-Auditorium	450
◆ Space Engg. And Rocketry block (including Explosive, Fuel cell and Cryogenic laboratory)	2490
◆ Workshop sheds, general stores, garage/godown	4880
◆ Gymnasium	850
◆ Indoor Badminton Stadium	1000
◆ Animal House	400
◆ R & D Building	7200
◆ Multi-Purpose halls	785

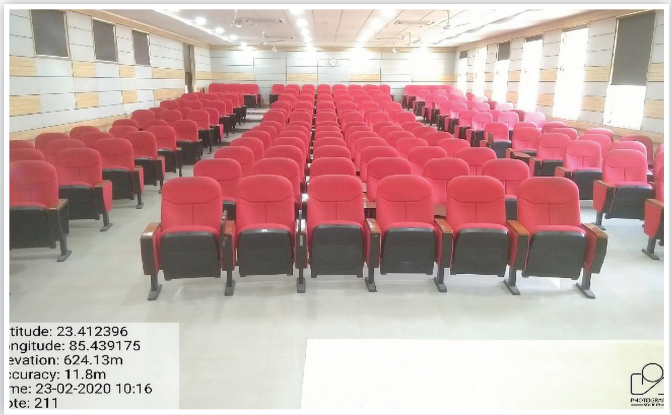
Institute Building	(Sq Mtrs.)
Biotechnology Centre	3477
Polymer Engineering	744
Lecture Theatre-1	1143
Lecture Theatre-2	1535
Hotel Management Building	2835
Pharmacy Building	3220
Golden Jubilee Auditorium	3280
Residential Complex	
Staff quarter in different categories	422
Residential complex for supporting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

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

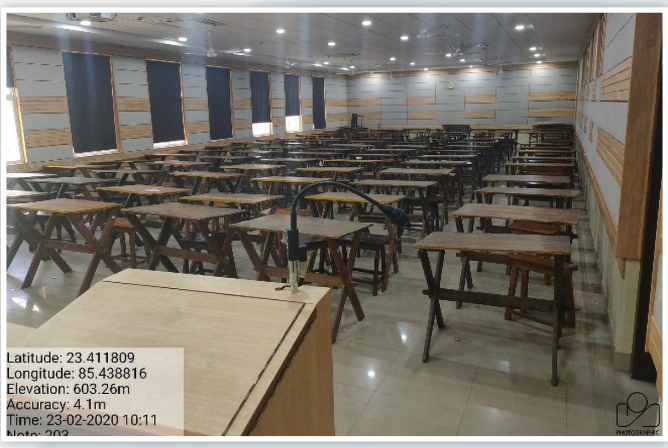
AREA DISTRIBUTION

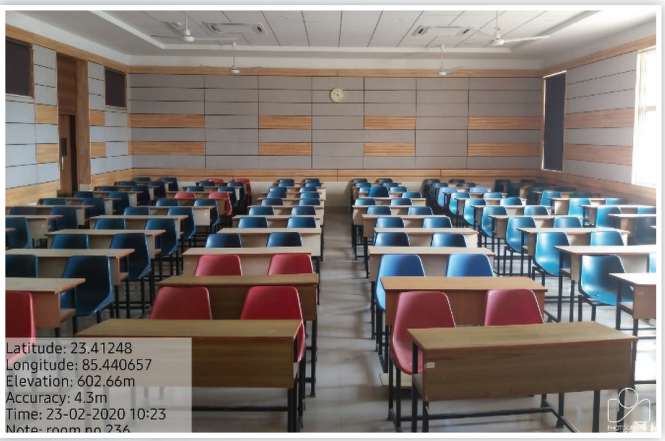






Lecture Halls





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



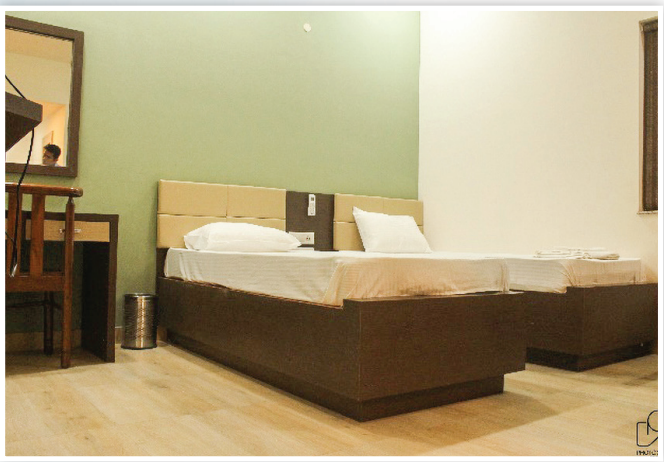


IC Arena and Cafeteria

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	13 (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.

Hostel Accomodation

Hostel No.	Total Rooms	Single Rooms	Double	Triple	Four Seater	PG Hostel	Cabin	No. of Students
1.	136	132	4	0				129
2.	140	136	4	0				134
3.	153	150	3	0				149
4.	154	148	6	0				148
5.	332	323	9	0				317
6.	300	300	0	0				286
7.	312	312	0	0				300
8.	361	246	83	13		12X2	(6X3+1X2)	649
9.	343	15	328	0				654
10.	426	376	20	27	3			824
11.	426	376	20	27	3			468
12.	261	252	9	0				236
13.	279	269	10	0				282
14.	112	94+18(AR)	0	0				87
		3147	**496**	**67**	**6**	**4**	**20**	**4663**

Student Intake and Admissions

Admission in UG Programmes 2019-20 (Mesra Campus)

Sl. No.	Course		No. of Seats	Received Application Form	Numbers of Admissions
	B.Tech*	JOSAA NRI EBC/OBC GOI (J&K)	780 + NRI	*	729
	B.Arch*	JOSAA NRI EBC/OBC	40 + NRI	*	35
	B. Pharm.		60	400	52
	BHMCT		40	41	24
		TOTAL	**920**	**441**	**840**

*Since, admission to these programmes is through JoSAA/CSAB. We do not have any application data.

Details of UG Admission at Mesra Campus:

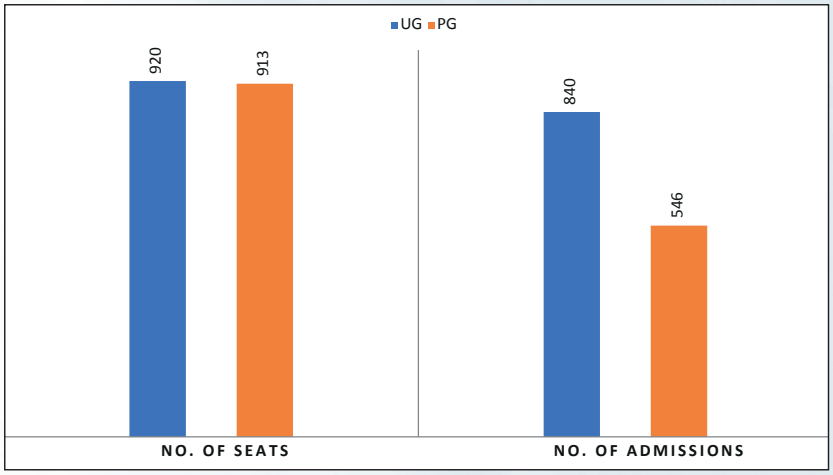
Sl. No.	Branch	Numbers of Admissions
1.	Bachelor of Architecture	**35**
2.	B.Tech Biotechnology	**26**
3.	B.Tech Chemical Engineering	**45**
4.	B.Tech Chemical Engineering(P&P)	**44**
5.	B.Tech Civil Engineering	**63**
6.	B.Tech Computer Sc. & Engineering	**137**
7.	B.Tech Electronics& Communication Engg.	121
8.	B.Tech Electrical & Electronics Engg.	**60**
9.	B.Tech Mechanical Engineering	**114**
10.	B.Tech Information Technology	**71**
11.	B.Tech Production Engineering	**48**
12.	Bachelor of Pharmacy	**52**
13.	Bachelor of Hotel Management & Catering Technology	24
	TOTAL	**840**

Admission in PG Programmes 2019-20 (Mesra Campus)

Sl. No.	Course		No. of Seats	Numbers of Admissions
1.	MBA		120	89
2.	MCA		60	52
3.	M. Tech Automated Manufacturing Systems		25	01
4.	M. Tech Chemical Engineering		18	02
5.	M. Tech Civil Engineering	a) Soil Mech. & Found	12	19
		b) Structural Engg.	12	
6.	M. Tech CAAD		18	02
7.	M. Tech - EEE	a) Power Elect.	18	29
		b) Control System	12	
		c) Power System	12	
8.	M. Tech - ECE	a) Wireless Comm.	18	12
		b) Microwave	12	
		c) Instrumentation & Control	12	
9.	M. Tech Mechanical Engineering	a) Heat Power	12	09
		b) Design of Mechanical Equipment	12	
10.	M. Tech - SER	a) Aerodynamics	12	02
		b) Rocket Propulsion	12	
11.	M.Tech Bio- Technology		18	10
12.	M.Tech Computer Science & Engineering		16	13
13.	M.Tech Information Security		18	02
14.	M.Tech Information Technology		18	08

Sl. No.	Course	No. of Seats	Numbers of Admissions
15.	M.Tech Energy Technology	18	02
16.	M.Tech Env. Science & Engg.	18	11
17.	M.Tech Remote Sensing	18	10
18.	M.Sc. Chemistry	15	08
19.	M.Sc. Mathematics	15	00
20.	M.Sc. Physics	15	06
21.	M.Sc. Biotechnology	30	21
22.	M.Sc. Geo – Informatics	20	13
23.	M.Pharm	75	59
24.	MUP	12	11
25.	Integrated M.Sc. Chemistry	40	15
26.	Integrated M.Sc. Physics	60	38
27.	Integrated M.Sc. Mathematics	80	91
28.	Integrated M.Sc. Food Tech.	30	11
	TOTAL	**913**	**546**

Student Distribution



Students Distribution for Academic Year 2019-20

Admission in Ph.D Programme - 2019

Sl. No.	Departments	No. of Seats	Numbers	No. of Seats	Numbers
		MO-2019		SP 2020	
1.	Architecture	06	00	04	00
2.	Bio - Engineering	26	04	21	09
3.	Computer Science.& Engineering	22	06	17	07
4.	Chemistry	36	01	29	02
5.	Chemical Engineering	24	00	24	03
6.	Civil & Environmental Engineering	20	01	20	02
7.	EEE	07	02	11	04

Sl. No.	Departments	No. of Seats	Numbers	No. of Seats	Numbers
8.	ECE	28	09	32	02
9.	Mechanical Engineering	14	03	21	04
10.	Mathematics	09	01	08	01
11.	Management	04	00	04	01
12.	Production Engineering	10	04	06	00
13.	Physics	11	01	16	04
14.	Pharmaceutical Science & Technology	38	10	21	08
15.	Remote Sensing	05	01	07	05
16.	Space Engineering and Rocketry	09	00	09	00
	TOTAL	**269**	**43**	**250**	**52**

Convocations, Results and Gold Medalist

Gold Medalist – 2020 (BIT, Mesra)

Sl. No.	Roll No.	Name	CGPA
Bachelor of Architecture			
1.	BARCH/10012/14	APARNA BAGARIA	8.72
Bachelor of Engineering (Biotechnology)			
2.	BE/10633/15	VIJAYA SHEKHAR	8.50
Bachelor of Engineering (Chemical)			
3.	BE/10608/15	KOUSUMI MUKHERJEE	8.81
Bachelor of Engineering (Chemical-Plastics and Polymer)			
4.	BE/10598/15	SAYANTIKA CHAKRABORTY	8.50
Bachelor of Engineering (Civil)			
5.	BE/10295/15	SREEJA	8.75
Bachelor of Engineering (Computer Science)			
6.	BE/10077/15	SNEHA ANAND	9.31
Bachelor of Engineering (Electrical and Electronics)			
7.	BE/10061/15	RISHAV KUMAR	8.87
Bachelor of Engineering (Electronics and Communication)			
8.	BE/10164/15	SOURAV NAVAL	9.13
Bachelor of Engineering (Information Technology)			
9.	BE/10053/15	ANKIT KUMAR SUREKA	9.11
Bachelor of Engineering (Mechanical)			
10.	BE/10379/15	HARISH RAMACHANDRAN	9.57
Bachelor of Engineering (Production)			
11.	BE/10142/15	SUNNY KUMAR	8.63
Bachelor of Hotel Management and Catering Technology			
12.	BHMCT/10001/15	ARK RAJ	8.39

Sl. No.	Roll No.	Name	CGPA
Bachelor of Pharmacy			
13.	BPH/10045/15	PRITHA MURARKA	8.90

BIRLA Institute OF TECHNOLOGY, MESRA-835215, RANCHI

GRADUANDS LIST - 2020 (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	22	12	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**

*ID : First Class with Distinction

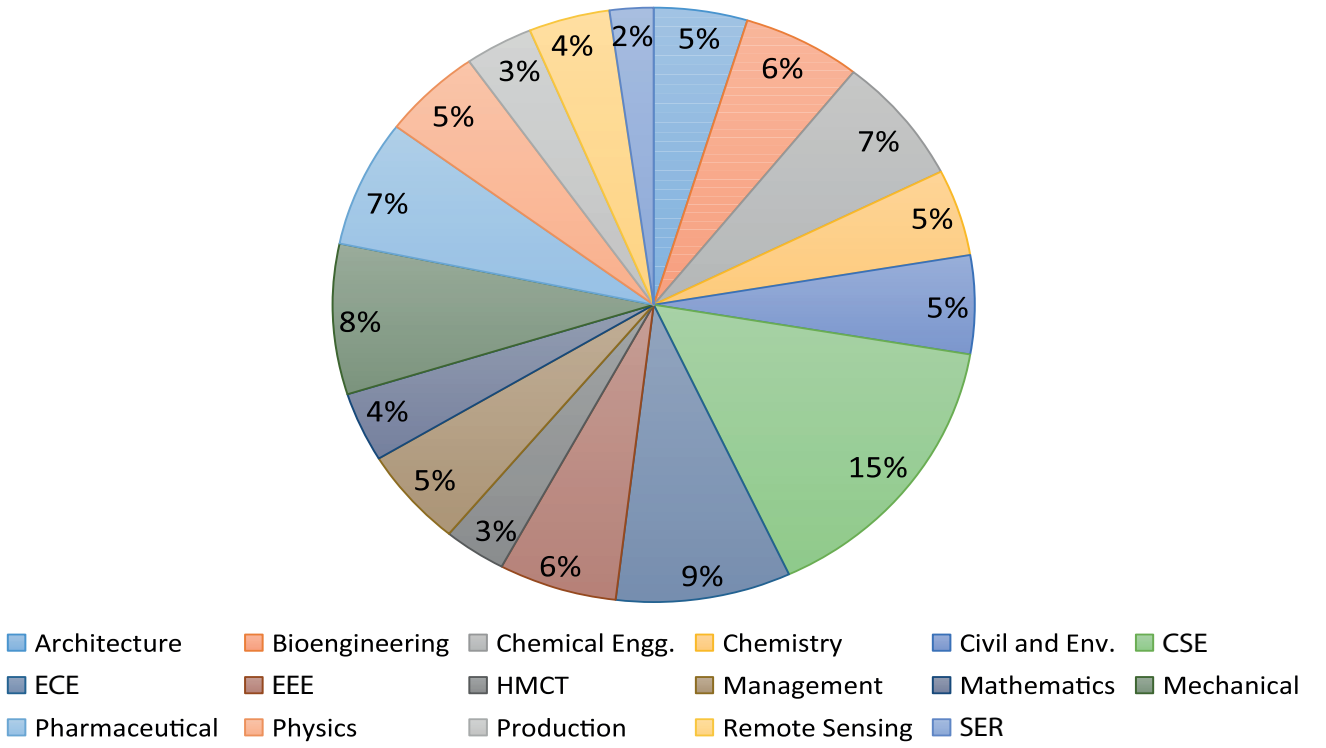
I : First Class

II : Second Class

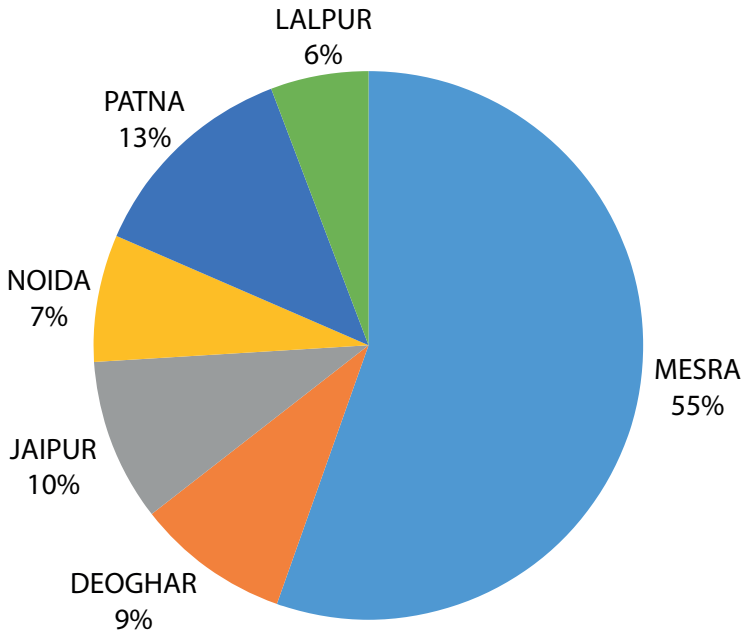
Faculty Strength

The faculty percentage in terms of total sanctioned post for last five years is presented in the following chart. The faculty segregation based on gender and regular / contractual / teqip faculties are also presented in the next figure. Finally a Department wise faculty distribution is provided.

Faculty Distribution : Mesra



Faculty Strength

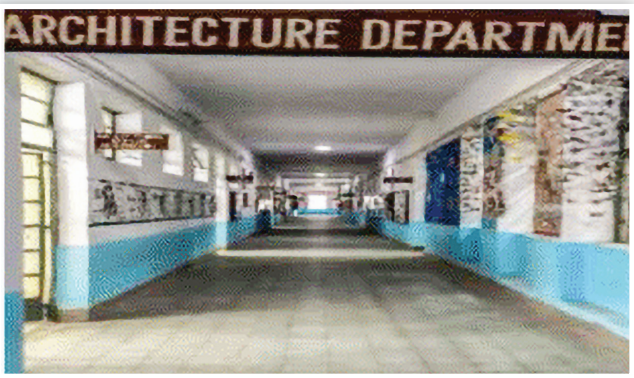


Departments

DEPARTMENT OF ARCHITECTURE

SECTION 1 DEPARTMENT PROFILE





About the Department/Campus:

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 2020.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

2.1 Sponsored Projects (Research and Consultancy)

a) Ongoing Projects

Sr. No.	Project Title	PI / Co PI / Collaborator	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/-	2 Yrs.

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 (dd.mm.year)
1.	Street Junction Design	Ms. Anjali Pathak Mr. Tiwari Pawan Kumar	WRI	22.08. 2019
2.	Energy Conservation And Building Codes	Ms. Anjali Pathak Mr. Tiwari Pawan Kumar	Govt. of Jharkhand	23.08. 2019
3.	Sustainable Future	Ms. Anjali Pathak Mr. Tiwari Pawan Kumar		09.09.2019-10.09.2019
4.	Autodesk Revit	Ms. Anjali Pathak Mr. Tiwari Pawan Kumar		15.09.2019-17.09.2019
5.	How To Festival	Ms. Anjali Pathak Mr. Tiwari Pawan Kumar	Locator, Bengaluru	23.09.2019

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	Organisers	Venue	Date
1.	Mr. Rizwan Kazmi	Workshop on "Universal Human Values"		AICTE Experts	Seminar Hall II, R&D Building, BIT Mesra	13-15 December 2019
2.	Mr. Rizwan Kazmi	MOOCs Workshop- "Teaching Learning in a Digital Age: MOOCs"		TEQIP Cell, BIT Mesra	Seminar Hall II, R&D Building, BIT Mesra	13 September 2019
3.	Ms. Shama Parween	Intellectual Property Rights and Patent Filing		BIT, Mesra	Seminar Hall II, R&D Building, BIT Mesra	28th June 2019

Sr. No.	Name of the faculty	Title of the conference seminar	Funding agency	Organisers	Venue	Date
4.	Ms. Shama Parween	Teaching Learning in Digital Age: MOOCS		BIT, Mesra	Seminar Hall II, R&D Building, BIT Mesra	13th September 2019
5.	Ms. Anjali Pathak	GIAN Course: From Infrastructure Creation to Rehabilitation	BIT Mesra	IIT KGP	IIT KGP	02-06 Sept 2019
6.	Dr. Smriti Mishra	Two week Course on Digital Transformation in Teaching Learning Process	Ministry of HRD, Govt. of India	IIT Mumbai, TEQIP Online certification	Online	April 6th-22nd, 2020
7.	Ms. Ritu Agrawal, Mr. Apurv Ashish	3rd World Environment Summit	BIT Mesra	St. Xavier's College, Ranchi.	St. Xavier's College, Ranchi	19th to 21st August 2019
8.	Mr. Mrinal Pathak	Two week Course on Digital Transformation in Teaching Learning Process	Ministry of HRD, Govt. of India	IIT Mumbai, TEQIP Online certification	Online	April 6th-22nd, 2020

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals

1. Danish Md., Chakraborty M., Measuring the tourist service satisfaction: Factoranalysis based study at red fort complex. International Journal of RecentTechnology and Engineering, Volume-7 Issue-6, 2019, (SCOPUS)ISSN: 2277-3878

2. Baruah Namrata, Sarkar Satyaki, Roy Bimal Chandra, Sinha Rajan Chandra, Quantitative analysis of sound absorption properties of plants in indoor environment for enabling sustainable practice, International Journal of Environmental Technology and Management, Vol 22, No.4/5, 2019, pp. 223-235, (ÌSSN 1741-511X, 1466-2132) (Inderscience) (SCOPUS, ESCI)

3. Mishra U.C, Sarkar Satyaki, Urban population and identification of indicators for affordable housing in India, International Journal of Recent Technology and Engineering, Vol. 8, Issue, 2S11, September 2019, (ISSN: 2277-3878) (SCOPUS) DOI: 10.35940/ijrte.B1001.982S1119

4. Sarkar Amrita, Sarkar Satyaki, Comparative assessment between statistical and soft computing methods for accident severity classification, Journal of The Institution of Engineers (India): Series A, 101, 27–40 (2020) (ISSN 2250-2149) (Springer) (SCOPUS) doi.org/10.1007/s40030-019-00422-7

5. Roy Bimal C., Sarkar Satyaki, Sinha Rajan C., Srivastava I., Identification of a new industrial area based on a macro level analysis - a Case of Bokaro District, Jharkhand,

India, International Journal of Engineering and Advanced Technology, Volume-9 Issue-2, December 2019 (SCOPUS) doi:10.35940/ijeat.A1168.129219

4.2 Publications in Proceedings:

1. Satyaki Sarkar, Anjali Pathak, **Can Peri-urban growth be confined within Urban Development Models in India?.** 3rd Asian Regional Conference on Peri-urbanisation - Sustainable Urban and Rural future, School of Planning and Architecture, Bhopal, 17th to 20th December 2019, 22 26-34. (ISSN 2671-9061)

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.	Satyaki Sarkar	Fellow	Indian Institute of Architects	National	2020

SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Student Coordinator (if any)	Faculty coordinator (if any)	Date / Duration
1.	Workshop on Street Junction Design by WRI India		Ms. Ritu Agrawal & Ms. Shama Parween	22.08.2019
2.	Workshop on energy conservation and Building codes by Government of Jharkhand		Mr. Apurv Ashish & Mr. Pavan Tiwari	23.08.2019
3.	Workshop on Sustainable future cities, Ecotech software by EDS New Delhi	Students Society of Architecture	Ms. Anjali Pathak	09-10.09.2019
4.	Workshop on Autodesk REVIT by LOMOS Archilabs Bengaluru	Students Society of Architecture	Ms. Anjali Pathak & Mr. Pavan Tiwari	15-17.09.2019
5.	Workshop on How to festival by LOCATOR	Students Society of Architecture	Dr. Satyaki Sarkar	23.09.2019
6.	Workshop on Grasshopper & Rhinoceros	Students Society of Architecture	Ms. Anjali Pathak & Mr. Pavan Tiwari	15-17.11.2019
7.	Workshop on Body Conscious Design by Dr. GaurabKar		Dr. D.J. Biswas	07. 01.2020
8.	Oeuvre – an architectural colloquium by Prof. S.S. Ray, KIIT Bhubaneswar, Ar. DebatoshSahu, Espace Pvt. Ltd. Kolkata, Ar. SandeepJha, Axis Studio, Ranchi	Students Society of Architecture	Dr. Satyaki Sarkar	08.02.2020

6.2. List of Faculties

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

6.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr Niraj Verma	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

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. D.J. Biswas	Professor	Internal
4.	Head Dept. of CEE, BIT, Mesra	Professor	External
5.	Head Dept. Remote Sensing, BIT, Mesra	Professor	External
6.	In-charge Dept, Architecture, BIT, Patna	Prof. In-charge	External
7.	In-charge Dept, Architecture, BIT, RAK	Prof. In-charge	External
8.	Prof. Swati Jha	Prof., IIEST Shibpur	External
9.	Ar. Sandeep Jha	Chief Architect, AXIS Ranchi	External

SECTION 7 OTHER INFORMATION

7.1 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of the visitor and affiliation	Date of visit	Picture
1.	Ar. Sanjay Puri, Sanjay Puri Architects, Mumbai	07.09.2019	
2.	Dr. Sandeep Agrawal, University of Alberta, Canada	09.12.2019	
3.	Ar. Harshwardhan, Design Strategist, Ford, USA	13.01.2020	
4.	Ar. Prapti Jha, Innovation catalyst, Ford, USA	17.01.2020	
5.	Ar. Vivek Singh Rathore, Salient Designs, Kolkata	22.02.2020	

7.2 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Tanay Kumar, B.Arch 11/95	B. Arch (BIT Mesra), MVC – (IIT Mumbai), CEO & Creative Director, Fractal Ink Design Studio Email: tanay.kumar@fractalink.com
2.	Anijo Punnem Mathew, B.Arch 13/95	B. Arch (BIT Mesra),, M.Des (Havard University) PhD (USA), Professor, American University, Sharjah, Email: anijomathew@hotmail.com
3.	Subhrendu Das, B.Arch 6/96	B. Arch (BIT Mesra), Masters (Kansas State University), Regional Head, East, Edifice Consultants Pvt. Ltd. Email:subhrendu.d@edifice.co.in
4.	Gourab Kar, B.Arch 1/99	B. Arch (BIT Mesra), M.des (IIT Delhi), PhD (Georgia Tech, USA), Research Assistant at Cornell University USA, Email: gourab_kar@yahoo.com
5.	Arpita Ray, B.Arch 8/2000	B. Arch (BIT Mesra), MCRP (Iowa State University, USA), Senior General Manager – Change Management, CBRE. Email: arpita.rray@gmail.com

DEPARTMENT OF BIOENGINEERING

SECTION 1 DEPARTMENT PROFILE

1. 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.

Department at a Glance

- Independent building about 35000 sq. ft.
- A mixed balanced of well recognized faculty members - Young, dynamic, and learned.
- 1 UG (B.Tech), 2 PG (M.Sc and M.Tech) and PhD Program all in Biotechnology
- Earlier sponsored as Center of Excellence, TEQIP, Phase II
- Earlier recognized as BTISnet SubDIC Bioinformatics center for Jharkhand
- More than 50 extremely funded projects from funding agencies like DST, DBT, UGC, AICTE, ICMR, CSIR etc.
- Rich academic and research profile of all faculties with minimum Doctoral Degree

Programmes Offered at a Glance

- B. Tech Biotechnology (4 years)
- M.Sc Biotechnology (2 years)
- M.Tech Biotechnology (2 years)
- Ph.D.

Infrastructure for Research

- Well-equipped high-end research laboratories dedicated to research and academics such as Molecular Biology & Genetic Engineering, Microbiology, Biochemistry, Proteomics, Cell Biology, Molecular Plant Physiology, Plant and Animal Biotechnology, Bioinformatics, Bioprocess Engineering, Chemical Engineering, Environmental Biotechnology, Biomedical Instrumentation and Imaging, Bio-photonics, etc.
- The new 'state-of-the-art' instrumentation facilities include: GC-Mass Spectrophotometer, Real Time PCR, FPLC, HPLC, UPLC_QTOF, UPLC-MS/MS, Bioreactors (Laboratory and pilot scale), Spray Dryer, Rotary Evaporator, Extractors, Filtration units, Ultra Water Purification System, Typhoon Laser Imager, Lyophilizer, Thermal Cyclers, Gene Pulser, Microplate Reader, 2D Electrophoresis System, SCF Extraction System, Spectrophotometers, Fluorimeters, Modern Microscope with Digital Imaging System, Stereo Microscope with Colony Counter, Fluorescence Microscope, Lab & Plant Scale Bioreactors.

Research Activities

The Department has taken initiative to become a "Centre for Excellence" in Biotechnology for carrying out basic research on Biofuels, Biodiversity conservation, Cultivation of endangered medicinal, plants of Jharkhand, to create a Biotech Information Hub and Entrepreneur Park. It was recognized as Center of Excellence, by TEQIP- Phase II world bank sponsored project. Moreover, some new areas like Proteomics and Genomics, Drug Delivery and Vaccine Development, IPR and Patenting in Biotechnology are of special interest to this Department. New initiatives were taken in Biomaterial development. As new initiative, Bio-Photonics laboratory also developed in the Department and used for research. The activities in the Department were for development of expertise in all area of Biotechnology. It has

proactively taken the lead to provide academic and scientific support to various institutions like NITs and nearby Universities for setting up academic and research facility.

Field of Study/Research:

- Agriculture and Plant Biotechnology
- Molecular Biology & Genetic Engineering
- Medicinal Plant
- Animal & Plant Cell & Tissue Culture
- Bioinformatics
- Microbial Resources & Microbial Transformation
- Bioprocess Engineering & Industrial Biotechnology
- Value Addition to Biomass & Waste Materials Biofuel Production
- Biomedical Instrumentation
- Biosensor & Nano-Biotechnology
- Food 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	Feb 21, 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	Ongoing till Feb 2021
2.	Bioprocess Development for efficient Triclosan Degradation	Co-PI – Shashwati Ghosh Sachan	CSIR	24(0340)/16/EMR-II dated 23.5.2016	Sanctioned: Rs10.6 Lakhs (as per first letter); Received: Rs 10.53	2016-2019
3.	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-Nano-mission	10/07/2019	1,13,25,480/- (joint IIT K+ BIT M) 51,15,240/- (BIT component)	09/07/2022
4.	Analysis and identification of features from neural dynamics and their correlations with autonomic nervous system for development of hybrid brain-computer interface	Prof. R. K. Sinha	AICTE (Rs. 17.64706 lakhs, 2020)	2020	(Rs. 17.64706 lakhs,	2023

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 Android mobile Based System for Monitoring of Plant-Pathogen Infection Using Foldscope	PI- Santosh Kumar Jha	DBT, GOI	20.03.2018	8 Lakh	19 Sept 2019
2.	To Study the Structure and Blood Flow of Chorioretinal Complex in Human Using Optical Coherence Angiography	PI- Dr. Raju Poddar	ICMR ICMR-EMR (5/20/21 (Bio)/2014-ITR-I)	05/04/2017	37.06 Lakh	04/05/2020

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.	Foldscope workshop for the teachers and students of aspirational districts of Jharkhand	Dr.S.K.Jha	10.7 Lakh Sponsored by DBT, GOI	22-23 Oct, 2019

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	Plant Genomics 2020 (Webinar on Plant Genomics and Plant Science) organized by	BIT Mesra	Meetings International Pte Ltd. at Osaka Japan	Meetings International Pte Ltd. at Osaka Japan	May 26, 2020.
2.	Dr. D. M. Pandey	Summer Training on "Internet of Things (IOT) Using Amazon AWS"	BIT Mesra	Finland Labs, India	Finland Labs, India	June 29, 2020 to July 10, 2020
3.	Dr. D. M. Pandey	Instructor-led online Five Days Faculty-Development Program on "Blockchain Technology & Its Application"	BIT Mesra	EDUXLAB-Esoir Business Solution LLP	EDUXLAB-Esoir Business Solution LLP	May 25-29, 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
4.	Dr. D. M. Pandey	National workshop on "Gene Editing for Enhancing Plant Productivity and Stress Tolerance"	TEQIP-3, BIT Mesra	ICAR-Indian Institute of Rice Research, Hyderabad, India	ICAR-Indian Institute of Rice Research, Hyderabad, India	10-12 Nov. 2019.
5.	Dr. S. K. Jha	SWAYAM FDP on Digital Transformation in Teaching-Learning Process	NA	IIT-Mumbai	Online	06 to 18 Apr 2020
6.	Shashwati Ghosh Sachan	FDP-Digital Trasformation in Teaching Learning Process	MHRD	IIT Bombay, TEQIP III	Online	6th-22nd April 2020
7.	V K Nigam	Digital Transformation in Teaching Learning Process	MHRD (TeQipIII) Govt. of India	IIT Bombay	On line	06-04-2020
8.	V K Nigam	International Webinar on COVID-19 pandemic	NA	Institute of Bioinformatica (IOB), Bangalore	online	23 to 25June 2020
9.	V K Nigam	Biological Diversity (Theories, Measures and Data sampling techniques)	NA	An online non-credit course authorized by National Research Tomsk State University and offered through Coursera	online	3 weeks (completion certificate 20-06-2020)
10.	V K Nigam	Statistics 101	NA	361 dgree minds	online	May-June 2020 (completion certificate 27-06-2020)
11.	Dinesh Prasad	Workshop on 3D Printing and Allied Technologies at IIT Guwahati during	TEQIP	Department of Mechanical engineering, IIT Guwahati	IIT Guwahati	06-10 January 2020
12.	Muthu Kumar S	Short term course on biopharmaceutical technology	TEQIP III	DBT / IIT Delhi	IIT Delhi	10-12 Dec, 2019
13.	Muthu Kumar S	Two week course on Digital Transformation in Teaching Learning Process	NPIU	IIT Bombay	online	14 Feb- Mar 6, 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
14.	Sneha Singh	Digital Transformation In Teaching Learning Process	MHRD, Govt. of India	IIT Bombay	Online (Swayam portal)	April 6- 22, 2020
15.	Sneha Singh	FDP for Student Induction	AICTE	AICTE	BIT Mesra	December 13-15, 2019
16.	Sneha Singh	Teaching Learning in Digital Age: MOOC	TEQIP	BIT Mesra	BIT Mesra	September 13, 2019

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals : (International/National)

1. Aggarwal Y, Das J, Mazumder P M, Kumar R, & 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.
2. Shukla R S, Aggarwal Y, Raut SS, & Sinha R K (2020) Unmet need of objective monitor to evaluate performance status in lung cancer patients. Indian Journal of Public Health Research and Development, 11(2): 98-101.
3. Singh N, Aggarwal Y, & Sinha R K (2019) Heart rate variability analysis under varied task difficulties in mental arithmetic performance. Health and Technology, 9(3): 343-353.
4. Mohan M, Alam Z, Poddar R, Chattopadhyay S. 2020, Real-time assessment and characterization of immobilized lipase onto a natural matrix and qualitative reaction kinetic studies using swept-source optical coherence tomography. 3 Biotech, (In Press)
5. Kumari R, Bharti B, Pandey D.M. (2020) Differential expression of some genes and their in-silico analysis in rice varieties under cold stress. Research Journal of Biotechnology. 15(6): 53-66.
6. Smita S, Katiyar A, Dalal M, Lenka SK, Kumar A, Mahtha SK, Yadav G, Chinnusamy V, Pandey DM, Bansal KC (2020) Gene network modules associated with abiotic stress response in tolerant rice genotypes identified by transcriptome meta-analysis. Functional & Integrative Genomics. 20: 29-49. https://doi.org/10.1007/s10142-019-00697-w.
7. Kumar G., Gupta R., Sharan S., Roy P., Pandey D.M. (2019): Anticancer activity of plant leaves extract collected from a tribal region of India. 3Biotech. 9(11):399. DOI:10.1007/s13205-019-1927-x.(2019) Identification of miRNA, their targets and miPEPs in peanut (Arachis hypogaea L.). Computational Biology Chemistry. 83: 107100. DOI_10.1016/j. compbiolchem. 2019. 107100.
8. Prakash P, Singh HR, Jha SK. Indicator dye based screening of glutaminase free L-asparaginase producer and kinetic evaluation of enzyme production process. Preparative biochemistry & biotechnology, 2020. https://doi.org/10.1080/10826068.2020.1737942.
9. Prakash P, Singh HR, Jha SK. Production, purification and kinetic characterization of glutaminase free anti-leukemic L-asparaginase with low endotoxin level from novel soil isolate. Preparative biochemistry & biotechnology, 2019; 23, 1-12.
10. S. Saha, K.K. Pradhan, S.K. Shukla, H.R. Singh, S.K. Jha. Production and purification of bioflocculants from newly isolated bacterial species: A comparative decolorization study of

cationic and anionic textile dyes. Environmental Technology, 2020. 15:1-12. https://doi.org/10.1080/09593330.2020.1737737.

11. Singh A, Ghosh Sachan S, Mukhopadhyay K, Kumar M, & Sachan A (2020) A rapid and simple ultra high performance liquid chromatography method for the simultaneous determination of methoxyphenol derivatives involved in the eugenol catabolic pathway, Journal of Separation Science, 43:877-885.
12. Misra, M., Sachan, A. and Ghosh Sachan, S. (2020) Current Aspects and Applications of Biofertilizers for Sustainable Agriculture. In: Plant Microbiomes for Sustainable Agriculture, Sustainable Development and Biodiversity Vol 25; pp. 445-473; Springer Nature Switzerland AG; A. N. Yadav et al. (eds.), ISBN 978-3-030-38452-4, ISBN 978-3-030-38453-1 (eBook); DOI 10.1007/978-3-030-38453-1_15
13. Misra, M., Akansha, K., Sachan, A. and Ghosh Sachan, S. (2020) Removal of Dyes from Industrial Effluents by Application of Combined Biological and Physico-chemical Treatment Approaches In: Combined Application of Physico-Chemical & Microbiological Processes for Industrial Effluent Treatment Plant; pp. 365-407; Springer Nature Singapore; M. Shah, A. Banerjee (eds.), ISBN 978-981-15-0496-9, ISBN 978-981-15-0497-6 (eBook); DOI 10.1007/978-981-15-0497-6_17
14. Singh, A., Kumari, R., Yadav, A.N., Mishra, S., Sachan, A. and Ghosh Sachan, S. (2020) Tiny Microbes, Big Yields: Microorganisms for Enhancing Food Crop Production Sustainable Development. In: Trends of Microbial Biotechnology for Sustainable Agriculture and Biomedicine Systems: Diversity and Functional Perspectives, pp. 1-15; Elsevier USA, Rastegari AA, Yadav AN, Yadav N (eds), doi.org/10.1016/B978-0-12-820526-6.00001-4.
15. Kumari, R., Singh, A., Yadav, A.N., Mishra, S., Sachan A. and Ghosh Sachan, S. (2020) Probiotics, prebiotics and synbiotics: Current status and future uses for human health. In: Trends of Microbial Biotechnology for Sustainable Agriculture and Biomedicine Systems: Perspectives for Human Health, pp. 173-190; Elsevier, USA, Rastegari AA, Yadav AN, Yadav N (eds), doi.org/10.1016/B978-0-12-820528-0.00012-0.
16. 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, DOI:10.1080/10242422.2020.1780211.
17. 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.
18. Soy S., Nigam V. K. and Sharma S. R. (2019) Cellulolytic, amylolytic and xylanolytic potential of thermophilic isolates of Surajkund hot spring. Journal of Biosciences, DOI: 10.1007/s12038-019-9938-7.
19. Gupta, A., Padmanabhan, P., & Singh, S. (2020). Resveratrol isomeric switching during bioreduction of gold nanoparticles: a gateway for cis-resveratrol. Nanotechnology (in press) https://doi.org/10.1088/1361-6528/ababcb
20. Madhyastha, H., Madhyastha, R., Thakur, A., Kentaro, S., Dev, A., Singh, S., ... & Aradhya, A. (2020). c-Phycocyanin primed silver nano conjugates: Studies on red blood cell stress resilience mechanism. Colloids and Surfaces B: Biointerfaces,194, 111211.
21. Singh, S., Gupta, A., Qayoom, I., Teotia, A. K., Gupta, S., Padmanabhan, P., Dev, A., & Kumar, A. (2020). Biofabrication of Gold Nanoparticles with Bone Remodelling Potential: An In-vitro and In-vivo Assessment. Journal of Nanoparticle Research, 22, 152.
22. Qayoom, I., Teotia, A. K., Meena, M., Singh, P., Mishra, A., Singh, S., & Kumar, A. (2020).

Enhanced bone mineralization using Withania somnifera incorporated hydroxyapatite based ceramic bone substitutes. Biomedical Materials. [published online ahead of print, 2020 Apr].

23. Mallick, A., Gupta, A., Hussain, A., Aparajay, P., Singh, S., Singh, S. K., & Dev, A. (2020). Intranasal delivery of gabapentin loaded optimized nanoemulsion for augmented permeation. Journal of Drug Delivery Science and Technology, 56, 101606.
24. Singh, S., Dev, A., Gupta, A., Nigam, V. K., & Poluri, K. M. (2019). Nitrate Reductase mediated synthesis of surface passivated nanogold as broad-spectrum antibacterial agent. Gold Bulletin, 52(3), 197-216.
25. Rajani Sharma, Shashwati Ghosh Sachan & Shubha Rani Sharma, 2020, In vitro analysis of gallstone formation in the presence of bacteria, Indian J Gastroenterol. DOI: 10.1007/s12664-020-01055-6
26. Soy S, Nigam VK, Sharma SR, 2019. Cellulolytic, amylolytic and xylanolytic potential of thermophilic isolates of Surajkund hot spring. J Biosci 44:124.
27. Anupam Ghosh, Koel Mukherjee, Barnali Dasgupta Ghosh, & Soumil Dutta. (2020)"COVID-19 Outbreak – The Role of Worldwide Interventions as a Preventive Measure to Fight the Pandemic"..Social Work in Public Health (Accepted) [Taylor & Francis]
28. Mukherjee, K., Prasad, M., Mukherjee, S., & Mukherjee, S. (2020). Tossing the word "Social Distancing" to "Human Distancing" for the Betterment of Human Species in Present Pandemic Situation of COVID-19 in India, Ind. J. Pure App. Biosci. 8(3), 58-63. doi: http://dx.doi.org/10.18782/2582- 2845.8072
29. Identification of miRNA, their targets and miPEPs in peanut (Arachis hypogaea L.). Mousam Kumar Ram, Koel Mukherjee, Dev Mani Pandey. Computational Biology and Chemistry 83 (2019). https://doi.org/10.1016/j.compbiolchem.2019.107100
30. In-vivo analysis of iron-gold composite nanoparticles as potential exogenous contrast agents for magnetomotive optical coherence tomography (MMOCT); Abhishek Indoliya, Dhruba Dhar, Muktesh Mohan and Raju Poddar; Journal of Magnetism and Magnetic Materials; Volume 514, 2020. https://doi.org/10.1016/j.jmmm.2020.167211
31. In Vitro Imaging of Animal Tissue with Upconversion Nanoparticles (UCNPs) as a Molecular Probing Agent Using Swept Source Optical Coherence Tomography (SSOCT), Muktesh Mohan, Sachin Kumar Maurya, Kaushal Kumar, Raju Poddar, Journal of Medical and Biological Engineering, 40, pages 251–263 (2020).
32. Synthesis of NaGdF4:Er3+/Yb3+ Upconversion Particles as Exogenous Contrast Agent for Swept-Source Optical Coherence Tomography: In Vitro Animal Tissue Imaging; Sachin Kumar Maurya, Muktesh Mohan, Raju Poddar, Dulal Senapati, Shweta Singh, Abhijit Roy, Archana Kyalanur Munirathnappa, Joaquim Carlos Gomes Esteves da Silva, and Kaushal Kumar; The Journal of Physical Chemistry C; https://doi.org/10.1021/acs.jpcc.0c05786; 2020.
33. Computational modeling for mutational analysis of nitrilase enzyme towards enhancement of binding empathy, Priya Kumari and Raju Poddar, Journal of Biomolecular Structure and Dynamics, DOI: 10.1080/07391102.2020.1747546; 2020.
34. Characterization and Oxygen Saturation Study of Human Retinal Blood Vessels evaluated by Spectroscopic Optical Coherence Tomography Angiography, Raju Poddar, Mainak Basu; Journal Optics & Laser Technology, Volume 122 Pages 105886, 2020.
35. An Amplitude Variation Field Subtraction Technique for visualization of Vasculature of the Human Eye, Mainak Basu, Raju Poddar Biomedical Signal Processing and Control; Volume 54, 101573, 2020.

36. A comparative multivariate analysis of nitrilase enzymes: An ensemble based computational approach Priya Kumari, Raju Poddar Computational biology and chemistry, Volume 83 Pages 107095, 2019.

37. Singh S., Banerjee M., Kumar M. (2020) Rhizobium rhizogenes Mediated Hairy Root Transformation and Analysis of Secondary Metabolites in Phlogacanthus thyrsiflorus Nees Hairy Roots using GC-MS. Journal of Scientific & Industrial Research, 79:590-594.

38. Dutta S, Afreen U, Kumar M, Mukhopadhyay K (2020) Small RNA in tolerating various biotic stresses. In: Guleria P and Kumar V (ed.) Plant Small RNA, 1st Edition, Biogenesis, Regulation and Application. ELSEVIER BV. Publishing Date: 1st February 2020. DOI: 10.1016/B978-0-12-817112-7.00008-0

39. Singh A, Ghosh Sachan S, Mukhopadhyay K, Kumar M, Sachan A (2020) A rapid and simple ultra-high-performance liquid chromatography method for the simultaneous determination of methoxyphenol derivatives involved in the eugenol catabolic pathway. Journal of Separation Science 43(5): 848-1018. DOI: 10.1002/jssc.201900939

40. Gaggar P, Kumar M, Mukhopadhyay K (2020) Genome-scale identification, in silico characterization and interaction study between wheat SNARE and NPSN gene families involved in vesicular transport. IEEE/ACM Transactions on Computational Biology and Bioinformatics. DOI: 10.1109/TCBB.2020.2981896

41. 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:1 0.1016/j.sajb.2020.06.017

42. Dutta S., Kumar M. and Mukhopadhyay K. (2019) Identification and validation of leaf rust responsive wheat isomiRs and their target genes in both wheat and Puccinia triticina. Tropical Plant Biology. DOI: 10.1007/s12042-019-09235-1.

43. Gupta, G. S., Dave, G. B., Tripathi, P. R., Mohanta, D. K., Ghosh, S. and Sinha, R. K. (Accepted) Brain Computer Interface controlled automatic electric drive for neuro-aid system, Biomedical Signal Processing and Control.

44. 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.

45. Gupta, G. S., Mohanta, D. K., Ghosh, S., Dave, G. B., Bhatnagar, M., and Sinha, R. K. (2020) Ocular artifacts elimination and feature extraction in motor imagery based BCI using nonlinear adaptive filter, Biomedical Engineering- Applications, Basis and Communications, 32: 2050015 (1-12).

46. Shukla, R. S., Aggarwal, Y., Raut, S. S. and Sinha, R. K. (2020) Unmet need of objective monitor to evaluate performance status in lung cancer patients, Indian Journal of Public Health Research & Development, 11: 98-101.

47. Gupta, G. S., Bhatnagar, M., Kumar, S. and Sinha, R. K. (2020) A comparative study of application of different non-conventional filters on electroencephalogram, Biomedical Research, 31:1-9.

48. Basani, M., Malothu, R., Sinha, R. K. and Murthy, S. V. (2019) Non-invasive electroencephalography method development and validation using carbamazepine, Asian Journal of Pharmaceutics,13: 282-286.

49. Gupta, G. S., Bhatnagar, M., Ghosh, S. and Sinha, R. K. (2019) Design of control system for

motor imagery based neuro-aid application, Biomedical Engineering- Applications, Basis and Communications, 31: 1950031 (1-16).

50. Singh N & Chandra R (2019). Combating influenza: Natural products as neuraminidase inhibitors. Phytochemistry reviews. 18, 69–107.
51. Khan F & Chandra R (2019). Bioprospecting of Wild Mushrooms from India with Respect to Medicinal Aspects. International Journal of Medicinal Mushrooms 21(2), 181-192.
52. R. Mishra R & Chandra R, (2019). Purification and characterization of α-mannosidase from moss Hyophilla nymaniana (Fleish.) Menzel. Proceedings of the national academy of sciences, India section B: Biological Sciences. 89, 885–891.

4.2 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). ISBN: 978-93-89996-487
2. Chattopadhyay S., Sen R., 2020, Materials and Methods for Biodiesel Production; In: Sustainable Agriculture Reviews 39, Eds.: Eric Lichtfouse; Springer Nature Switzerland AG., pp: 179-204; ISBN 978-3-030-38880-5.
3. Shukla, R.S., Aggarwal, Y., Sinha, R.K., and Raut, S. (2020) Effect of age on heart rate variability analysis in breast cancer patients. In: Biomedical and Clinical Engineering for Healthcare Advancement. IGI Global. pp. 141-167. ISBN: 9781799803263.
4. Shukla, R. S., Aggarwal, Y., Raut, S.S. and Sinha, R.K. (2020) Heart rate variability analysis in lung cancer patients to determine the effect of treament. In: Advances in Bioengineering. Springer Singapore. pp. 201-210. ISBN: 978-981-15-2062-4
5. Prakash P., Fatima F., Singh H. R., Jha, S.K. Nano-biotechnological interventions for Removal of Toxic Pollutants. 2020, ELSEVIER (ISBN: 978-0-12-821014-7).
6. Misra, M., Sachan, A. and Ghosh Sachan, S. (2020) Current Aspects and Applications of Biofertilizers for Sustainable Agriculture. In: Plant Microbiomes for Sustainable Agriculture, Sustainable Development and Biodiversity Vol 25; pp. 445-473; Springer Nature Switzerland AG; A. N. Yadav et al. (eds.), ISBN 978-3-030-38452-4, ISBN 978-3-030-38453-1 (eBook); DOI 10.1007/978-3-030-38453-1_15
7. Misra, M., Akansha, K., Sachan, A. and Ghosh Sachan, S. (2020) Removal of Dyes from Industrial Effluents by Application of Combined Biological and Physico-chemical Treatment Approaches In: Combined Application of Physico-Chemical & Microbiological Processes for Industrial Effluent Treatment Plant; pp. 365-407; Springer Nature Singapore; M. Shah, A. Banerjee (eds.), ISBN 978-981-15-0496-9, ISBN 978-981-15-0497-6 (eBook); DOI 10.1007/978-981-15-0497-6_17
8. Singh, A., Kumari, R., Yadav, A.N., Mishra, S., Sachan, A. and Ghosh Sachan, S. (2020) Tiny Microbes, Big Yields: Microorganisms for Enhancing Food Crop Production Sustainable Development. In: Trends of Microbial Biotechnology for Sustainable Agriculture and Biomedicine Systems: Diversity and Functional Perspectives, pp. 1-15; Elsevier USA, Rastegari AA, Yadav AN, Yadav N (eds), doi.org/10.1016/B978-0-12-820526-6.00001-4.
9. Kumari, R., Singh, A., Yadav, A.N., Mishra, S., Sachan A. and Ghosh Sachan, S. (2020) Probiotics, prebiotics and synbiotics: Current status and future uses for human health. In: Trends of Microbial Biotechnology for Sustainable Agriculture and Biomedicine Systems: Perspectives for Human Health, pp. 173-190; Elsevier, USA, Rastegari AA, Yadav AN, Yadav N (eds), doi.org/10.1016/B978-0-12-820528-0.00012-0.

10. Tiwari A. K. and Nigam V. K. (2019) Recent Bio-Processing Technologies for Value Added Horticultural Products. Applied Microbiology and Bioengineering, 57-67. https://doi.org/10.1016/B978-0-12-815407-6.00004-6

11. Gupta, A., Dev, A., Nigam, V. K., Padmanabhan, P., & Singh, S. (2020). A Review on Next-Generation Nano-Antimicrobials in Orthopedics: Prospects and Concern. In R. Prasad, B. Siddhardha and M. Dyavaiah (Eds.) Nanostructures for Antimicrobial and Antibiofilm applications. Cham, Switzerland: Springer Nature. ISBN: 9783030403362

12. Gupta, A., Padmanabhan, P., & Singh, S. (2020). Bionanocomposites: Green Materials for Orthopedic Applications. In S. E. Jujjavarapu and K. M. Poluri (Eds.) Green Polymeric Nanocomposites., Boca Raton, Florida, USA: CRC Press. ISBN: 9781138486577

13. Bhatnagar, M., Gupta, G. S. and Sinha, R. K. (2020) Prototype algorithm for three-class motor imagery data classification: a step toward development of human computer interaction-based neuro-aid, In Chaki, J., Dey, N. and De, D. (Eds), Advances in ubiquitous sensing applications for healthcare, volume 8, Smart Biosensors in Medical Care, pp. 1-28, Elsevier. (ISBN: 978-0-12-820781-9).

SECTION 5 AWARD / PATENT / COLLABORATIONS

5.1 Patents

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	Dr. Raju Poddar	A method and apparatus for imaging of vasculature of human eyes adapting an intensity disparity field subtraction optical coherence technique	E-1/39303/2019-KOL, 2019	2019

5.2 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	Rajendra Institute of Medical Sciences, Bariautu, Ranchi	Research Collaboration in Biomedical and Pharmaceutical Sciences	May 2020/ 5 Years
2.	Central Tassar Reasearch and Training Institute, Piska Nagri, Ranchi, Central Silk Board, GOI	Research on Various Untrapped Technomachanical Issues Linked to Tassar Silk Indusrtry	Nov. 2019/ 4 Years

SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Faculty Co-ordinators	Date / Duration
1.	BIOTS	Dr. Dinesh Prasad, Dr. Koel Mukherjee	Round the year

6.2. List of Faculties

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

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Ramesh Chandra	Professor and Head (Bioengg)	Chairman
2.	Dr. Sudipta Goswami	Professor (Chemical Engg)	Internal
3.	Dr. S. Samanta	Professor (PST)	Internal
4.	Dr. Padmini Padmanabhan	Professor (Bioengg)	Internal
5.	Dr. Kunal Mukhopadhyay	Professor (Bioengg)	Internal
6.	Dr. Rakesh Kumar Sinha	Professor (Bioengg)	Internal
7.	Dr. V.K. Nigam	Asso. Professor (Bioengg)	Internal
8.	Dr. Raju Poddar	Asso. Professor (Bioengg)	Internal
9.	Dr. T.R. Sharma	Director, IIAB, Namkom, Ranchi, Jharkhand	External

SECTION 7 OTHER INFORMATION

7.1 Publication by students, if any

1. **S Nirala, P. Kumar L, J. Kumar,** Kaushik Paul, Dinesh Prasad (2019) Developing bio-concrete in laboratory and investigating its mechanical, structural and self-healing properties ITCSD 2019 NIT Warangal.

2. Singh, S., **Gupta, A.**, Qayoom, I., Teotia, A. K., Gupta, S., Padmanabhan, P., Dev, A., &

Kumar, A. (2020). Biofabrication of Gold Nanoparticles with Bone Remodelling Potential: An In-vitro and In-vivo Assessment. Journal of Nanoparticle Research, 22, 152.

3. Mallick, A., **Gupta, A.**, Hussain, A., Aparajay, P., Singh, S., Singh, S. K., & Dev, A. (2020). Intranasal delivery of gabapentin loaded optimized nanoemulsion for augmented permeation. Journal of Drug Delivery Science and Technology, 56, 1-11.

4. Singh, S., Dev, A., Gupta, A., Nigam, V. K., & Poluri, K. M. (2019). Nitrate Reductase mediated synthesis of surface passivated nanogold as broad-spectrum antibacterial agent. Gold bulletin, 1-20.

7.2 Achievements of Students

Sr. No.	Name of Student	Achievement/ Position/Award etc	Organised by	Date and Venue
1.	Pushprenu	Best Poster Award-2020	Department of Biotechnology and Medical Engineering, National Institute of Technology, Rourkela-769008, India	March 05-07, 2020
2.	ARCHITA GUPTA (PHD/ BE/10054/2017)	Best poster award	29th National Conference of SBAOI along with International Conference on Biomaterial in Tissue Engineering and Regenerative Medicine (BioTERM) 2019	IIT Kanpur, Kanpur, Uttar Pradesh, India. Dec, 2019

7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Dr. Mohd. Aslam, Scientist G, Adviser DBT, GoI, New Delhi	Oct.22, 2019	

7.4 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	Bharati Pandey, PHD/109/2010 Department of Bioengineering, BIT Mesra, Ranchi	Dr. Bharati Pandey has been announced to be the winner of 2020 Women in Triticum (WIT) award by Borlaug Global Rust Initiative (BGRI) on April 29, 2020.

DEPARTMENT OF CHEMICAL ENGINEERING

SECTION 1 DEPARTMENT PROFILE





About the Department

The Department of "Chemical Engineering" with well qualified faculty provides high standard of education in the diversified fields of Chemical Engineering. The Department has immense strength in the area of Chemical and Polymer Engineering. The Department received national recognition by winning the Gold Trophy for Plasticon Award 2012 in the category of Best Educational Institution Contributing to Plastics. The Plasticon Award was conferred on 1st February 2012, at 8th International Plastics Exhibition and conference. The programme was supported by Ministry of Chemicals and Fertilizers, Department of Chemicals and Petrochemicals, Government of India. Faculty members are working on sponsored projects and collaborative research with various organizations. The Department is also recognized under DST-FIST.

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 facilities in Polymer Processing Workshop and Product Development Laboratory. The various materials Characterization facilities include Instron Universal Testing Machine, Rigaku wide angle X-Ray diffractometer, ATLAS accelerated weathering testing system, HAAKE Rheometers. The students are trained in various CAE applications in the field of product and process design with various software such as ASPEN PLUS, Accelrys, Material Studio for molecular simulation, MATLAB, PROENGINEER, ANSYS, CATIA, FLUENT, POLYFLOW, and MOLDFLOW. There are several Projects sponsored by DRDL, DST, Ministry of New and Renewable Energy, Coir Board etc. to the credit of the Department. Major research areas are: Nanotechnology, Advanced Polymer Composites, Alternative Energy, Bioresources Utilization, Pollution Control, Water Treatment Technologies, Polymer Blends and Interpenetrating Polymer Networks, Nano filtration Membrane, Recycling of Polymer Waste, Specialty Polymer, Colloids and Interfacial Science, Tissue Engineering, Sensors, Fuel Cell Membrane. The Department of Chemical Engineering offers Undergraduate four-year Programmes, and Postgraduate Programmes as well as 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:

- M.Tech. (Chemical Engineering)
- Integrated M.Sc. Food Technology (10 Semesters)

Doctoral Programmes:

- Doctoral Programme in the fields of Chemical Engineering, Polymer Science and Engineering, Food Processing Technology 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	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
2.	Development of process technology for enhanced resistant starch content in rice and rice based snack (Puffed rice)	PI-Dr. Anupam Roy	DST-SERB	06-06-19	Rs. 53.06 Lakh	Three Years
3.	Biopolymer based nano-layer fortification of self-assembled micronutrients over pre-conditioned rice: Retention of fortified nutrients and scale up studies by	PI-Dr. Anupam Roy	ICMR	01.12.2019	Rs. 39.57 Lakh	Three Years

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
4.	Development of nanofiller reinforced ionomer-based polymer nano-composite for radio frequency absorber	PI- Nirupama Co-PI Dr. Gautam Sarkhel	NPIU, TEQIP 3	18.06.2019	14.60 lakhs	One Year
5.	Transition metal(s) containing perovskite/CNFs composite for low temperature CO2 reduction	PI- Y. N. Prajapati Co-PI Dr. A. K. Sen	NPIU, TEQIP 3	18.06.2019	16.58 lakhs	One Year
6.	Deep Eutectic Solvents as Electrolytes for Nanomaterials-based high-performance Supercapacitors	PI- Dr. Anand Bharati Co-PI - Dr. G.T Mohanraj	NPIU, TEQIP 3	18.06.2019	15.45 Lacs	One Year
7.	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	16.24 Lacs	One 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.	Development of advanced polybenzimidazole based nanocomposite materials for potential defense applications	PI- Dr. Arup Choudhury Co-PI Dr. Gautam Sarkhel	DRDO	2nd September, 2016	Rs 23.71 Lakhs	Three 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.	Awareness camp for school Children: Starch, resistant starch and diabetes	Dr. Anupam Roy	DST	December 18, 2019

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.	Debasree Ghosh	Digital Transformation in Teaching Learning Process (workshop)	MHRD, Govt.of India	Indian Institute of Technology Bombay	online	16.03.2020 to 30.03.2020
2.	Gautam Sarkhel	Digital Transformation in Teaching Learning Process (workshop)	MHRD, Govt.of India	Indian Institute of Technology Bombay	online	06.04.2020 to 22.04.2020
3.	Bidhan Chandra Ruidas	3 day AICTE FDP on Universal Human Values	AICTE	AICTE	BIT Mesra	13 - 15 December 2019
4.	Dr. G.T. Mohanraj	International conference on Advance Technologies for Industrial Pollution Control (ATIPC)	Institute Funding	IIEST, Shibpur, Kolkata	Shibpur, Kolkata	Dec.17-19, 2019
5.	Dr. G.T. Mohanraj	Second International Conference on Materials Science and Materials Chemistry	Institute Funding	Allied Academies, UK	London, UK	March 20-21, 2019
6.	Dr. G.T. Mohanraj	International Conference on Nanoscience and Technology (ICONOSAT 2020)	DST -SERB	SN Bose National centre for basic sciences, Kolkata	Biswa Bangla Convention Centre, Kolkata	5-7 March 2020
7.	Dr. G.T. Mohanraj	30thAnniversay World Congress on Biosensors, Busan	Self	Elsevier Publishers	Busan, S. Korea	26-29 May 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
8.	Dr. G.T. Mohanraj	Digital Transformation in Teaching Learning Process	NPIU, TEQIP-III, MHRD, India & World Bank	IIT Bombay	SWAYAM-Online course	6-22 April 2020
9.	Dr. Amit Kmar Tiwari	Faculty Development Program "Outcome Based Education and Online Learning Teaching"	NA	Department of Management and Department of HMCT, BIT Mesra Ranchi Jharkhand	BIT Mesra	29.062020 to 03.07.2020
10.	Dr. Amit Kmar Tiwari	Faculty Development Programme on delivering online course using canvas LMS.	NA	TEQIP-III, BIT Mesra Ranchi Jharkhand,		27th July to 5thAugust, 2020.
11.	Dr. J Sudeepan	Digital Transformation in Teaching Learning Process (workshop)	MHRD, Govt.of India	Indian Institute of Technology Bombay	online	06.04.2020 to 22.04.2020

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals :

1. Subhadra Panda, Sudipta Goswami, Bibhudendra Acharya (2019),"Polydimethylsiloxane-Multiwalled Carbon Nanotube Nanocomposites as Dielectric Materials: Frequency, Concentration and Temperature-Dependence Studies" Journal of Electronic Materials 48,3.

2. Jagesh Kumar Ranjan, Sudipta Goswami (2020) "Effect of surface treatment of natural reinforcement on thermal and mechanical properties of vinyl ester/polyurethane interpenetrating polymer network-based biocomposites", Journal of Elastomers and Plastics,52 (1), 29-52, 2020

3. Sudipta Goswami, Jagesh Kumar Ranjan (2020) "Study of Mechanical and Thermomechanical Properties of Vinyl Ester/Polyurethane Interpenetrating Polymer Network Based Hybrid Composites", Fibers and Polymers, 21, 1096–1114.

4. M W. Ahmad, B. Dey, A. ALMezeni, Arup Choudhury(2020)."Chemically-reduced graphene reinforced polyetherimide nanocomposites: dielectric behavior, thermal stability and mechanical properties", Materials Research Express 6, 115316-115328.

5. M. W. Ahmad, B. Dey, A. A. Sammar, Arup Choudhury(2020)."Sulfonic-functionalized graphene oxide reinforced polyethersulfone nanocomposites with enhanced dielectric permittivity and EMI shielding effectiveness", Journal of Macromolecular Science, Part A Pure and Applied Chemistry 57, 778-790.

6. S. Anand, M. W. Ahmad, A. K. A. Saidi, Arup Choudhury(2020), "Polyaniline nanofiber decorated carbon nanofiber hybrid mat for flexible electrochemical supercapacitor,"Materials Chemistry and Physics 254, 123480-123491.

7. B. Dey, M W. Ahmad, A. ALMezeni, G. Sarkhel, D. S. Bag, Arup Choudhury(2020). "Enhancing electrical, mechanical, and thermal properties of polybenzimidazole by 3D carbon nanotube@ graphene oxide hybrid", Composites Communications 17, 87-96.

8. M. W. Ahmad, B. Dey, A. A. 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 (DOI: 10.1080/09243046.2019.1710680).

9. Neha Jha, Gautam Sarkhel, S.P. Mahapatra (2020). "Morphology, barrier and electrical properties of oil-extended EPDM/nanographite nanocomposites"Materials Today: Proceedings, doi.org/10.1016/J.MATPR.2020.06.082.

10. A K Baranwal, S A Patel, R P Chhabra, "Laminar Natural Convection from a Differentially Heated Horizontal Cylinders in a Viscoplastic Fluid Filled Square Enclosure" (2020). American Society of Thermal and Fluids Engineers (ASTFE 2020) & New Orleans, LA, USA (Accepted).

11. S. Basu, A.K.Sen (2020). "Dehydration of glycerol with silica–phosphate-supported copper catalyst", Res. Chem. Int. 46, 3545, ISSN 0922-6168.

12. S. Basu, A.K.Sen, M.Mukherjee (2019)."Synthesis and performance evaluation of silica supported copper chromite catalyst for glycerol dehydration to acetol", J. Chem. Sci., 82, 131 ISSN 0974-3626.

13. Nirupama, Pranav Thakur, Dan Bahadur Pal(2020)."Cadmium removal from aqueous solution by jackfruit seed bio-adsorbent", Springer Nature Applied Sciences 2:1018.

14. Dan Bahadur Pal, P. K. Misra, Ram Prasad(2020)"Composite Copper Ceria Catalyst prepared by Different Methods for Water Gas Shift Reaction", Intl. J. Engg. Sci. Adv. Research 6(1): 32-40 (ISSN NO: 2395-0730)

15. A Kumar, NiupamaPrasad, A K Tiwari, Dan Bahadur Pal (2020)."Thermal Kinetics and Its Behavior of Waste Amaltash Seeds and Peels Biomass Using Thermo Gravimetric Analysis", Intl. J. Engg. Sci. Adv. Research 6(1): 15-22 (ISSN NO: 2395-0730)

16. Nirupama, M Anand, Dan Bahadur Pal (2020)"Prepared Bio-adsorbent (Jackfruit Seed) for Cadmium Removal from Waste Water", Intl. J. Engg. Sci. Adv. Research 6(1): 9-14 (ISSN NO: 2395-0730)

17. Dan Bahadur Pal, S Sinha, N Prasad (2020)."Effect of Ammonium Phosphate on the Thermal and Flammability Behaviour of Sisal/Epoxy Composite", Intl. J. Engg. Sci. Adv. Research 6(2): 21-23 (ISSN NO: 2395-0730)

18. Roy A, Bulut O, Some S, Mandal AK, Yilmaz MD (2019). "Green synthesis of silver nanoparticles: biomolecule-nanoparticle organizations targeting antimicrobial activity."RSC Adv. 2019 Jan 18 [cited 2019 Apr 29];9(5):2673–702. Available from: http://xlink.rsc.org/?DOI=C8RA08982E

19. Saha S, Roy A (2020). "Puffed rice: A materialistic understanding of rice puffing and its associated changes in physicochemical and nutritional characteristics."J Food Process Eng. 2020 Jul 5 [cited 2020 Jul 22]; Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/jfpe.13479

20. Roy A, Sarkar B, Celik C, Ghosh A, Basu U, Jana M, et al (2020). "Can concomitant

use of zinc and curcumin with other immunity boosting nutraceuticals be the arsenal against <scp>COVID</scp> 19?"Phyther Res 2020 Jun 24 [cited 2020 Jul 22];ptr.6766. Availablefrom: https://onlinelibrary.wiley.com/doi/abs/10.1002/ptr.6766.

21. Saha S, Roy A (2020). "Whole grain rice fortification as a solution to micronutrient deficiency: Technologies and need for more viable alternatives." Food Chemistry 326, p. 127049..
22. Some S, Bulut O, Biswas K, Kumar A, Roy A, Sen IK, et al (2020). "Effect of feed supplementation with biosynthesized silver nanoparticles using leaf extract of Morusindica L. V1 on Bombyx mori L. (Lepidoptera: Bombycidae)."Sci Rep. 2019 Dec 1 [cited 2020 Jul 22];9(1):1–13. Available from: https://doi.org/10.1038/s41598-019-50906-6
23. Debasree Ghosh, Chandan Guha, Joyjeet Ghose(2020)."Numerical investigation of paraffin wax solidification in spherical and rectangular cavity", Heat and Mass Transfer 55(12), 3547-3559.
24. Debasree Ghosh, Chandan Guha(2020)."Numerical simulation of paraffin wax melting in a rectangular cavity using CFD", Indian Chemical Engineer 62(3), 314-328.
25. Debasree Ghosh, Chandan Guha, Joyjeet Ghose(2019)."Numerical Simulation on Heat Transfer Analysis in Zinc Solidification Process Using Enthalpy Porosity Method", International Journal of Advanced Trends in Computer Applications-Special Issue (1), 39-43.
26. Abhijit Jadhav, Govindaraj Mohanraj, Ashok Gokarn, Susheeladevi Mayadevi(2019)."Ferets diameter estimation of activated carbon for effluent treatment application", Journal of the Indian Chemical Society, 96, 1067-1074.
27. Subhash Magar, Govindaraj Thangaraj Mohanraj, Sumit Kumar Jana, Chandrashekar Rode (2020)."Synthesis and characterization of supported heteropoly Acid: Efficient solid acid catalyst for glycerol esterification to produce biofuel", Inorganic and Nano-Metal Chemistry, 49, 1-9.
28. Abhijit Jadhav, Govindaraj Thangaraj Mohanraj, Ashok Gokarn, Suseela devi Mayadevi (2019). "Adsorption of heavy metal on active carbon derived from coconut leaves agro-waste", Chemistry & Chemical Technology, Accepted: June 02, 2019.
29. Satarupa Pattanayak and Sumit Kumar Jana(2019). "Controllable aqueous synthesis of near-IR-plasmonic anisotropic gold nanoparticles in the hydrazine concentration assisted: hydrazine-citrate hydrogen-bonded network at room temperature and application in highly sensitive SERS-based detection of Pb (II) species." Inorganic and nano-metal Chemistry, 48, 536-540 (ISSN:2470-1564).

4.2 Publications in Proceedings: (International/National)

1. A.S. Jadhav, G.T. Mohanraj, S. Maya devi and A.N. Gokarn (2019)."Estimation of ferets diameter of activated carbon derived from agrowaste for effluent treatment application", International conference on Advance Technologies for Industrial Pollution Control (ATIPC),Shibpur, Kolkata, Dec.17-19".
2. A.S. Jadhav, G.T. Mohanraj, S. Maya devi and A.N. Gokarn (2019)."Synthesis of EPDM rubber coconut leaves activated carbon composite for automobile application", Second International Conference on Materials Science and Materials Chemistry, London, UK, March 20-21, 2019.
3. P. Sindhuja and G.T. Mohanraj (2020)."Preparation and characterization of polymer-carbon nanotubes nanocomposites for EMI shielding application", International Conference on Nanoscience and Technology (ICONOSAT 2020), DST Nanomission, Biswa Bangla Convention Centre, Kolkata, 5-7 March 2020. P. Sindhuja and G.T. Mohanraj (2020)."A Comparative study

on electrical properties of PMMA-CNT nanocomposite films for VOC sensing applications", 30th Anniversay World Congress on Biosensors, Busan, S.Korea (26-29 May 2020, date before COVID-19).

4. Anamika Sinha,Pulak Datta (2019)."Study of polyethersulfone /lead oxide/ carbon composite for defense application", Chemcon 2019, IIT Delhi, 15-19th December, 2019, 18/12/2019.

5. Nirupama, Pranav Thakur, Dan Bahadur Pal (2020)."Prepared bio-adsorbent (jackfruit seed) for Cadmium removal from wastewater", paper presented in International Conference on Advanced Nanomaterials (ICAN2020), 27th -29th February 2020.

6. Atul Kumar, Niupama, A K Tiwari, Dan Bahadur Pal (2020)."Thermal Kinetics and Its Behavior of Waste Amaltash Seeds and Peels Biomass Using Thermo Gravimetric Analysis", paper presented in International Conference on Advanced Nanomaterials (ICAN2020)", 27th -29th February 2020.

7. Dan Bahadur Pal; P. K. Mishra, Ram Prasad (2020)."Composite Copper Ceria Catalyst prepared by Different Methods for Water Gas Shift Reaction", paper presented in International Conference on Advanced Nanomaterials (ICAN2020), 27th -29th February 2020.

8. Dan Bahadur Pal, Shreya Sinha, Nirupama Prasad (2020)."Effect of Ammonium Phosphate on the Thermal and Flammability Behavior of Sisal/Epoxy Composite", paper presented in International Conference on Advanced Nanomaterials (ICAN2020), 27th -29th February 2020.

9. Baranwal, A.K., Patel, S.A. and Chaabra, R.P. (2020). "Laminar Natural Convection from a Differentially Heated Horizontal Cylinders in a Viscoplastic Fluid Filled Square Enclosure", American Society of Thermal of Thermal and Fluids Engineers (ASTFE 2020) New Orleans, LA, USA (Accepted).

4.3 Chapter(s) in Edited Book

1. Dan Bahadur Pal, Amit Kumar Tiwari, Deen Dayal Giri, "Heavy Metals Resources and Purification Techniques of Groundwater", Accepted in CRC Wiley Publishers.

2. Dan Bahadur Pal, Amit Kumar Tiwari, DeenDayalGiri, "Bioremediation of Different Organic Pollutants", Accepted in Elsevier Publishers.

3. Amit Kumar Tiwari, Dan Bahadur Pal, "Plant growth promoting bacteria and its role in green remediation", accepted in Elsevier Publishers.

4. Amit Kumar Tiwari, Dan Bahadur Pal, "Recent Trends in Groundwater Conservation and Management", Accepted in CRC Wiley Publishers.

5. Amit Kumar Tiwari, Dan Bahadur Pal, "Nutrients contamination and eutrophication in the river ecosystem", communicated in Elsevier Publishers.

SECTION 5 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

5.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Faculty Co-ordinator	Date / Duration
1.	CRUCIGRAMA (ONLINE)	Prof -Incharge IIChE	24/08/2019-25/08/2019
2.	CHEM-E-ROCKET-	Prof -Incharge IIChE	28/09/2019
3.	CHEM-E-GRAPHY	Prof -Incharge IIChE	29/12/2019-14/01/2020

Sr. No.	Name of the Activity	Faculty Co-ordinator	Date / Duration
4.	SEMINAR ON MIND OVER MATTER & WOMEN OF METTLE	Prof -Incharge IIChE	03/02/2020
5.	Quiz- MIND BATTLE (ONLINE)	Prof -Incharge IIChE	13/03/2020
6.	TECHNOZION (ONLINE)	Prof -Incharge IIChE	8/06/2020-29/06/2020

5.2 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored (Yes / No)
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. Dharmendra Pandey	Assistant Professor	No
12.	Dr. Arnab Karmakar	Assistant Professor	No
13.	Dr. Bidhan Chandra Ruidas	Assistant Professor	No
14.	Dr. Anupam Roy	Assistant Professor	No
15.	Dr. Chandan Kumar Das	Assistant Professor	No
16.	Dr. Amit Kumar Tiwari	Assistant Professor	No
17.	Dr. Ashok Kumar Baranwal	Assistant Professor	No
18.	Dr. Yogendra Nath Prajapati	Assistant Professor	No
19	Dr. Anand Bharti	Assistant Professor	No
20.	Dr. Nirupama	Assistant Professor	Yes
21.	Dr. Dan Bahadur	Assistant Professor	Yes
22.	Mr. G Ravi Kumar	Assistant Professor	Yes

5.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. Anirudha Singh	Adjunct Assistant Professor	Department of Urology Brady Urological Institute Johns Hopkins University School of Medicine

5.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	HOD/In-Charge		Chairman (Ex-Officio)
2.	Dr. (Mrs.) M. Mukherjee	Professor	Internal Member
3.	Dr. Gautam Sarkhel	Professor	Internal Member
4.	Dr. (Mrs.) S. Goswami	Professor	Internal Member
5.	Dr. G.T. Mohanraj	Assistant Professor	Internal Member
6.	Dr. Bidhan C. Ruidas	Assistant Professor	Internal Member
7.	Dr. A.K. Sinha, Dept. of Civil Engg., BIT Mesra	Professor	External Member
8.	Dr. D.P. Mishra, Dept. of Mech.Engg., BIT Mesra	Professor	External Member
9.	One student representative of UG programme	Student	Internal Member
10.	One Student representative of PG programme	Student	Internal Member
11.	Dr. Pallab Ghosh Dept. of Chemical Engineering, IIT, Guwahati	Professor	External Member
12.	Dr. Siddhartha Datta Dept. of Chemical Engineering, Jadavpur University	Professor	External Member
13.	Dr. Pinakpani Biswas Environment Research Group, Tata Steel Ltd., Jamshedpur	Principal Scientist	External Member
14.	Prof. Priyabrata Sarkar Department of Poly Sci & Tech, University of Calcutta	Professor	External Member
15.	Dr. Suddhasatwa Basu Chemical Engineering, IIT Delhi	Professor	External Member

SECTION 6 OTHER INFORMATION

6.1 Publication by Students

1. Nirupama, **Pranav Thakur**, Dan Bahadur Pal (2020). "Cadmium removal from aqueous solution by jackfruit seed bio-adsorbent", **Springer Nature Applied Sciences** 2:1018.
2. **A Kumar,** Niupama Prasad, A K Tiwari, Dan Bahadur Pal (2020). "Thermal Kinetics and Its Behavior of Waste Amaltash Seeds and Peels Biomass Using Thermo Gravimetric Analysis", **Intl. J. Engg. Sci. Adv. Research** 6(1): 15-22 (ISSN NO: 2395-0730)
3. **Anamika Sinha,** Pulak Datta **(2019). "**Study of polyethersulfone /lead oxide/ carbon composite for defense application", **Chemcon 2019, IIT Delhi**, 15-19th December, 2019, 18/12/2019.
4. Nirupama, **Pranav Thakur**, Dan Bahadur Pal **(2020).** "Prepared bio-adsorbent (jackfruit seed) for Cadmium removal from wastewater", paper presented in **International Conference on Advanced Nanomaterials (ICAN2020)**, 27th -29th February 2020.

5. **Atul Kumar,** Niupama, A. K. Tiwari, Dan Bahadur Pal **(2020).** "Thermal Kinetics and Its Behavior of Waste Amaltash Seeds and Peels Biomass Using Thermo Gravimetric Analysis", paper presented in **International Conference on Advanced Nanomaterials** (ICAN2020)", 27th -29th February 2020.

6.2 Achievements of Students

Sr. No	Name of Student	Achievement/ Position/ Award etc	Organised by	Date and Venue
1.	Preeti Sridhar (BE/10422/16) & Shloka Atul Dhavle (BE/10548/16)	Participation certificate in CHEMBIOEN-2020	Dr. B.R. Ambedkar National Institute of Technology. Jalandhar	13.02.2020 Dr. B.R. Ambedkar National Institute of Technology. Jalandhar

6.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Dr. Pradip Munshi Asst. Vice President (VP) Lead Scientist (Organic) Reliance Technology Group	05.09.2019	
2.	Prof. Pralay Maiti School of Materials Science and Technology IIT BHU	23.09.2019	

6.4 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	 **Dr. Anirudha Singh, 1997-2001**	Assistant Professor Johns Hopkins University Brady Urological Institute Department of Chemical & Biomolecular Engineering Department of Biomedical Engineering Translational Tissue Engineering Center

Sr. No.	Name, Batch and Affiliation	Short Description
2.	 **Saurabh Toshniwal, 2002-2006**	Director Royal Composite Pvt. Ltd Kolkata, India
3.	 **Mukesh Chadra Anchuri**	C.E.O and Co-Founder Paymarix T-HUB Catalyst, IIIT-Hyderabad, Gachibowli, Hyderabad, Telangana 500032
4.	 **Ankita Singh 2008-2012**	MIT (LGO: MechE & MBA), Bose, UMass Lowell (Plastics), Amgen, MIT School of Engineering, Cambridge, Massachusetts
5.	 **Praphulla Tiwary 2004-2008**	Co-founder & CEO (Plantee.ca) Queen's University, Kingston, Ontario, Canada

DEPARTMENT OF CHEMISTRY

SECTION 1 DEPARTMENT PROFILE





1. About the Department

Department of Chemistry was established in 1955, offers undergraduate, postgraduate & Ph.D. programmes in chemistry. The Department has received support under "Fund for Improvement in Science & Technology Infrastructure" (FIST-2012) programme of the Department of Science and Technology, New Delhi for NMR and Computational Chemistry facility. The Department is committed to high quality research programmes supported by DST, UGC, DBT, CSIR and AICTE in major thrust areas like:

Oscillatory Chemical Reactions and Dynamics, Fuel Cells and Electrochemical Supercapacitors, Medicinal Chemistry, Polymers, Environmental Chemistry, Nanotechnology, Biomaterials, Computational Chemistry, Coordination Chemistry.

Vision & Mission

To become a recognized centre of excellence for teaching, research and innovations and make significant contribution for 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 is equipped with state - of - art instruments and research facility to meet the requirement of modern-day chemistry
- The Department has a unique research facility of Nuclear Magnetic Resonance (NMR) spectroscopy, 400 MHz, JEOL which fulfils the requirements of solution-state analytical needs for both students and researchers.
- Advanced equipment's such as AUTOLAB 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. are available for training and research.
- Department has a computational lab facility for conducting training and research in the area of theoretical and computational chemistry

SECTION 2 **RESEARCH PROJECTS**

2.1 Sponsored Projects

a) Ongoing Projects

Sr. No.	Project Title	PI / Co PI / Collaborator	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	"Spatial Distribution Uranium and Associated Water Quality Parameters in Seven district (Giridih, Jamtara, Dumka, Sahibgang, Godda, Pakur and Deoghar) in North East of Jharkhand".	Dr. P.K. Srivastava	BRNS	2017	Rs. 2697300/-	2020
2.	Development of Transition Metal Complexes as Water Oxidation Catalyst	Dr. Subhendu Naskar-PI	SERB	12/07/2017	Rs. 28,34,040/-	3 Yr 5 months
3.	Band-Gap Engineering of Lead-Free Perovskite Quantum-Dots for Optoelectronic Application	Dr. Joydeep Dhar-PI	AICTE-TEQIP	11/07/2019	Rs. 11,45,000/-	1Yr 3 months
4.	Development of compounds that selectively destroy HIV-1-infected cells	Dr. A. Sharon, PI; Dr. C. Bal, Co-PI	Kagoshima Univ, Japan	01/01/19	Rs. 7,66,000/-	1 Yr
5.	Synthesis and development of novel HSP90 inhibitors as potential anti-HIV candidate molecules and elucidation of their mechanism of inhibition	Dr. A. Sharon, PI;	SERB-DST	03/10/18	Rs. 23,38,000/-	3 Yrs

b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Development of compounds that selectively destroy HIV-1-infected cells	Dr. A. Sharon, PI; Dr. C. Bal, Co-PI	Kagoshima Univ, Japan	01/04/18	Rs. 3,65,000/-	1.5 Yr
2.	Development of highly porous, nanostructured metal/mixed metal oxide spheres for removal of arsenic. 499875/- March 2020	Dr. Sanjaya Kumar Swain (PI) Dr. Usha Jha (Co-PI) Dr. Sanjukta A	BRNS	15/04/2016	Rs. 4,99,875/-	March 2020

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. Subhendu Naskar	Modern Trends in Inorganic Chemistry-XVIII	SERB & BIT-Mesra	IIT-Guwahati	IIT-Guwahati	11-14 dec' 2019
2.	B. Dasgupta Ghosh,	International Conference on Sustainable Cities and Communities (ICSCC-2020)		Gurgaon	Delhi	7-8 February, 2020
3.	B. Dasgupta Ghosh,	AICTE sponsored quality improvement programme on "A green therapeutic approach towards cancer		Dept. of Pharmaceutical sciences and technology	BIT Mesra, Ranchi,	7-20 February, 2020
4.	Dr Sumit Mishra	Applications of Computers in Chemistry	TEQIP	IIT KGP	IIT KGP	11-13 March 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
5.	Dr Sumit Mishra	Online Certification on Digital Transformation in teaching learning process		IITB	Online mode	6-22 Apr 2020
6.	Dr Sumit Mishra	Weekly webinar series on 'Water Challenges during and Post Covid 19'		IITM	Online mode	7-28 May 2020

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals:

1. Arti Mahto, Sumit Mishra, Design, Development and validation of guar gum-based pH sensitive drug delivery carrier via graft copolymerization reaction using microwave irradiation, International Journal of Biological Macromolecules, Volume 138, 278-291, 2019.
2. Sumit Mishra, Koustav Kundu, Synthesis, Characterization and Applications of Polyacrylamide grafted Fenugreek gum (FG-g-PAM) as Flocculant: Microwave Vs Thermal Synthesis Approach, International Journal of Biological Macromolecules, 149, 792-808, 2019.
3. Pinki Pal, Srikant Kumar Singh, Sumit Mishra, Jay Prakash Pandey, Gautam Sen, Gum ghatti based hydrogel: Microwave synthesis, characterization, 5-Fluorouracil encapsulation and 'in vitro' drug release evaluation, Carbohydrate Polymers, Volume 222, 2019, 114979.
4. C.H.Jamkhokai Mate., Mishra, S. Exploring the Potential of Moi Gum for Diverse Applications: A Review. J Polym Environ,28, 1579-1591
5. Priti Rani, Pinki Pal, Jay Prakash Panday, Sumit Mishra, Gautam Sen, Alginic Acid Derivatives: Synthesis, Characterization and Application in Wastewater Treatment, Journal of Polymers and the Environment, 27, 12, pp 2769–2783, 2019.
6. Ch. Jamkhokai Mate, Sumit Mishra, Synthesis of borax cross-linked Jhingan gum hydrogel for remediation of Remazol Brilliant Blue R (RBBR) dye from water: Adsorption isotherm, kinetic, thermodynamic and biodegradation studies, International Journal of Biological Macromolecules, 151, 2020, 677-690
7. Ch Jamkhokai Mate, Sumit Mishra, PK Srivastava, In vitro release kinetics of graft matrices from Lannea Coromandelica (Houtt) gum for treatment of colonic diseases by 5- ASA, International Journal of Biological Macromolecules149 (2020) 908–920
8. Ch Jamkhokai Mate, Sumit Mishra, PK Srivastava, Design of low-cost Jhingan gum-based flocculant for remediation of waste water: Flocculation and biodegradation studies, International Journal of Environmental Science and Technology, Accepted, Springer, In Press, 1.1.2020
9. Swaraj Sengupta, Sahanwaj Khan, Shyamal K. Chattopadhyay, Indrani Banerjee, Tarun K. Panda and Subhendu Naskar, Trinuclear copper and mononuclear nickel complexes of oxime containing Schiff bases: Single crystal X-ray structure, catecholase and phenoxazinone synthase activity, catalytic study for the homocoupling of benzyl amines Polyhedron 182, 114512 (2020)
10. Deep Shikha, Md. Shahid, Sanjay K. Sinha, Improvement in adhesion of HAP deposited

on alumina after Ar+ ions implantation and its physiochemical properties, Surfaces and Interfaces, Volume 19, 2020, 100485

11. A. Singh, S. Samanta, N. Bage, B.D. Ghosh, P. Kar, P. Roy; Synthesis of stable aqueous colloid of functionalized silver nanorod, Functional Materials Letters 12, 1950076-1950079 (2019).
12. A. Adhikari, P. Kar, D. Rana, S. De, J. Nath, K. Dutta, D. Chattopadhyay; Synthesis of sodium cholate mediated rod-like polypyrrole-silver nanocomposite for selective sensing of acetone vapor, Nano-Structures and Nano-Objects 21, 100419 (2020).
13. D. Ponnamma, H. Parangusan, K. Deshkukh, P. Kar, A. Muzaffar, S.K.K. Pasha, M.B. Ahamed, M.A.A. Al-Maadeed; Green synthesized materials for sensor, actuators, energy storage and energy generation: A review, Polymer-Plastic Technology and Materials 59, 1-62 (2020).
14. S. Samanta, P. Roy, P. Kar; Sensing of ethanol and other alcohol contaminated ethanol by conducting functional poly(o-phenylenediamine), Materials Science and Engineering B 256, 114541 (2020).
15. 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, 8973-8980 (2020).
16. S. Sil, H. Luitel, J. Dhar, M. Chakrabarti, P. P. Ray, B. Bandyopadhyay, D. Sanyal; Defect Induced Room Temperature Ferromagnetism in Methylammonium Lead Iodide Perovskite, Phys. Lett. A, 384, 126278 (2020).
17. B. Bandyopadhyay, H. Luitel, S. Sil, J. Dhar, M. Chakrabarti, P. Nath, P. P. Ray, D. Sanyal; NMR Study of Defect Induced Magnetism in Methylammonium Lead Iodide Perovskite, Phys. Rev. B, 101, 094417 (2020)
18. S. Shalu, B. Dasgupta Ghosh (2019), Synthesis, Characterization and Dielectric properties of low-loss Zr-doped Barium Strontium Titanate materials, Advances in Applied Ceramics: Structural, Functional and Bioceramics, 118(8),451-457.
19. 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., E-pharmacophore guided discovery of pyrazolo [1, 5-c] quinazolines as dual inhibitors of topoisomerase-I and histone deacetylase. Bioorg Chem 2020, 94, 103409.
20. Rozy, F.; Sharon, A., Base Catalyzed Scaffold Shift from Pyranone Carboxamide to Pyrazolyl Acetamide through Intramolecular Ring Transformation. ChemistrySelect 2019, 4 (20), 6194-6197.
21. Trivedi, J.; Parveen, A.; Rozy, F.; Mitra, A.; Bal, C.; Mitra, D.; Sharon, A., Discovery of 2-isoxazol-3-yl-acetamide analogues as heat shock protein 90 (HSP90) inhibitors with significant anti-HIV activity. European Journal of Medicinal Chemistry 2019, 183, 111699.
22. Ansari, A. J.; Wani, A. A.; Maurya, A. K.; Verma, S.; Agnihotri, V. K.; Sharon, A.; Bharatam, P. V.; Sawant, D. M., An unprecedented N- to C-sulfonyl migration in the reaction of azomethine amine and allenoates: access to arylsulfonylmethyl substituted pyrazolo[1,5-c]quinazoline and mechanistic studies. Chemical Communications 2019, 55, 14825.
23. Samunuri, R.; Toyama, M.; Pallaka, R. S.; Neeladri, S.; Jha, A. K.; Baba, M.; Bal, C., Synthesis and anti-HBV activity of carbocyclic nucleoside hybrids with salient features of entecavir and aristeromycin. RSC Medicinal Chemistry 2020, 11 (5), 597-601.
24. Bal T, Yadav S K, Ray N, Swain S, Garg S S, Sen G (2020). In vitro evaluation of free radical assisted microwave irradiated polyacrylamide grafted cashew gum (CG) biocompatible graft copolymer (CG-g-PAM) as effective polymeric scaffold, Journal of drug delivery and science and technology 56,101572.
25. Pal P, Ranga N, Samanta S, Aryan A, Pandey J P, Sen G (2019). Graft copolymer of PVP-A

sutureless, hameostatic bioadhesive for wound healing applications, Polymer Bulletein 76,5191-5212.

26. A.P. Panda, P. Rout, K.K. Jena, S.M. Alhassan, S.A. Kumar, U. Jha, R.K. Dey, S.K. Swain, Core–shell structured zero-valent manganese (ZVM): a novel nanoadsorbent for efficient removal of As(III) and As(V) from drinking water, J. Mater. Chem. A. 7 (2019) 9933–9947.
27. A.P. Panda, P. Rout, S.A. Kumar, U. Jha, S.K. Swain, Enhanced performance of a core–shell structured Fe(0)@Fe oxide and Mn(0)@Mn oxide (ZVIM) nanocomposite towards remediation of arsenic contaminated drinking water, J. Mater. Chem. A. 8 (2020) 4318–4333.
28. A.P. Panda, P. Rout, K.K. Jena, S.M. Alhassan, S.A. Kumar, U. Jha, R.K. Dey, S.K. Swain, Exploring Nanostructured Zr/Cu Composite Oxide (NZCO) as an Efficient Adsorbent for Removal of As(III) and As(V) from Aqueous Solution, Chemistry Select.4 (2019) 5925–5936.
29. A.P. Panda, Usha Jha, S. K. Swain, Synthesis of nanostructured CuO loaded boehmite(CuO_ Boehmite) for adsorptive removal of As(III/V) from aqueous solution, J. Water Process Eng. 37 (2020) 101506.
30. P. K. Srivastava, Vishal Rimal and Shubham Shishodia Novel synthesis of high-thermal stability carbon dots and nanocomposites from oleic acid as an organic substrate, Applied Nanoscience (2019), ISSN 2190-5509, DOI 10.1007/s13204-019-01178-z

4.2 Chapter(s) in Edited Book

1. 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 form Springer 2020) pp. 349-403. Print ISBN-13: 978-3-030-26667-7
2. Sumit Mishra and Nisha Kumari, 'Nanocellulose based hydrogels and their applications' in 'Cellulose Nanoparticles: Chemistry and Fundamentals' (Published by Royal Society of Chemistry, Ed: Vijay Kr Thakur, Accepted, May 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.	B. Dasgupta Ghosh	Outstanding Woman in Science award, 5th Venus International Women Awards - VIWA 2020	Venus International Women Awards - VIWA 2020	International level	2020

5.2 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	Dr. Reddy's Laboratory PVT. Ltd., Hyderabad	Consultancy, Nominee Consultant: Dr. A. Sharon	19/12/2019

SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. P. K. Srivastava	Professor	No
2.	Dr (Mrs) U. Jha	Professor	No
3.	Dr J P Pandey	Professor	No
4.	Dr Bimal Verma	Associate Professor	No
5.	Dr A. Sharon	Associate Professor	No
6.	Dr S Naskar	Associate Professor	No
7.	Dr (Mrs) S Mishra	Associate Professor	No
8.	Dr P Kar	Associate Professor	No
9.	Dr (Mrs) C Bal	Assistant Professor	No
10.	Dr (Mrs) Deepshikha	Assistant Professor	No
11.	Dr (Mrs) 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 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. P.K. Srivastava	Professor , Dept .of Chemistry	Chairman
2.	Dr. Usha Jha	Professor , Dept. of Chemistry	Internal
3.	Dr. J.P. Pandey	Professor, Dept. of Chemistry	Internal
4.	Dr. Ashoke Sharon	Associate Prof., Dept. of Chemistry	Internal
5.	Dr. Subhendu Naskar	Assistant Prof., Dept of Chemistry	Internal
6.	Dr. Sumit Mishra	Assistant Prof., Dept .of Chemistry	Internal
7.	Dr. Gautam Sen	Assistant Prof., Dept .of Chemistry	Internal
8.	Dr. S.S. Mahapatra	Assistant Prof., Dept .of Chemistry	Internal
9.	Dr. R.N. Gupta	Professor, Dept. Pharm. Sc. & Tech.	Internal
10.	Dr. R.P. Sharma	Professor, Dept. of Mech. Engg	Internal
11.	Dr. D. Tiwary	Professor; Department of Chemistry – IIT, B.H.U. Varanasi	External
12.	Dr. R.K. Dey	Professor; Department of Chemistry, Central University of Jharkhand	External

SECTION 7 OTHER INFORMATION

7.1 Publication by students

1. **Amulya Prasad Panda, Pooja, Priyanka Rout,** Usha Jha, Ashwini K. Singh, S.K. Swain, Study of geochemical occurrence and chemistry of arsenic in groundwater of ward number 17 of Ranchi municipality, Ranchi, Jharkhand, International Conference on Environmental Challenges and Sustainability (ICECS 2018), CUJ, Ranchi, India. (3rd Best Poster Presentation Award).

2. **Amulya Prasad Panda, Mouli Giri**, Usha Jha, S. K. Swain, Development of iron ore slime incorporated α-MnO2 microspheres (IOSM) for effective remediation of arsenic contaminated groundwater, International Conference on Sustainable Energy and Environmental Challenges (IV SEEC-2019), CSIR-NEERI, Nagpur, India. (Best Oral Presentation Award).

3. Sumit Mishra, **Koustav Kundu**, Synthesis, Characterization and Applications of Polyacrylamide grafted Fenugreek gum (FG-g-PAM) as Flocculant: Microwave Vs Thermal Synthesis Approach, International Journal of Biological Macromolecules, 149, 792-808, 2019.

4. **Ankish Aman** and P.K. Srivastava , Status and challenges of municipal solid waste management in Ranchi, City, Jharkhand, India: - A review , International conference CHEM-CONFLUX [20] on "energy and environmental technologies for sustainable development" Chemical Engineering Department, Motilal Nehru National Institute of Technology Allahabad, Prayagraj 211004, Paper No. 166, during February 14, 2020 to February 16,2020.

7.2 Achievements of Students

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
1.	Nandkishore Thombare	Jawaharlal Nehru Award for outstanding doctoral research in agriculture & allied sciences	Ministry of Agriculture & farmers welfare, Govt. of India	2019, New Delhi

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

SECTION 1 **DEPARTMENT 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	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	PI: Dr. R. Naresh Kumar	MoEFCC	14-3-2017 & 30-3-2020	Rs. 159.47 Lacs	5 years (2016-2021)
2.	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	PI – Dr. Indrajit Roy, Co-PI – Prof. Anand Kr. Sinha, Prof. Sudeshna Chakravarty, and Prof. Bindhu Lal	Coal India Limited, R&D Project	1.5.2018	Rs. 75.3 Lacs	3 years
3.	Mobility, Bioaccessibility and Source Apportionment Study of Toxic Heavy Metals in Indoor and Outdoor Dust Environment: An Isotope Fingerprinting Approach'.	Tanushree Bhattacharya	SERB	26.9.2017	Rs. 41.907 Lacs	3 years
4.	Validation of Water, Sanitation and Hygiene across 780 schools in Jharkhand	PI: Kirti Avishek	UNICEF	11th Feb, 2020	Rs.15.34 Lacs	11th Nov, 2020.

b) Projects Completed

Sr. No.	Project Title	PI / Co PI/	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Slope stability study of Wani area, Wani North area, Umrer area & Pench area	Dr. Indrajit Roy (PI)	Western Coalfield Limited (WCL)	July, 2019	Rs. 30.44 Lakhs	30.06.20
2.	Slope Stability Study of 4 opencast mines	Dr. Indrajit Roy (PI)	West Bengal Power Development Corporation Ltd.	July, 2019	Rs.12 lakhs	30.06.20

Sr. No.	Project Title	PI / Co PI/	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
3.	Rock testing of CCL mines	Dr. Indrajit Roy (PI)	CMPDI	July, 2019	Rs. 3 lakhs	30.06.20
4.	Slope Stability Study of 4 opencast mines	Dr. Indrajit Roy (PI)	West Bengal Power Development Corporation Ltd.	July, 2019	Rs.12 lakhs	30.06.20
5.	Rock testing of CCL mines	Dr. Indrajit Roy (PI)	CMPDI	July, 2019	Rs.3 lakhs	30.06.20

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.	One Day workshop on Coal chemistry and Health Impacts due to Coal	Dr. Sukalyan Chakraborty	TEQIP Phase III	10/12/2019

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. Indrajit Roy	Asian Mining Congress	Research Promotion Grant	Mining Geological and Metallurgical Institute	Kolkata	6-9/11/2019
2.	Dr. Indrajit Roy	Invited lecture	Research Promotion Grant	Disaster Prevention Research Institute, Kyoto University,	Japan	7/06/2019
3.	Dr. Siddhartha Sengupta	Workshop on Teaching Learning in a Digital Age: MOOCS	TEQIP	BIT Mesra	BIT Mesra	13/09/2019
4.	Dr. R. Naresh Kumar	Digital Transformation in Teaching Learning Process (FDP)	-	IIT Bombay	Online	06-22/4/2020
5.	Dr. R. Naresh Kumar	FDP on Delivering Online course using Canvas LMS	-	BIT Mesra	Online	27/7-05/08/2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
6.	Dr. Tanushree Bhattacharya	National Conference on "Ground Water Management in Mining and Social Sectors"	Ranchi, CMPDIL, International Association of Hydrologist, Society of Geo Scientist	CMPDIL, Ranchi	CMPDIL, Ranchi	21/09/2020
7.	Dr. Tanushree Bhattacharya	Teaching Learning in a digital age: MOOCS workshop	-	BIT Mesra	Ranchi	13/09/2019
8.	Dr. Tanushree Bhattacharya	Excellence in pedagogy and quantitative research	-	BIT Mesra	Ranchi	26-30/08/2019
9.	Dr. Tanushree Bhattacharya	FDP MOOC course in pedagogy	Self	IIT Kharagpur	WB	09/2019
10.	Dr. Kirti Avishek	TESOL Specilization	Self	Arizona State University	Online	09/2019 – 11/2019
11.	Dr. Kirti Avishek	Corporate Sustainability	TEQIP	Bocconi University, Italy	Online	11/2019-12/2019
12.	Dr. Kirti Avishek	Oil and Gas Industry Operations	TEQIP	Duke University	Online	12/2019
13.	Dr. Kirti Avishek	Climate Science to Action	Self	World Bank	Online	04/2020-05/2020
14.	Dr. Neeta Kumari	Digital Transformation in Teaching-Learning Process	TEQIP	IIT Bombay	Online	06-22/04/2020
15.	Dr. Sukalyan Chakraborty	Digital Transformation in Teaching Learning Process (FDP)	-	IIT Bombay	Online	06-22/4/2020
16.	Dr.Neeta Kumari	8th Training Programme on Science and Technology for Rural Societies	DST	IIPA, Delhi	IIPA Delhi	25-29/11/2019
17.	Dr. Ashish Kumar Patnaik	2nd ASCE Conference on CRSIDE	TEQIP	ASCE	Kolkata	02-04/03/2020
18.	Mr. Vikky Masih	Short Course Numerical Solutions to Geotechnical Challenges	Self	MIDAS R&D Centre	Online, India	28/05/2020-12/06/2020
19.	Mr. Vikky Masih	Short Course Midas Civil Advanced Features	Self	MIDAS R&D Centre	Online, India	18/05/2020-22/05/2020
20.	Mr. Vikky Masih	Short Course Basic Conventional Bridges	Self	MIDAS R&D Centre	Online, India	11/05/2020-16/05/2020

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals

1. Yaduvanshi, A., Sinha, A. K., & Haldar, K. (2019). A century scale hydro-climatic variability and associated risk in Subarnarekha river basin of India. Modeling Earth Systems and Environment, 5(3), 937-949. Springer Nature.
2. Gautam, R. & Sinha, A.K. (2019). Estimation of Autocorrelation Function and Partial Autocorrelation Function of Evapotranspiration for Ranchi District, India, in Context of Time Series Modelling, International Journal of Scientific Research and Reviews, 8(4), 21-31. Centre of Scientific Innovation and Research Publication, Alwar, Rajasthan
3. Verma, M., Roy, I., & Sahoo, U. C. (2020). Design of Haul Roads in Open Cast Mines in India—A Mechanistic Design Approach. Journal of The Institution of Engineers (India): Series D, 1-17. DOI 10.1007/s40033-020-00229-y.
4. Shaikh, W. A., Alam, M. A., Alam, M. O., Chakraborty, S., Owens, G., Bhattacharya, T., & Mondal, N. K. (2020). Enhanced aqueous phase arsenic removal by iron nano bio-composite. Environmental Technology & Innovation, 100936. https://doi.org/10.1016/j.eti.2020.100936 2352-1864
5. Shaikh, W. A., Chakraborty, S., & Islam, R. U. (2019). Photocatalytic degradation of rhodamine B under UV irradiation using Shorea robusta leaf extract-mediated bio-synthesized silver nanoparticles. International Journal of Environmental Science and Technology, 1-14. https://doi.org/10.1007/s13762-019-02473-6
6. Mondal, A., Hajra, A., Shaikh, W. A., Chakraborty, S., & Mondal, N. K. (2019). Synthesis of silver nanoparticle with Colocasia esculenta (L.) stem and its larvicidal activity against Culex quinquefasciatus and Chironomus sp. Asian Pacific Journal of Tropical Biomedicine, 9(12), 510. doi: 10.4103/2221-1691.271724.
7. Prathap, A., & Chakraborty, S. (2019). Hydro chemical characterization and suitability analysis of groundwater for domestic and irrigation uses in open cast coal mining areas of Charhi and Kuju, Jharkhand, India. Groundwater for sustainable development, 9, 100244. https://doi.org/10.1016/j.gsd.2019.100244.
8. Prathap, A., & Chakraborty, S. (2020). Assessment of surface water quality around opencast coal mines for sustainable utilization potentials: a case study in Jharkhand, India. Environment, Development and Sustainability, 22(4), 3179-3205. DOI: 10.1007/s10668-019-00341-4.
9. Patnaik, A. K., Agarwal, L. A., Panda, M., & Bhuyan, P. K. (2020). Entry capacity modelling of signalized roundabouts under heterogeneous traffic conditions. Transportation letters, 12(2), 100-112. https://doi.org/10.1080/19427867.2018.1533160.
10. Patnaik, A. K., Patra, R., & Bhuyan, P. K. (2019). Comparison of Artificial Intelligence Based Roundabout Entry Capacity Models. International Journal of Intelligent Transportation Systems Research, 1-9. https://doi.org/10.1007/s13177-019-00207-z.
11. Kumari, N., Garg, S., Singhal, A., Kumar, M., Bhattacharya, M., Jha, P. K., ... & Thakur, I. S. (2019). Optimizing pretreatment of Leucaena leucocephala using artificial neural networks (ANNs). Bioresource Technology Reports, 7, 100289.
12. Singh, B. K. (2020). Protection of Bank of River for Very High Discharge of Flow. Journal of Water Resources and Pollution Studies (e-issn: 2581-5326), 5(1), 10–18. http://doi.org/10.5281/zenodo.3741878

13. Singh, B. K. (2019). Comparison of mean depth of flow obtained by maximum permissible velocity and Adam- Basforth Method. International Journal of Water Resource Engineering (ISSN: 2456 – 1606), 5(1), 13-18.

14. Singh, B. K. (2019). Determination of Mean Velocity of Flow Using Finite Difference Method. International Journal Water Resources Engineering (ISSN: 2456 -1606), 5(2), 46-49.

15. Singh, B. K. (2019). Determination of Real Root for the Equation Developed Between Mean Velocity of Flow and Mean Depth of Flow. Journal of Water Resources and Pollution Studies, 4(2), 1–4. http://doi.org/10.5281/zenodo.2900398

16. Singh B.K., Sengupta, S. (2019). Development of sustainable building blocks using alkali activated waste materials: A critical review. International Journal of Engineering Science And Computing, 9 (8), p. 23511 - 23515.

17. Chakraborty, S., Mohanty, P. K., Iqbal, J., & Kumar, R. N. (2020). Can electrocoagulation be an effective post-treatment option for SBR treated landfill leachate and municipal wastewater mixture? Journal of Water, Sanitation and Hygiene for Development, 10(1), 86-95.

18. Kumari, S. & Kumar, R. N. (2020). Electrocoagulation for COD, turbidity, ammonia and phosphate removal from municipal wastewater. Journal of Indian Chemical Society 97, 527-532.

19. Rajhans, P., Chand, G., Kisku, N., Panda, S. K., & Nayak, S. (2019). Proposed mix design method for producing sustainable self compacting heat cured recycled aggregate concrete and its microstructural investigation. Construction and Building Materials, 218, 568-581.

20. Rajhans, P., Kisku, N., Nayak, S., & Panda, S. K. (2020). Sustainable self compacting acid and sulphate resistance RAC by two stage mixing approaches. Advances in concrete construction, 9(1), 55-70.

21. Gupta, P. K., Rajhans, P., Panda, S. K., Nayak, S., & Das, S. K. (2020). Mix Design Method for Self-Compacting Recycled Aggregate Concrete and Its Microstructural Investigation by Considering Adhered Mortar in Aggregate. Journal of Materials in Civil Engineering, 32(3), 04019371.

22. Kisku, N., Rajhans, P., Panda, S. K., Pandey, V., & Nayak, S. (2020, April). Microstructural investigation of recycled aggregate concrete produced by adopting equal mortar volume method along with two stage mixing approach. In Structures (Vol. 24, pp. 742-753). Elsevier.

23. Kisku, N., Rajhans, P., Panda, S. K., Nayak, S., & Pandey, V. (2020). Development of durable concrete from C&D waste by adopting identical mortar volume method in conjunction with two-stage mixing procedure. Construction and Building Materials, 256, 119361.

24. Kiran, S., Lal, B. (2019). Comparing Artificial Neural Networks (ANN) and Regression Tree (CART) for Estimating Soil Shear Strength Parameters,Jour of Adv Research in Dynamical & Control Systems 11, 882-894

25. Akhoury, G., & Avishek, K. (2020). Global atmospheric changes versus the Indian rainfall variation. Arabian Journal of Geosciences, 13(13), 1-13. DOI: 10.1007/s12517-020-05478-5.

26. Dash, J. & Avishek, K et al. (2020). India's contribution to mitigating the impacts of climate change through vegetation management. Tropical Ecology. https://doi.org/10.1007/s42965-020-00075-9.

27. Suman, K., Avishek, K. (2020). Mapping Landfill Suitable Sites for Ranchi City Using GIS and Multi Criteria Making Approach. IJEP 40 (2): 140-149.

28. Roy, A., Bhattacharya, T. (2020). Air pollution tolerance, dust capturing capacity of native tropical trees for green belt development in Dhanbad and Bokaro city, Jharkhand, India. J. Indian Chem. Soc.,97, 1-9.

29. Shaikh, W. A., Alam, M. A., Alam, M. O., Chakraborty, S., Owens, G., Bhattacharya, T., & Mondal, N. K. (2020). Enhanced aqueous phase arsenic removal by iron nano bio-composite. Environmental Technology & Innovation, 100936., https://doi.org/10.1016/j.eti.2020.100936 2352-1864.

30. Roy, A., Bhattacharya, T., & Kumari, M. (2020). Air pollution tolerance, metal accumulation and dust capturing capacity of common tropical trees in commercial and industrial sites. Science of The Total Environment, 137622.

31. Bhattacharya, T., Narayan, T., Chakraborty, S., Konar, S., Singh, S. (2020). Statistics as a Technology to Predict the Seasonal Variation of Air Pollution. International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, 9(3), 1426-1431.

4.2 Publications in Proceedings:

1. Roy Indrajit (2019). Development of guidelines to predict distance between toe of the shovel-dumper dump and dragline dump. In proceedings of 8th Asian Mining Congress.

2. Patnaik, A.K., Mishra, N.B., Bhuyan, P.K. (2020). Modelling of Critical gap of Roundabouts under Heterogeneous Traffic Flow Conditions, In proceedings of 2nd ASCE Conference on CRSIDE, Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economics, 02-04 March, Kolkata, India (International Conference).

4.3 Chapter(s) in Edited Book

1. Balogun, A. H., Dhar, U., Finkelman, R. B., Chakraborty, S., Olanipekun, O., Shaikh, W. A., Stracher, G. B. (2019), Evidence of Human Health Impacts From Uncontrolled Coal Fires in Jharia, India in Coal and Peat Fires: A Global perspective. Elsevier. 343-355. ISBN: 978-012-84-9885-9.

2. Jha, Aditya Kumar, Chakraborty, S. (et al.) (2020), "Ecological Consequences of Genetically Modified Crops on Soil Biodiversity" in Ecological and Practical Applications for Sustainable Agriculture (Springer Nature Publisher). ISBN 978-981-15-3372-3.

3. Bhattacharya, T., Pandey, S. K., (2020), Suitability of Fly Ash Amendment in Soil for Productivity of Agricultural Crops in Ecological and Practical Applications for Sustainable Agriculture. Springer, Singapore First Online: 28 June 2020, pp.251-260, In: Bauddh K., Kumar S., Singh R., Korstad J. (eds), Online ISBN: 978-981-15-3372-3, Print ISBN: 978-981-15-3371-6.

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. Indrajit Roy	Guiding an intern from Germany	DAAD-RISE programme	International	2019/ 2 months

2.	Dr. Sukalyan Chakraborty	Recipient of Fulbright Specialist Program Grant	USEFI and World Learning Centre, USA	International	2019
3.	Dr. Kirti Avishek	Excellence and Recognised Reviewer	Elsevier	International	2020

5.2 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	UNICEF	Water Sanitation Hygiene	2020/1 year

SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Faculty Co-ordinator	Date / Duration
1.	IIM Ranchi construction site	Dr. Indrajit Roy	04.02.20
2.	Northern Coal field Limited (NCL) site visit	Dr. Indrajit Roy	04.08.19
3.	Gujrat Mineral Development Corporation site visit	Dr. Indrajit Roy	15.07.19
4.	Central Mine Planning and Design Institute (CMPDI) site visit	Dr. Indrajit Roy	05.04.19

6.2 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. Sudeshna Chakravarty	Professor, Head of the Department	No
2.	Dr. Bindhu Lal	Professor	No
3.	Dr. Anand Kumar Sinha	Professor	No
4.	Dr. Birendra Kumar Singh	Professor	No
5.	Dr. Siddhartha Sengupta	Associate Professor	No
6.	Dr. Indrajit Roy	Associate Professor	No
7.	Dr. Kirti Avishek	Assistant Professor	No
8.	Dr. Radhakrishnan Naresh Kumar	Assistant Professor	No
9.	Dr. Sukalyan Chakraborty	Assistant Professor	No
10.	Dr. Tanushree Bhattacharya	Assistant Professor	No
11.	Dr. Jawed Iqbal	Assistant Professor	No
12.	Dr. Neeta Kumari	Assistant Professor	No
13.	Mr. Mani Mohan	Assistant Professor	No
14.	Mr. Vikky Masih	Assistant Professor	Yes
15.	Mr. Indrajit Barua	Assistant Professor	Yes
16.	Dr. Puja Rajhans	Assistant Professor	No
17.	Dr. Ashish Kumar Patnaik	Assistant Professor	No

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Prof. (Dr.) Sudeshna Chakravarty	Head of Department	Chairman
2.	Dr. Anand Kr. Sinha	Professor	Internal
3.	Dr. Bindhu Lal	Professor	Internal
4.	Dr. Birendra Kr. Singh	Professor	Internal
5.	Dr. Indrajit Roy	Associate Professor	Internal
6.	Dr. Kirti Avishek	Assistant Professor	Internal
7.	Dr. D. J. Biswas	Professor (Architecture)	External
8.	Dr. C. Jeganathan	Professor and Head (Remote Sensing)	External
9.	Dr. S. K. Maity	Professor (ESE), IIT (ISM), Dhanbad	External
10.	Dr. Rajesh Kumar	Professor (CE), IIT(BHU), Varanasi	External
11.	Dr. Rakesh Pratap Singh	Associate Professor (CE), NIT Jamshedpur	External
12.	Mr. Sujib Chatterjee	Chief Manager (Civil), CMPDIL, Ranchi	External
13.	Mr. Rammohon Chatterjee	GM, CET, SAIL, Durgapur	External
14.	Mr. Suvendu Basu	Head, Redimix, Health and Safety, Lafarge, Kolkata	External
15.	Prof. (Dr.) Balram Singh	HOD, Patna Centre, BIT	External
16.	Prof. (Dr.) R. R. Sahay	Patna Centre, BIT	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

1. **Singh B.K.,** Sengupta, S. (2019). Development of sustainable building blocks using alkali activated waste materials: A critical review. International Journal of Engineering Science And Computing, 9 (8), p. 23511 - 23515.
2. **Kuldip Suman**, Kirti Avishek 2020. Mapping Landfill Suitable Sites for Ranchi City Using GIS and Multi Criteria Making Approach. IJEP 40 (2): 140-149.
3. **Pranav Dev Singh** and Kirti Avishek (2019) Evaluating the Role of Wetland in Varying Human Comfort Index. Proc. of 3rd International Conference on Clean Environment Summit. 19-21st August, 2019. (ISBN: 978-81-937346-6-7).
4. **Arpita Roy**, Tanushree Bhattacharya*. Air pollution tolerance, dust capturing capacity of native tropical trees for green belt development in Dhanbad and Bokaro city, Jharkhand, India". J. Indian Chem. Soc., Vol. 97, April 2020, pp. 1-9.
5. **Wasim Akram Shaikh, Md. Arsh Alam, Md. Osaid Alam**, Sukalyan Chakraborty, Gary Owens, Tanushree Bhattacharya, Naba Kumar Mondal, Enhanced aqueous phase arsenic removal by iron nano bio-composite, Environmental Technology & Innovation, 2020, https://doi.org/10.1016/j.eti.2020.100936 2352-1864/ 2020, Published online.
6. **Arpita Roy**, Tanushree Bhattacharya*, **Mala Kumari**, Air pollution tolerance, metal accumulation and dust capturing capacity of common tropical trees in commercial and industrial sites, Science of The Total Environment, Vol. 722, 137622-137648, 2020.
7. Tanushree Bhattacharya, **Tripta Narayan,** Soubhik Chakraborty, Swapan Konar, Shilpi Singh. Statistics as a Technology to Predict the Seasonal Variation of Air Pollution. International

Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-9 Issue-3, January 2020.

8. **Akhoury, G**., & Avishek, K. (2020). Global atmospheric changes versus the Indian rainfall variation. Arabian Journal of Geosciences, 13(13), 1-13. DOI: 10.1007/s12517-020-05478-5.

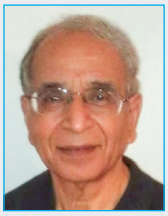
7.2 Achievements of Students

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
1.	Aditya Kr Jha	"Best Paper Award" in the 1st International Conference on Water Security and Sustainability "Down To Earth 2019"	Department of Civil Engineering, Sikkim Manipal Institute of Technology	13th to 14th December 2019
2.	Aditya Kr Jha	2nd Prize in Poster presentation competition held in 1st Research Scholar's Colloquium	BIT, Mesra	1st and 2nd September 2019
3.	Dipti Thakur	2nd Prize in Debate competition in National Science Day celebration	BIT, Mesra	28th Feb 2020

7.3 Distinguished Visitors from Industry/Academia/Research organizations

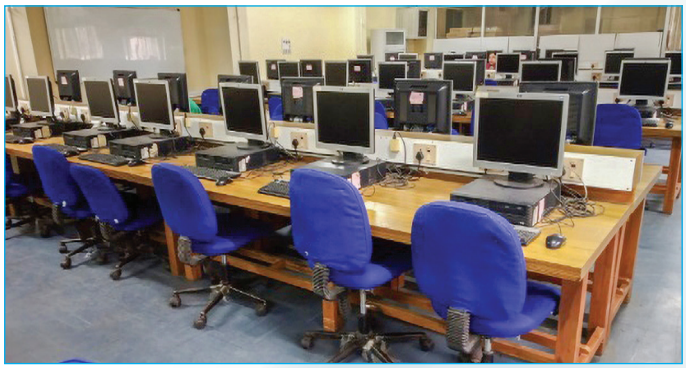
Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Prof. Robert Finkelman, University of Texas at Dallas, USA	5th December 2019	
2.	Somnath Mukherjee, Jindal Steel limited	27.01.20	
3.	Susmit Roy, MTI SAIL	06.03.20 & 16.03.20	
4.	Prof. A B Roy, FNA, FASc Retd as Emiritus Prof. of Presendency Univ. Kolkata	26.08.19	 

7.4 List of Distinguished Alumni

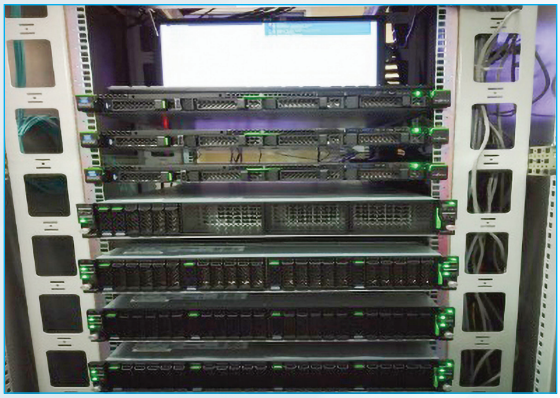
Sr. No.	Name, Batch and Affiliation	Short Description
1.	**Ms. Dorji Choden** BE, Civil Engg Batch of 1984, Politician, Bhutan's Works and Human Settlement Ministry	 Minister Aum Dorji Choden (born 5 December 1960) is a Bhutanese politician. She was appointed minister of Bhutan's Works and Human Settlement Ministry in 2013, making her the first woman to serve as a minister in Bhutan.
2.	**Dr. Niraj Verma** BE, Civil Engg. Batch of 1980 L. Douglas Wilder School of Government & Public Affairs.	 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.
3.	**Mr. Sharad Jaipuriar** BE, Civil Engg. Batch of 1980, MECON Limited	 Retired General Manager, I/C Civil and Architecture, MECON Limited.
4.	**Dr. B. K. Rath** Bsc, Civil Engg. Batch of 1966 Retired Director, NIT Rourkela	 Retired Director, NIT Rourkela
5.	**Mr. Surinder Chadha** Bsc, Civil Engg. Batch of 1963, MetLife	 Senior Consultant, MetLife

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SECTION 1 DEPARTMENT 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"	Dr. Subrajeet Mohapatra (PI) Dr. Vandana Bhattacharjee (CO-PI)	CSRI, DST	File No. DST/ CSRI/2017/ 400 (G)	Rs. 22,54,800/-	2022
2.	Automated vegetation stress detection from very high resolution multi-temporal spectral data to establish relationship using Artficial Intelligence	Dr. Vandana Bhattacharjee (PI) Dr. Abhijeet Mustafi (CO-PI)	Sky Map Global (SMG) Pvt. Ltd., Singapore	-	Rs. 7,50,000/-	May 2020

2.2 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 Basic Natural Language Processing Tools and Resources for Maithili	Sujan Kumar Saha	SERB	02-03-2017	Rs. 17,98,000/-	15/03/2020

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 (dd.mm.year)
1.	Excellence in Pedagogy and Quantitative Research	S. K. Sahana (Co-Convenor)	TEQIP-III (BIT Mesra, Ranchi)	26th August to 31st August 2019

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.	Amritanjali	Training Programme on Science & Technology for Rural Societies	BIT Mesra	IIPA, New Delhi	New Delhi	Nov 25-29, 2019
2.	Itu Snigdh	ICETSG4.0	TEQIP	BIT Mesra	BIT Mesra	5-7 Dec,2019
3.	Itu Snigdh	5G Mobile Communication Networks (5GMCN)"	-	BIT Mesra	BIT Mesra	December 9-13, 2019.
4.	Kalyan Samanta	Data Analytics with R	TEQIP	Industrial Engg Dept, IIT Kharagpur	IIT Kharagpur	20-22 November 2019
5.	Narayan Sharma	TEQIP Phase - III : Faculty Training on 'Robotics & Automation' at IIT Madras	TEQIP	IIT Madras	IIT Madras, Chennai, Tamilnadu	15th FEb 2020 to 28th FEB 2020
6.	Niraj Kumar Singh	Faculty Development Program for Student Induction (FDP-SI)	-	AICTE	BIT Mesra	13-15 December, 2019
7.	K. S. Patnaik	Online Mobile App Development	Mad Blocks Technologies PvT Ltd	RIT IEEE Branch,Vizag	Hyderabad	28 July - 1st Aug,2020
8.	K. S. Patnaik	MATLAB & Its Applications in AI and ML	E&ICT	NIT	Patna	19-26 May, 2020
9.	K. S. Patnaik	Machine learning Applications in Software Engineering	E&ICT	NIT	Warrangle	11-16 June, 2019
10.	S. K. Sahana	Emerging Trends in Computer Science & Application (ETCSA-2020)	Department of Computer Sc., Belda College	IEEE Computational Intelligence Society	Kolkata	28th of July 2020
11.	S. K. Sahana	An industrial automation approach in Software Engineering	Dept. of IT	Oriental College of Technology	Bhopal	5th to 7th June,2020

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals : (International/National)

1. Nandini Kumari, Shamama Anwar, Vandana Bhattacharjee, Correlation and Relief Attribute Rank-based Feature Selection Methods for Detection of Alcoholic Disorder Using Electroencephalogram Signals, IETE Journal of Research, 1-13, June 2020 **[SCIE Indexed].**
2. Vandana Singh, V. Bhattacharjee, C. Jeganathan, Nidhi Bhattacherjee, Land Cover Classification using Machine Learning Techniques – A Survey, International Journal of Engineering Research & Technology, Vol. 9, Issue 6, June 2020.
3. Nidhi Bhattacherjee, Debjani Mustafi, V. Bhattacharjee, A Big Data Architecture for Healthcare, International Journal of Engineering Sciences & Research Technology, Vol. 9, Issue 4, April 2020.
4. Snigdh, Itu, and Nisha Gupta. "Enhancing reliability by adoptive graph traversals for backbone-assisted communication in wireless sensor networks." International Journal of Sensor Networks 30, no. 1 (2019): 13-23.
5. Singh N K, Chakraborty S, & Mallick D K (2019). Complexity Verification through design and analysis of computer experiments. International Journal of Computational Complexity and Intelligent Algorithms, Vol 1(2), 178-195.
6. Ahmad AJ, Priyadarshini S., "Design and development of a friendly user interface for building social network traceability system, Soc. Netw. Anal. Min. 10, 59 (2020).
7. Aamir Junaid Ahmed, Sabina Priyadarshini, Searching social networking sites using semantic web and natural language processing, International Journal of Engineering, Applied and Management Sciences Paradigms (IJEAM), Volume 54 Issue 3 June 2019 034 ISSN 2320-6608.
8. Aamir Junaid, Priyadarshini Sabina, Literature Review: Semantic Web tools and technologies for creating and effective searching method based on the data available in social networking sites Ahmad International Journal of Advance Research, Ideas and Innovations in Technology Vol 5, issue 3 2019.
9. Kumari, R., Nigam, A. & Pushkar, S. Machine learning technique for early detection of Alzheimer's disease. Microsyst Technol (2020). https://doi.org/10.1007/s00542-020-04888-5.
10. Sandip Kumar Singh Modak, Vijay Kumar Jha. "Multibiometric Fusion strategy and its Applications: A Review". Information Fusion. Volume 49, September 2019, Pages 174-204. SCI Indexed.
11. Pratibha Jha, Bhaskar Karn "Knowledge Managements' Relevance in Supply Chain Management Process of Indian E- Commerce Companies" ISSN: 2277-3878 , International Journal of Recent Technology and Engineering (IJRTE), Vol. -8 , Issue 3 , September 2019. pp.1797 -1805.
12. Mustafi D., Mustafi A., Sahoo G., "A novel approach to text clustering using genetic algorithm based on the nearest neighbour heuristic", International Journal of Computers & Applications, Taylor and Francis, 2019.
13. K.Sridhar Patnaik,Itu Snigdh,"Architectural Modeling of Cyber Physical Systems using UML", International Journal of Cyber Physical Systems, pp.19-37, Vol.1, Issue.2, July-Dec-2019, IGI Global.
14. Pooja Jha, K.Sridhar Patnaik," Relative risk proneness in phases of software development:

metric based approach with Cox model" International Journal of System Assurance Engineering and Management, https://doi.org/10.1007/s13198-019-00904-8, 0976-4348, Spinger. ESCI/SCOPUS, Oct-23, 2019. IF-1.02.

15. R.Mukherjee, K.S Patnaik," Prioritizing JUnit Test Cases Without Coverage Information: An Optimization Heuristics Based Approach",IEEEAccess, SCIE/Scopus, Vol.9, pp-78092-78107,2019, DOI: 10.1109/ACCESS.2019.2922387. June, 2019.IF-4.098.
16. H.P. Patra, and K. Rajnish. "A New High-Performance Empirical Model for software Cost Estimation", International Journal of Computer Added Engineering and Technology, Vol.11, No 4/5, 2019, Inderscience Publisher, Scopus.
17. Puja Kumari and K. Rajnish, "Cloud Cost Management: An Empirical View", IJARIIT, Vol.5, Issue: 3, pp.486-490, 2019.
18. Dhawaleswar Rao CH, Sujan Kumar Saha, Automatic Multiple Choice Question Generation from Text: A Survey. IEEE Transaction on Learning Technologies. Vol. 13, Issue 1, pp. 14-25. ISSN: 1939-1382 DOI: 10.1109/TLT.2018.2889100 [SCI 2.714 in JCR 2020], 2020.
19. Sujan Kumar Saha and Dhawaleswar Rao CH, Development of a Practical System for Computerized Evaluation of Descriptive Answers of Middle School Level Students. Interactive Learning Environments, Taylor & Francis. DOI: 10.1080/10494820.2019.1651743. [IF - 1.938], 2019.
20. Dhawaleswar Rao CH, Sujan Kumar Saha, A Computer Assisted Learning Platform for Efficient Biology Learning of Secondary School Level Students. Journal of Educational Computing Research. Special Issue on "Augmented & Virtual Reality in Education: Immersive Learning Research". Volume 57, Number 7, Pages 1671-1694. [SCI 2.18 JCR 2020], 2019.
21. Amit Prakash, Sujan Kumar Saha, A Study on Use of the Web for Automatic Answering of Remedy Finding Questions of Common Users. Technology and Health Care, IOS Press. Vol. 27, No. 1, pp. 23-35, published 24 January 2019, ISSN: 0928-7329. [SCI 0.787 in JCR 2019], 2019.
22. 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, 2020.
23. Rakesh Patra and Sujan Kumar Saha, Utilizing External Corpora Through Kernel Function: Application in Biomedical Named Entity Recognition. Progress in Artificial Intelligence Springer, DOI: 10.1007/s13748-020-00208-0, 2020.
24. Sujan Kumar Saha and Rushali Gupta, An Experimental Study on Adopting Computer-Assisted Assessment in Evaluation of Handwritten Answer Books. Education and Information Technology Springer. DOI: 10.1007/s10639-020-10192-6, 2020.
25. Ankur Priyadarshi, Sujan Kumar Saha. (2020). Web Information Extraction for Finding Remedy Based on a Patient-Authored Text: A Study on Homeopathy. Network Modeling Analysis in Health Informatics and Bioinformatics, Springer. Volume 9, Article number: 9 (2020). DOI:10.1007/ s13721-019-0216-2, 2020.
26. Sujan Kumar Saha, Amit Prakash, Mukta Majumder, "Similar Query was Answered Earlier": Processing of Patient Authored Text for Retrieving Relevant Contents from Health Discussion Forum. Health Information Science and Systems, Springer, 7: 4, DOI: 10.1007/s13755-019-0067-3 [SCOPUS, ESCI], 2019.
27. Dhawaleswar Rao CH, Sujan Kumar Saha, "RemedialTutor: A Blended Learning Platform for Weak Students and Study its Efficiency in Social Science Learning of Middle School Students

in India". Special issue on "Blended Learning in South Asia", Education and Information Technologies, Springer, Volume 24, Issue 3, pp 1925–1941. ISSN: 1360-2357 (Print) 1573-7608 (Online). [SCOPUS, ESCI], 2019.

28. Rakesh Patra, Sujan Kumar Saha, A Hybrid Approach for Automatic Generation of Named Entity Distractors for Multiple Choice Questions. Education and Information Technologies, Springer. ISSN: 1360-2357 (Print) 1573-7608 (Online). Volume 24, Issue 2, pp 973–993. [SCOPUS, ESCI], 2019.

29. Rakesh Patra, Sujan Kumar Saha, A Novel Word Clustering and Cluster Merging Technique for Named Entity Recognition. Journal of Intelligent Systems. Vol. 28, Issue 1, pages 15-30. ISSN 2191-026X [Web of Science, SCOPUS], 2019.

30. Shruti Garg, Gaurav Kumar, "CONVOLUTION NEURAL NETWORK FOR SPEECH EMOTION RECOGNITION", International Journal of Creative Research Thoughts (IJCRT), ISSN:2320-2882, Volume.8, Issue 6, pp.514-518, June 2020, Available at :http://www.ijcrt.org/papers/IJCRT2006076.pdf.

31. Puja Gupta, Shruti Garg, Breast Cancer Prediction using varying Parameters of Machine Learning Models, published in Procedia Computer Science journal, Vol.171C, May 2020, May 2020, pp.587-595, Elsevier, (Scopus) ISSN: 1877-0509.

32. Prince Kumar, Shruti Garg, Ashwani Garg, "Assessment of Anxiety, Depression and Stress using Machine Learning Models," published in Procedia Computer Science journal, Vol. 171C, May 2020, pp. 2073-2083, Elsevier. (Scopus) ISSN: 1877-0509 https://doi.org/10.1016/j.procs.2020.04.213.

33. Anupriya, Shruti Garg, Neha Prerna Tigga, Predicting Anxiety, Depression and Stress in Modern Life using Machine Learning Algorithms published in Procedia Computer Science journal, Vol. 167, Apr 2020, pp. 1258-1267, Elsevier. (Scopus) ISSN: 1877-0509 https://doi.org/10.1016/j.procs.2020.03.442.

34. Neha Prerna Tigga, Shruti Garg, Prediction of Type 2 Diabetes using Machine Learning, Classification Methods published in Procedia Computer Science journal, Vol. 167, Apr 2020, pp. 706-716, Elsevier (Scopus), ISSN: 1877-0509.

35. Neeta Kumari, Shruti Garg, Anjali Singhal, Madan Kumar, Mallika Bhattacharya, Pawan Kumar Jha, Devendra Kumar Chauhan, Indu Shekhar Thakur, Optimizing pretreatment of *Leucaena leucocephala* using artificial neural networks (ANNs) published in Bioresource Technology Reports journal, 7, 2019, Elsevier.(100289), ISSN: 2589-014X. (Scopus), 2019.

36. 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].

37. A.Nigam, V. K. Singh, "Efficient Retrieval of Trademark Images from Large Database", International Journal of Intellectual Property Management, In Press. [Non paid SCOPUS], 2020.

38. A.Gupta and A. Nigam, Development of general mathematical model for calculation of solar radiation on moving surfaces, Vigyan Garima Sindhu (CSTT, MHRD), Vol. 112, Jan 2020, pp. 78-86, ISSN: 2320-7736

39. R. Kumari, A.Nigam and S. Pushkar, Machine learning technique for early detection of Alzheimer's disease. Microsyst Technol. https://doi.org/10.1007/s00542-020-04888-5 [SCI impact factor 1.73], 2020.

40. D. Patil, A.Nigam, S.Mohapatra, "Automation of geometric feature computation through image processing approach for single-layer laser deposition process", International Journal of Computer Integrated Manufacturing, In Press. [SCIE, impact factor 2.86], 2020.

41. P. Kumari, S.K.Sahana, "Comprehensive Survey and Comparative Experimental Performance Gain of AODV, DSR and OLSR in MANETs", International Journal of Engineering and Advanced Technology (IJEAT), Volume-8 Issue-5,pp 1036-1045, ISSN: 2249-8958, https://www.ijeat.org/wp content/uploads/papers/v8i5/E7083068519.pdf (SCOPUS), 2019.

42. Ankita, S.K.Sahana, Evolutionary based hybrid GA for solving multi-objective grid scheduling problem, Microsystem Technologies, Springer, ISSN: 0946-7076 (Print) 1432-1858 (Online) https://doi.org/10.1007/s00542-019-04673-z (SCI) (IF 1.513), 2019.

43. A. Priya and S. K. Sahana, "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: 4.098**),** 2020.

44. A. Priya and S. K. Sahana, 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), 2020.

45. B. K. Sarkar, Hybrid model for prediction of heart disease. - Soft Computing (Springer, ISSN:1432-764324, SCI, I.F. - 3.050), 24(3): 1903-1925, DOI 10.1007/s00500-019-04022-2, 2020.

46. B. K. Sarkar, A Two-Step Knowledge Extraction Framework for Improving Disease Diagnosis .- The Computer Journal (OUP, ISSN: 1460-2067, SCIE, I.F. – 1.077), 63 (3): 364-382, 2020.

47. R. Raja, I.Mukherjee and B.K.Sarkar, A Systematic Review of Healthcare Big Data. - Scientific Programming (Hindawi, ISSN: 1875-919X, SCIE, I.F. – 0.963), Volume 2020, Article ID 5471849,15 pages, https://doi.org/10.1155/2020/5471849,2020.

4.2 Publications in Proceedings: (International/National)

1. Mansi Gupta, Kumar Rajnish, V. Bhattacharjee, Predicting software cost through Entity-Relationship diagrams: An empirical view, 5th International Conference on Nanoelectronics, Circuits & Communication Systems (NCCS-2019), BSNL Training Center, Ranchi, November 2019.

2. Ritesh Jha, V. Bhattacharjee, Abhijit Mustafi "Classification of Big data using Spark Framework" 5th International Conference on Microelectronics, Circuits & Communication Systems (MCCS-2019) ARTTC BSNL Ranchi. (May 2019).

3. Ritesh Jha, V. Bhattacharjee, Abhijit mustafi "K-NN classification for Large dataset in Spark Framework" 5th International Conference on Nanoelectronics, Circuits & Communication Systems (NCCS-2019) ARTTC BSNL Ranchi. (November 2019).

4. N. Verma, S. Sharma, K. Sinha, P. Paul , and Amritanjali (2020),Selection on Traditional Cryptographic Algorithm for Real-Time Video Transmission and Storage: A Study, Lecture Notes in Electrical Engineering (Proceedings of NCCS 2108), pp. 229–238, 2020. DOI: 10.1007/978-981-15-2854-5_21.

5. R. Chaddha, A. Kumar, K. Sinha, P. Paul, and Amritanjali (2020), Selection on Various Traditional Image Encryption Techniques: A Study, Lecture Notes in Electrical Engineering (Proceedings of NCCS 2108), pp. 219–228, 2020. DOI: 10.1007/978-981-15-2854-5_20.

6. Anvita, Snigdh, Itu. "A Multi-Level Type II Fuzzy Logic based Prediction of Connectivity in

a Wireless Sensor Network." In 2020 International Conference on Inventive Computation Technologies (ICICT), pp. 597-602. IEEE, Feb. 2020. IEEE ISBN, XPLORE COMPLIANT- 978-1-7281-4685-0.

7. Sakshi Gupta, Itu Snigdh, Analyzing impacts of energy dissipation on scalable IoT architectures for smart grid applications, ICETSGAI4.0, 5-7 Dec, 2019.
8. Aamir Junaid Ahmed, Sabina Priyadarshini, Use of Semantic Web and Technologies for creating a searching technique in Social Networking, Proceedings of the Universal Academic Cluster International July Conference in Bangkok, 2019.
9. Arjun Besra, Amir Junaid Ahmad, Sabina Priyadarshini,"missing person tracking system", 5th international conference on microelectronics computingand communication system, MCCS 2020.
10. Rajendrani Mukherjee, K.Sridhar Patnaik,"Introducing a Fuzzy Model for Cost Cognizant Software Test Case Prioritization "In Proceedings of IEEE International Conference,TENCON-2019,Region 10,Page 502-507,17-19 Oct,2019,Kochi,Kerala,India.
11. Ankur Priyadarshi and Sujan Kumar Saha. 2019. A study on the Importance of Linguistic Suffixes in Maithili POS Tagger Development. MIKE 2019: Seventh International Conference on Mining Intelligence and Knowledge Exploration. 19-22 December, NIT Goa.
12. Ankur Priyadarshi and Sujan Kumar Saha. 2019. A Hybrid Approach to Develop the First Stemmer in Maithili. FIRE 2019: 11th meeting of the Forum for Information Retrieval Evaluation (FIRE, 19) 12-15 December, ISI Kolkata.
13. U. K. Mukhopadhyay, R. N. Sharma, S. Anwar & A. D. Dutta (2019), "Correlating Thermal Anomaly with Earthquake Occurrences Using Remote Sensing". In International Conference on Advanced Machine Learning Technologies and Applications (pp. 863-875). Springer, Cham.
14. Puja Gupta, Shruti Garg, Ashwani Garg, "Convolution Neural Network for Lung Cancer" presented in International Conference on Recent Trends in Artificial Intelligence, IOT, Smart Cities and Applications (ICAISC 2020), 28-29 Feb. 2020 held at Chaibasa Engineering College, Jharkhand -833201, India sponsored by TEQIP-III.https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3562893
15. Shruti Garg, Gaurav Kumar and Ashwani Garg, "Convolution Neural Network for Speech Emotion Recognition," presented in 2ND International Conference of Energy Systems, Drives and Automations (ESDA2019), 28-29 Dec. 2019 held at Kolkata, West Bengal, India organized by Applied Computer Technology, Kolkata.
16. Puja Gupta and Shruti Garg, "Convolution Neural Network for Skin Cancer", presented at 2ND International Conference of Energy Systems, Drives and Automations (ESDA2019), 28-29 Dec. 2019 held at Kolkata, West Bengal, India organized by Applied Computer Technology, Kolkata.
17. Quazi Warisha Ahmed and Shruti Garg, "A cloud computing based advanced encryption standards," in proceedings of 3rd international conference on IOT in Social, Mobile, Analytics and cloud(ISMAC 2019), 12-14 Dec. 2019 held at SCAD Institute of Technology, Palladam, Coimbatore, pp. 89-95(IEEE).
18. N. Priyadarshi, A.K.Bhoi, S.K.Sahana, P.K.Mallick, P.Chakrabarti, 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 439-447 ISBN: 978-981-15-1450-0, DOI: https://doi.org/10.1007/978-981-15-1451-7_47, 2020.

4.3 Book:

1. Sahana, S.K., and Bhattacharjee, V., 2019, "Book Title: Advances in Computational

Intelligence -Proceedings of Second International Conference on Computational Intelligence 2018", Springer, Singapore, Series: 988, Series ISSN: 2194-5357, ISBN: 978-981-13-8221-5 (Print), 978-981-13-8222-2 (E-book), DOI: https://doi.org/10.1007/978-981-13-8222 https://link.springer.com/book/10.1007/978-981-13-8222-2 .(Edited Book).

1. Sarkar B.K. and Kumar A. (2019): Introduction to Theory of Computation.- University Press, Hyderabad, India, ISBN No. - 978-93-86235-75-6.

4.3.1 Chapter(s) in Edited Book

1. Ritesh Jha, Vandana Bhattacharjee, Vinit Singh and I. Mukherjee, K-NN Classification for Large Dataset in Hadoop Framework, © Springer Nature Singapore Pte Ltd. 2020 V. Nath and J. K. Mandal (eds.), Nanoelectronics, Circuits and Communication Systems, Lecture Notes in Electrical Engineering 642, https://doi.org/10.1007/978-981-15-2854-5_43
2. Ritesh Jha, Vandana Bhattacharjee and Abhijit Mustafi , IoT in Healthcare: A Big Data Perspective, © Springer Nature Switzerland AG 2020, P. K. Pattnaik et al. (eds.), Smart Healthcare Analytics in IoT Enabled Environment, Intelligent Systems Reference Library 178, https://doi.org/10.1007/978-3-030-37551-5_13
3. S. Roy, P. Pranav, Vandana Bhattacharjee, Securing the Internet of Things: Current and Future State of the Art, © Springer Nature Switzerland AG 2020, P. K. Pattnaik et al. (eds.), Smart Healthcare Analytics in IoT Enabled Environment, Intelligent Systems Reference Library 178, https://doi.org/10.1007/978-3-030-37551-5_15.
4. K. Sinha, P. Paul, and Amritanjali(2019), Network Security Approaches in Distributed Environment, In Advances in Computational Intelligence and Robotics, IGI Global, pp. 174–209, 2019. DOI:10.4018/978-1-5225-7955-7.ch008.
5. Snigdh, Itu.(2019), "Deployment Strategies in Wireless Sensor Networks." In Computational Intelligence in Sensor Networks, pp. 123-140. Springer, Berlin, Heidelberg.
6. Patnaik, K. Sridhar, and Itu Snigdh. (2019), "Modelling and Designing of IoT Systems Using UML Diagrams: An Introduction." In Integrating the Internet of Things Into Software Engineering Practices, pp. 36-61. IGI Global, ISBN13: 9781522577904
7. Mayank Oraon, Kishan Majhi, Ravi, Sabina Priyadarshini, "A New Proposed TCP for Faster Transmission of Packets" Lect. Notes Electrical Eng., Vol. 692, Vijay Nath and J.K. Mandal (Eds): Nanoelectronics, Circuits and Communication Systems, 978-981-15-7485-6, 499559_1_En, (Chapter 16)
8. Rashmi Kumari and Shashank Pushkar, "Analysis of Biomedical Image for Alzheimer's Disease Detection", ISBN :9781799800668, DOI: 10.4018/978-1-7998-0066-8.ch012
9. Pooja Jha,K.Sridhar Patnaik,"Self Driving Cars:Role of Machine Learning, pp 490-507, Handbook of Reserach on Emerging Trends and Applications of Machine Learning, IGI-Global, Dec-2019.
10. A.Priya, S.Garg, 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, 2020.
11. A.Priya & S.K.Sahana, 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, 2020.
12. A. Priya & S.K. Sahana, 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:10.4018/978-1-5225-9806-0.ch009, 2020.

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. K. S. Patnaik	Believer award	NPTEL	Certificate of appreciation	Jul-Dec,2019
2.	Dr. K. S. Patnaik	Dicipline award	NPTEL	Certificate of appreciation	Jul-Dec,2019
3.	Dr. K. S. Patnaik	Silver Medal Award	NPTEL	Onine Certification Course	July-Oct,2019

SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Co-ordinator (if any)	Date / Duration
1.	Guest Lecture University of South Alabama, USA	-	-	17/02/2020
2.	Guest Lecture LDRA Saghire Tech.	-	Dr. K.S. Patnilk	25/02/2020
3.	Google's Explore ML Program: Intro to Deep Learning Workshop	Kiran Muthigi	Sumit Srivastava	24th Jan - 5.15 pm - 8.00pm 25th Jan - 9.00 am - 5.00pm 26th Jan - 9.00 am - 5.00pm
4.	Competitive Programming Workshop	Kevin Mathew T	Sumit Srivastava	Rooms 236 & 237, Main Building 7th - 9th February 2020.
5.	Overnight Coding Contest in association with CodeChef	Kevin Mathew T	Sumit Srivastava	08th February 2020
6.	CNC (Code n Conquer) – Coding Contests	Kevin Mathew T	Sumit Srivastava	27th March 2020, 5th April 2020 22nd April 2020
7.	Coder of the Month	Kevin Mathew T	Sumit Srivastava	May '20 – August '20
8.	Webinar on 'Internship Interview Process Experiences'	Kevin Mathew T	Sumit Srivastava	Date: 26th July 2020 Time: 5 PM – 6 PM
9.	Placement Practice Contest	Kevin Mathew T	Sumit Srivastava	Date: 26th July 2020 Contest Time: 9PM – 12PM Contest Link: www.hackerrank.com/placement-practice-1595232881
10.	Guest Lecture by IBM	-	-	13/08/2019
11.	Guest Lecture Trumindus Soft. Sys.	-	-	11/10/2019

6.2 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored (Yes / No)
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. B. K. Sarkar	Assistant Professor	No
11.	Dr. I. Mukherjee	Assistant Professor	No
12.	Dr. (Mrs.) Itu Snigdh	Assistant Professor	No
13.	Prof. Ritesh Jha	Assistant Professor	No
14.	Prof. I. D. Ram	Assistant Professor	No
15.	Dr. Anup Kumar Keshri	Assistant Professor	No
16.	Dr. K. K. Senapati	Assistant Professor	No
17.	Dr. (Mrs.) Amritanjali	Assistant Professor	No
18.	Dr. (Mrs.) Sanchita Paul	Assistant Professor	No
19.	Dr. (Mrs.) Shruti Garg	Assistant Professor	No
20.	Dr. Sudip Kumar Sahana	Assistant Professor	No
21.	Prof. B. K. Chanda	Assistant Professor	No
22.	Dr. S. Pushkar	Assistant Professor	No
23.	Dr. Sujan Kumar Saha	Associate Professor	No
24.	Dr. S. Priyadarshini	Assistant Professor	No
25.	Dr. (Mrs.) Shamama Anwar	Assistant Professor	No
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. Mrs. D. Mustafi	Associate Lecturer	No
32.	Mr. Amit Prakash	TCRF	No
33.	Kshitiza Vasudeva	Assistant Professor	Yes
34.	Kumar Gaurav	Assistant Professor	Yes
35.	Radhamadhab Dalai	Assistant Professor	Yes
36.	Alok Kumar	Assistant Professor	Yes
37.	Surya Narayan Mahapatra	Assistant Professor	Yes
38.	Narayan Sharma	Assistant Professor	Yes
39.	Arunangshu Pal	Assistant Professor	Yes

Sr. No.	Name	Designation	TEQIP Sponsored (Yes / No)
40.	Satya Prakash Patel	Assistant Professor	Yes
41.	Ashish Kumar	Assistant Professor	Yes
42.	Shishir Singh Chauhan	Assistant Professor	Yes
43.	Najima Begum	Assistant Professor	Yes
44.	Rashmi Rathi Upadhyay	Assistant Professor	Yes
45.	Mayur.V. Shrirame	Assistant Professor	Yes
46.	Rosamma K.S	Assistant Professor	Yes
47.	Deo Dutta Ishar	Assistant Professor	Yes
48.	Dhananjay Kumar	Assistant Professor	Yes
49.	Gaurav Kumar	Assistant Professor	Yes

6.3 Board of Studies

Sr. No.	Name of the Member	Designation (Kindly mention Ex-Officio, where applicable)	Role (Chairman/ Internal or External Member)
1.	Dr. V.Bhattcaherjee	Professor & HOD	Chairman
2.	Dr. S. Dutta	Professor	Internal Member
3.	Dr. K. S. Patnaik	Associate Professor	Internal Member
4.	Dr A. Mustafi	Associate Professor	Internal Member
5.	Dr. S. K. Saha	Associate Professor	Internal Member
6.	Dr. S. Puskar	Assistant Professor	Internal Member
7.	Dr. S. Anwar	Assistant Professor	Internal Member
8.	Dr. A. K. Sinha	Professor	Internal Member (Civil and Environmental Engg)
9.	Dr. Shradha Shivani	Professor	Internal Member (Management)
10.	Mr. Amitabh Bhattacharjee	Chief General Manager (IT Services)	External Member (Mecon, Ranchi)
11.	Dr. Annapa B	Professor	External Member NITK Surathkal
12.	Dr. Asif Ekba1	Associate Professor	External Member IIT Patna
13.	Mr. Supparna Kanti Das	Scientist	External Member (DRDO Kolkata)
14.	Mr. D.S. Verma	Scientist	External Member (JAPIT Ranchi)
15.	Dr. Ujjwal Maulik	Professor	External Member (Jadavpur University)
16.	Dr. Punam Bedi	Professor	External Member (University of Delhi)

SECTION 7 OTHER INFORMATION

7.1 Publication by students, if any

1. **Ahmad AJ,** Priyadarshini S., "Design and development of a friendly user interface for building social network traceability system, Soc. Netw. Anal. Min. 10, 59 (2020).
2. **Aamir Junaid Ahmed**, Sabina Priyadarshini, Searching social networking sites using semantic web and natural language processing, International Journal of Engineering, Applied and Management Sciences Paradigms (IJEAM), Volume 54 Issue 3 June 2019 034 ISSN 2320-6608
3. **Aamir Junaid**, Priyadarshini Sabina, Literature Review: Semantic Web tools and technologies for creating and effective searching method based on the data available in social networking sites Ahmad International Journal of Advance Research, Ideas and Innovations in Technology Vol 5, issue 3 2019.
4. **Aamir Junaid Ahmed**, Sabina Priyadarshini, Use of Semantic Web and Technologies for creating a searching technique in Social Networking, Proceedings of the Universal Academic Cluster International July Conference in Bangkok, 2019
5. **Arjun Besra**, Amir Junaid Ahmad, Sabina Priyadarshini,"missing person tracking system", 5th international conference on microelectronics computingand communication system, MCCS 2020.
6. **Mayank Oraon**, Kishan Majhi, Ravi, Sabina Priyadarshini, "A New Proposed TCP for Faster Transmission of Packets" Lect. Notes Electrical Eng., Vol. 692, Vijay Nath and J.K. Mandal (Eds): Nanoelectronics, Circuits and Communication Systems, 978-981-15-7485-6, 499559_1_En, (Chapter 16).
7. **K. Sinha**, P. Paul, and Amritanjali(2019), Network Security Approaches in Distributed Environment, In Advances in Computational Intelligence and Robotics, IGI Global, pp. 174–209, 2019. DOI:10.4018/978-1-5225-7955-7.ch008.
8. **Mansi Gupta**, Kumar Rajnish, V. Bhattacharjee, Predicting software cost through Entity-Relationship diagrams: An empirical view, 5th International Conference on Nanoelectronics, Circuits & Communication Systems (NCCS-2019), BSNL Training Center, Ranchi, November 2019
9. **S. Roy**, P. Pranav, Vandana Bhattacharjee , Securing the Internet of Things: Current and Future State of the Art, © Springer Nature Switzerland AG 2020, P. K. Pattnaik et al. (eds.), Smart Healthcare Analytics in IoT Enabled Environment, Intelligent Systems Reference Library 178, https://doi.org/10.1007/978-3-030-37551-5_15.
10. **N. Verma**, S. Sharma, K. Sinha, P. Paul , and Amritanjali (2020), Selection on Traditional Cryptographic Algorithm for Real-Time Video Transmission and Storage: A Study, Lecture Notes in Electrical Engineering (Proceedings of NCCS 2108), pp. 229–238, 2020. DOI: 10.1007/978-981-15-2854-5_21.
11. **R. Chaddha**, A. Kumar, K. Sinha, P. Paul, and Amritanjali (2020), Selection on Various Traditional Image Encryption Techniques: A Study, Lecture Notes in Electrical Engineering (Proceedings of NCCS 2108), pp. 219–228, 2020. DOI: 10.1007/978-981-15-2854-5_20.
12. **Anvita**, Snigdh, Itu. "A Multi-Level Type II Fuzzy Logic based Prediction of Connectivity in a Wireless Sensor Network." In 2020 International Conference on Inventive Computation Technologies (ICICT), pp. 597-602. IEEE, Feb. 2020. IEEE ISBN, XPLORE COMPLIANT- 978-1-7281-4685-0.

13. **Sakshi Gupta**, Itu Snigdh, Analyzing impacts of energy dissipation on scalable IoT architectures for smart grid applications, ICETSGAI4.0,5-7 Dec, 2019.
14. **Nandini Kumari**, Shamama Anwar, Vandana Bhattacharjee, Correlation and Relief Attribute Rank-based Feature Selection Methods for Detection of Alcoholic Disorder Using Electroencephalogram Signals, IETE Journal of Research, 1-13, June 2020 [SCIE Indexed].
15. **Vandana Singh**, V. Bhattacharjee, C. Jeganathan, Nidhi Bhattacherjee, Land Cover Classification using Machine Learning Techniques - A Survey, International Journal of Engineering Research & Technology, Vol. 9, Issue 6, June 2020.
16. **Kumari, R.**, Nigam, A. & Pushkar, S. Machine learning technique for early detection of Alzheimer's disease. Microsyst Technol (2020). https://doi.org/10.1007/s00542-020-04888-5
17. **Rashmi Kumari** and Shashank Pushkar ,"Analysis of Biomedical Image for Alzheimer's Disease Detection", ISBN :9781799800668, DOI: 10.4018/978-1-7998-0066-8.ch012.
18. **Sandip Kumar Singh Modak**, Vijay Kumar Jha. "Multibiometric Fusion strategy and its Applications: A Review". Information Fusion. Volume 49, September 2019, Pages 174-204. SCI Indexed.
19. **Nidhi Bhattacherjee**, Debjani Mustafi, V. Bhattacharjee, A Big Data Architecture for Healthcare, International Journal of Engineering Sciences & Research Technology, Vol. 9, Issue 4, April 2020.
20. **Pratibha Jha**, Bhaskar Karn "Knowledge Managements' Relevance in Supply Chain Management Process of Indian E-Commerce Companies" ISSN: 2277-3878 , International Journal of Recent Technology and Engineering (IJRTE), Vol. -8, Issue 3, September 2019. Pp.1797 -1805.
21. **Pooja Jha**, K. Sridhar Patnaik," Relative risk proneness in phases of software development: metric based approach with Cox model" International Journal of System Assurance Engineering and Management, https://doi.org/10.1007/s13198-019-00904-8, 0976-4348, Spinger.ESCI/SCOPUS, Oct-23,2019.IF-1.02.
22. **R. Mukherjee**, K.S Patnaik," Prioritizing JUnit Test Cases Without Coverage Information: An Optimization Heuristics Based Approach", IEEEAccess, SCIE/Scopus, Vol.9, pp-78092-78107, 2019, DOI: 10.1109/ACCESS. 2019. 2922387. June,2019. IF-4.098.
23. **Rajendrani Mukherjee**,K.Sridhar Patnaik,"Introducing a Fuzzy Model for Cost Cognizant Software Test Case Prioritization "In Proceedings of IEEE International Conference,TENCON-2019, Region 10, pp. 502-507, 17-19 OCT, 2019, Kochi, Kerela.
24. **Pooja Jha**, K. Sridhar Patnaik,"Self Driving Cars:Role of Machine Learning,pp 490-507,,Handbook of Reserach on Emerging Trends and Applications of Machine Learning,IGI-Global,Dec-2019.
25. **H.P. Patra**, and K. Rajnish. "A New High-Performance Empirical Model for software Cost Estimation", International Journal of Computer Added Engineering and Technology, Vol.11, No 4/5, 2019, Inderscience Publisher, Scopus.
26. **Puja Kumari** and K. Rajnish, "Cloud Cost Management: An Empirical View", IJARIIT, Vol.5, Issue: 3, pp.486-490, 2019.
27. **Dhawaleswar Rao CH**, Sujan Kumar Saha, Automatic Multiple Choice Question Generation from Text: A Survey. IEEE Transaction on Learning Technologies. Vol. 13, Issue 1, pp. 14-25. ISSN: 1939-1382 DOI: 10.1109/TLT.2018.2889100 [SCI 2.714 in JCR 2020], 2020.
28. Sujan Kumar Saha and **Dhawaleswar Rao CH**, Development of a Practical System for

Computerized Evaluation of Descriptive Answers of Middle School Level Students. Interactive Learning Environments, Taylor & Francis. DOI: 10.1080/10494820.2019.1651743. [IF - 1.938], 2019.

29. **Dhawaleswar Rao CH**, Sujan Kumar Saha, A Computer Assisted Learning Platform for Efficient Biology Learning of Secondary School Level Students. Journal of Educational Computing Research. Special Issue on "Augmented & Virtual Reality in Education: Immersive Learning Research". Volume 57, Number 7, Pages 1671-1694 . [SCI 2.18 JCR 2020], 2019.
30. **Amit Prakash**, Sujan Kumar Saha, A Study on Use of the Web for Automatic Answering of Remedy Finding Questions of Common Users. Technology and Health Care, IOS Press. Vol. 27, No. 1, pp. 23-35, published 24 January 2019, ISSN: 0928-7329. [SCI 0.787 in JCR 2019], 2019.
31. **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, 2020.
32. **Rakesh Patra** and Sujan Kumar Saha, Utilizing External Corpora Through Kernel Function: Application in Biomedical Named Entity Recognition. Progress in Artificial Intelligence Springer, DOI: 10.1007/s13748-020-00208-0, 2020.
33. Sujan Kumar Saha and **Rushali Gupta**, An Experimental Study on Adopting Computer-Assisted Assessment in Evaluation of Handwritten Answer Books. Education and Information Technology Springer. DOI: 10.1007/s10639-020-10192-6, 2020.
34. **Ankur Priyadarshi**, Sujan Kumar Saha. (2020). Web Information Extraction for Finding Remedy Based on a Patient-Authored Text: A Study on Homeopathy. Network Modeling Analysis in Health Informatics and Bioinformatics, Springer. Volume 9, Article number: 9 (2020). DOI:10.1007/ s13721-019-0216-2, 2020.
35. Sujan Kumar Saha, **Amit Prakash, Mukta Majumder**, "Similar Query was Answered Earlier": Processing of Patient Authored Text for Retrieving Relevant Contents from Health Discussion Forum. Health Information Science and Systems, Springer, 7: 4, DOI: 10.1007/ s13755-019-0067-3 [SCOPUS, ESCI], 2019.
36. **Dhawaleswar Rao CH**, Sujan Kumar Saha, "RemedialTutor: A Blended Learning Platform for Weak Students and Study its Efficiency in Social Science Learning of Middle School Students in India". Special issue on "Blended Learning in South Asia", Education and Information Technologies, Springer, Volume 24, Issue 3, pp 1925–1941. ISSN: 1360-2357 (Print) 1573-7608 (Online). [SCOPUS, ESCI], 2019.
37. **Rakesh Patra**, Sujan Kumar Saha, A Hybrid Approach for Automatic Generation of Named Entity Distractors for Multiple Choice Questions. Education and Information Technologies, Springer. ISSN: 1360-2357 (Print) 1573-7608 (Online). Volume 24, Issue 2, pp 973–993. [SCOPUS, ESCI], 2019.
38. **Rakesh Patra**, Sujan Kumar Saha, A Novel Word Clustering and Cluster Merging Technique for Named Entity Recognition. Journal of Intelligent Systems. Vol. 28, Issue 1, pages 15-30. ISSN 2191-026X [Web of Science, SCOPUS], 2019.
39. **Ankur Priyadarshi** and Sujan Kumar Saha. 2019. A study on the Importance of Linguistic Suffixes in Maithili POS Tagger Development. MIKE 2019: Seventh International Conference on Mining Intelligence and Knowledge Exploration. 19-22 December, NIT Goa.
40. **Ankur Priyadarshi** and Sujan Kumar Saha. 2019. A Hybrid Approach to Develop the First Stemmer in Maithili. FIRE 2019: 11th meeting of the Forum for Information Retrieval Evaluation (FIRE, 19) 12-15 December, ISI Kolkata.

41. **U. K. Mukhopadhyay,** R. N. Sharma, S. Anwar & A. D. Dutta (2019), "Correlating Thermal Anomaly with Earthquake Occurrences Using Remote Sensing". In International Conference on Advanced Machine Learning Technologies and Applications (pp. 863-875). Springer, Cham.

42. Shruti Garg, **Gaurav Kumar**, "CONVOLUTION NEURAL NETWORK FOR SPEECH EMOTION RECOGNITION", International Journal of Creative Research Thoughts (IJCRT), ISSN:2320-2882, Volume.8, Issue 6, pp.514-518, June 2020, Available at :http://www.ijcrt.org/papers/IJCRT2006076.pdf.

43. **Puja Gupta**, Shruti Garg, Breast Cancer Prediction using varying Parameters of Machine Learning Models, published in Procedia Computer Science journal, Vol.171C, May 2020, May 2020, pp.587-595, Elsevier, (Scopus) ISSN: 1877-0509.

44. **Prince Kumar**, Shruti Garg, Ashwani Garg, "Assessment of Anxiety, Depression and Stress using Machine Learning Models," published in Procedia Computer Science journal, Vol. 171C, May 2020, pp. 2073-2083, Elsevier. (Scopus) ISSN: 1877-0509 https://doi.org/10.1016/j.procs.2020.04.213.

45. **Anupriya**, Shruti Garg, Neha Prerna Tigga, Predicting Anxiety, Depression and Stress in Modern Life using Machine Learning Algorithms published in Procedia Computer Science journal, Vol. 167, Apr 2020, pp. 1258-1267, Elsevier. (Scopus) ISSN: 1877-0509 https://doi.org/10.1016/j.procs.2020.03.442.

46. **Neha Prerna Tigga**, Shruti Garg, Prediction of Type 2 Diabetes using Machine Learning, Classification Methods published in Procedia Computer Science journal, Vol. 167, Apr 2020, pp. 706-716, Elsevier (Scopus), ISSN: 1877-0509.

47. **Neeta Kumari**, Shruti Garg, Anjali Singhal, Madan Kumar, Mallika Bhattacharya, Pawan Kumar Jha, Devendra Kumar Chauhan, Indu Shekhar Thakur, Optimizing pretreatment of Leucaena leucocephala using artificial neural networks (ANNs) published in Bioresource Technology Reports journal, 7, 2019, Elsevier.(100289), ISSN: 2589-014X. (Scopus), 2019.

48. **A.Priya**, S.Garg, 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, 2020.

49. **Puja Gupta**, Shruti Garg, Ashwani Garg, "Convolution Neural Network for Lung Cancer" presented in International Conference on Recent Trends in Artificial Intelligence, IOT, Smart Cities and Applications (ICAISC 2020), 28-29 Feb. 2020 held at Chaibasa Engineering College, Jharkhand -833201, India sponsored by TEQIP-III.https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3562893

50. Shruti Garg, **Gaurav Kumar and Ashwani Garg**, "Convolution Neural Network for Speech Emotion Recognition," presented in 2ND International Conference of Energy Systems, Drives and Automations (ESDA2019), 28-29 Dec. 2019 held at Kolkata, West Bengal, India organized by Applied Computer Technology, Kolkata.

51. **Puja Gupta** and Shruti Garg, "Convolution Neural Network for Skin Cancer", presented at 2ND International Conference of Energy Systems, Drives and Automations (ESDA2019), 28-29 Dec. 2019 held at Kolkata, West Bengal, India organized by Applied Computer Technology, Kolkata.

52. **Quazi Warisha Ahmed** and Shruti Garg, "A cloud computing based advanced encryption standards," in proceedings of 3rd international conference on IOT in Social, Mobile, Analytics and cloud(ISMAC 2019), 12-14 Dec. 2019 held at SCAD Institute of Technology, Palladam, Coimbatore, pp. 89-95(IEEE).

53. **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]

54. A. Nigam, **V.K. Singh**, "Efficient Retrieval of Trademark Images from Large Database", International Journal of Intellectual Property Management, In Press. [Non paid SCOPUS], 2020.

55. **A. Gupta** and A. Nigam, Development of general mathematical model for calculation of solar radiation on moving surfaces, Vigyan Garima Sindhu (CSTT, MHRD), Vol. 112, Jan 2020, pp. 78-86, ISSN: 2320-7736

56. **R. Kumari**, A.Nigam and S. Pushkar, Machine learning technique for early detection of Alzheimer's disease. Microsyst Technol. https://doi.org/10.1007/s00542-020-04888-5 **[SCI impact factor 1.73], 2020**.

57. **D. Patil,** A. Nigam, S. Mohapatra, "Automation of geometric feature computation through image processing approach for single-layer laser deposition process", International Journal of Computer Integrated Manufacturing, In Press [SCIE, impact factor 2.86], 2020.

58. **N. Priyadarshi**, A.K. Bhoi, S.K. Sahana, P.K. Mallick, P. Chakrabarti, 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 439-447 ISBN: 978-981-15-1450-0, DOI: https://doi.org/10.1007/978-981-15-1451-7_47, 2020.

59. **P. Kumari**, S.K. Sahana, "Comprehensive Survey and Comparative Experimental Performance Gain of AODV, DSR and OLSR in MANETs", International Journal of Engineering and Advanced Technology (IJEAT), Volume-8 Issue-5,pp 1036-1045, ISSN: 2249-8958, https://www.ijeat.org/wp content/uploads/papers/v8i5/E7083068519.pdf (SCOPUS), 2019.

60. **Ankita,** S.K. Sahana, Evolutionary based hybrid GA for solving multi-objective grid scheduling problem, Microsystem Technologies, Springer, ISSN: 0946-7076 (Print) 1432-1858 (Online) https://doi.org/10.1007/s00542-019-04673-z (SCI) (IF 1.513), 2019.

61. **A. Priya** and S. K. Sahana, "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: 4.098), 2020.

62. **A. Priya** and S. K. Sahana, 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), 2020.

63. **A. Priya** & S.K. Sahana, 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, 2020.

64. **A. Priya** & S.K. Sahana, 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:10.4018/978-1-5225-9806-0.ch009, 2020.

65. **R. Raja**, I. Mukherjee and B.K. Sarkar, A Systematic Review of Healthcare Big Data. - Scientific Programming (Hindawi, ISSN: 1875-919X, SCIE, I.F. – 0.963), Volume 2020, Article ID 5471849,15 pages, https://doi.org/10.1155/2020/5471849,2020.

7.2 Achievements of Students

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
1.	Sourav Jain	8th among 400+ teams	HackJaipur (Online Hackathon - Devfolio)	-
2.	Kevin Mathew T	11th ICPC Kharagpur Regional, 82nd ICPC Online Round	ICPC	-
3.	Divyanshu Pandey	11th	ICPC Asia Kharagpur Regionals	-
4.	Dhara Goyal	Ranked 3rd Position, Ranked Top 50 in TechGig	Microsoft Codess 2019 Hackathon, TechGig Geek Godess 2019	-
5.	Abhilasha Sinha	Top 5 finalist	Smart India Hackathon 2020	-
6.	Abhilasha Sinha	Wining Team	Hack36 2020	-
7.	Ankur Dubey	2nd Runner Up	Hackabit'19	-

7.3 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	Mr. Abhishek Kumar 2015-2018 MCA, Department of CSE.	He is associated with Amazon India and working in the field of Cloud Computing and Dsitributed System.
2.	Ms. Pratysha Pratik 2015-2018 MCA, Department of CSE.	She is associated with Walmart Labs, India and working in the field of Enterprise application software Development.
3.	Mr. Chetan Khalko 2014-2017 MCA, Department of CSE.	He is currently working in the field of The emerging field of Cyber forensics.

7.4 Infrastructure Development

Sl. No.	Room Description	Faculty Name	Room Area	Shared/ Exclusive	Capacity	Equipped with
1.	FG1	Dr. B.K. Sarkar	13'4''x 9'4''	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, WhiteBoard, Notice Board.
2.	FG2	Dr. S. Paul	9'7"x 9'	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, WhiteBoard, Notice Board.
2.	FG3	Dr. G. Sahoo	10' x 13'7"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board
3.	FG4	Dr. B. Karn	10' x 13'7"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board..
4.	FG5	Dr. A. Jain	10' x 13'7"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, WhiteBoard, Notice Board.

Sl. No.	Room Description	Faculty Name	Room Area	Shared/ Exclusive	Capacity	Equipped with
5.	FG6	(a). Prof. B.K.Chanda (b). Prof. R. Jha	15'x12'	Shared	2	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
	FG7	Dr. A.Nigam	8'9" x 9'9"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
6.	FG8	Dr. K.S. Patnaik	9'3" x 14'9"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN,White Board, Notice Board.
7.	FG9	Dr. K.K.Senapati	9'3" x 14'9"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
8.	FG10	Dr. D Mustafi	8'10"x11'5"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
	FG11	(a). Dr. S. Garg (b). Dr. S.Anwar	14'9"x10' 10'	Shared	2	Computer/ Laptop, Printer, UPS, Wifi, LAN, WhiteBoard, Notice Board.
10.	FF1	Dr. S. Dutta	9'3' x 14'9"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, WhiteBoard, Notice Board.
11.	FF2	Dr. V. Bhattacharjee	9'3' x 14'9"	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, WhiteBoard, Notice Board.
12.	FF3	Dr. A. Mustafi	9'3' x 14'9	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN,White Board, Notice Board.
13.	FF4	Dr. Itu Snigdh	9'3"x 9'	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, WhiteBoard,Notice Board.
	FF5	Dr. S.K. Saha	13'.4'x9'.4'	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
14.	FS1	(a). Prof. K.Samanta (b). Prof. S.Srivastava	13'4"x10'	Shared	2	Computer/ Laptop, Printer, UPS, Wifi, LAN, WhiteBoard, Notice Board
	FS2	Dr. S.K. Sahana	9'7" x 8'8"	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.	FS3	Dr. D.K. Mallick	9.3″ x 13′5″	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
16.	FS4	Dr. V.K. Jha	9.3″ x 13′5″	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
17.	FS5	Dr. I. Mukharjee	9.3″ x 13′5	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
18.	FS6	Dr. K. Rajnish	9.3″ x 13′5	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
19.	FS7	(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.
20.	FS8	Dr. S. Mohapatra	12′ x 10′3″	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
21.	FS9	Dr. S. Priyadarsini	11′5″ x 10′3″	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
22.	FS10	Dr. S. Pushkar	8′1″ x 9′3″	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
23.	FS11	Dr. I.D. Ram	8′ x 9′	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
24.	FS12	Dr. A.K. Keshri	8′8″ x 9′	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.
25.	FS13	Dr. Amritanjali	9′3″ x 9′	Exclusive	1	Computer/ Laptop, Printer, UPS, Wifi, LAN, White Board, Notice Board.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

SECTION 1 DEPARTMENT PROFILE

1.1 About the Department :

The Department of Electrical and Electronics offers B.E/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 programmes are accredited by NBA. Twenty Eight 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, Magneto-optic Sensors, Power System Voltage Stability, System Identifications, Applications of Soft Computing Techniques etc. Department of EEE is presently 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 labs for laboratory based research and teaching. Many major equipments, such as Twin Rotor MIMO System, 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 Hill, 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 Softwareare 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 Acquisision Card for Drives Lab and DC Motor + AC Three Phase Alternator for Smart Grid Lab.

SECTION 2 RESEARCH PROJECTS

2.1 Sponsored Projects (Research and Consultancy)

a) Ongoing Projects

Sr. No.	Project Title	PI / Co PI	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"	Dr. Subrajeet Mohapatra(PI) Dr. Vandana Bhattacharjee (Co-PI)	CSRI, DST	File No. DST/ CSRI/2017/ 400(G)	Rs. 22,54,800/-	2022

Sr. No.	Project Title	PI / Co PI	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
2.	Automated vegetation stress detection from very high resolution multi-temporal spectral data to establish relationship using Artificial Intelligence	Dr. Vandana Bhattacharjee and Dr. Abhijit Mustafi (Co-PI)	Sky Map Global (SMG) Pvt. Ltd. Singapore	-	Rs. 7,50,000/-	May 2020

b) Consultancy Projects carried out/ongoing

Sl. No.	Title of Project	Funding Agency	Grant mobilized (Rs. lakhs)	PI /Co PI	Ongoing/ Completed*
1.	Validation of electrical design of 5000 MT cold storage.	SPECON Engineering Consultant, Jamshedpur	0.60 lacs	T. Ghose (PI)	Completed

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 conference on Emerging Trends for Smart Grid Automation and Industry 4.0 (ICETSGAI4.0)	Dr. D. K. Mohanta Dr. T. Ghose Dr. Deepak Kumar Dr. Debomita Ghosh	TEQIP & TYPHOON HIL	05.12.2019 - 07.12.2019

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. P. R. Thakura Dr. V. Laxmi Dr. S. Chakraborty Dr. T. Ghose	Experts Training Programme	AICTE, TEQIP	AICTE	AICTE Headquarters, New Delhi	27.02.2020
2.	Dr. D. K. Mohanta	Faculty Development Program on Outcome Based education (online)	InPods Edtech			28.04.2020
	Dr. T. Ghose	Clarivate webinar 'Web of Science Certification'	Nil	e-Sodh Sindhu, Ministry of Education	Webinar	14.05.2020-28.05.2020

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals :

1. Mallikarjuna B, Devagupta R, Reddy M J B, & Mohanta D K (2020). Synchrophasor Sensors Assisted Novel Algorithm for Power System Protection Reinforcement and Health Monitoring. IEEE Sensors Journal, Vol 20, (15). p 8213-8222.
2. Manohar M, Koley E, Ghosh S, Mohanta D K, & Bansal R C (2020). Spatio-temporal information based protection scheme for PV integrated microgrid under solar irradiance intermittency using deep convolutional neural network. International Journal of Electrical Power & Energy Systems, Vol 116, p 105576.
3. Pal D, Mallikarjuna B, Gopakumar P, Reddy M J B, Panigrahi B K, & Mohanta D K (2020). Probabilistic Study of Undervoltage Load Shedding Scheme to Mitigate the Impact of Protection System Hidden Failures. IEEE Systems Journal, Vol 14, (1). p 862-869.
4. Dwivedi A, Mallikarjuna B, Pal D, Reddy M J B & Mohanta D K (2019). A Real-Time Synchrophasor-Based Zone-3 Supervision of Distance Relays Under Load Encroachment Condition. IEEE Systems Journal, Vol 13, (4). p 4227-4235.
5. D. K. Mohanta et al. (2019). Emerging Trends In System Integrity Protection Schemes (SIPS) for Improving the Performance of Smart Grid. Guest Editorial, IET Generation, Transmission & Distribution, Vol 13, (8). p 1191-1193.
6. Shukla S K, Koley E, Ghosh S & Mohanta D K (2019). Enhancing the reliability of six phase transmission line protection using power quality informatics with real time validation. International Transactions on Electrical Energy Systems (Wiley Publishers), Vol 29, (9).
7. Appasani B, & Mohanta D K (2019). A Two-Stage Markov Model Aided Frequency Duration Approach for Reliability Analysis of PMU Microwave Communication Networks. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, Vol 233, (3). p 355-368.
8. Rajalwal N K, & Ghosh D (2020). Recent Trends in Integrity Protection of Power System A Literature Review. International Transaction on Electrical Energy Systems, Wiley, p 1-43. https://doi.org/10.1002/2050-7038.12523.
9. Sahu S K, & Ghosh D (2020). Hosting Capacity Enhancement in Distribution Systemin Highly Trenchant Photo-voltaic Environment: A Hardware in Loop Approach. IEEE Access, Vol 8, p 14441-14451.
10. Acharya D S, & Mishra S K (2020). A Multi-Agent based Symbiotic Organisms Search Algorithm for Tuning of Fractional Order PID Controller Measurement. Elsevier, Vol 155, https://doi.org/10.1016/j.measurement.2020. article 107559
11. Acharya D S, Subrat Kumar Swain, & Mishra S K (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, Springer, Vol 45, (8), p 6311-6329. DOI: 10.1007/s13369-020-04425-6
12. Sahoo A K, & Mishra S K (2020). Design of Lagrangian based FOPID controller for desired closed loop system. Journal of Circuits, Systems and Computers (JCSC), World Scientific. (Accepted)
13. Acharya D S, & Mishra S K (2020). Optimal Consensus Recovery of Multi-Agent System subjected to Agent Failure. International Journal of Artificial Intelligent Tools, World Scientific. (Accepted)

14. Sagar P, Upadhyaya A, Mishra S K, Pandey R N, Sahu S S, & Panda G (2020). A Circular Adaptive Median Filter for Salt and Pepper Noise Suppression from MRI Images. Journal of Scientific and Industrial Research, National Institute of Science Communication andInformation Resources (NISCAIR). (Accepted)

15. Kumar M, Mishra S K, Choubey S K, Tripathy S S, Choubey D K, & Das D (2020). Cat Swarm Optimization based Functional Link Multilayer Perceptron for Suppression of Gaussian and Impulse Noise from Computed Tomography Images. Current Medical Imaging Reviews Bentham Science, Vol 16, p 329-339.

16. Kumar M, & Mishra S K (2020). A Comprehensive Review of Nature Inspired Neural Network based Adaptive Filter for Eliminating Noise from Medical Images. Current Medical Imaging Reviews. Bentham Science, Vol 16, p 278-287.

17. Sain D, Swain S K, & Kumar T (2020). Robust 2-DOF FOPID Controller Design for Maglev System Using Jaya Algorithm . IETE Journal of Research,Vol 66, (3), p 414-426.

18. Sain D, Swain S K, Saha A, Mishra S K, & Chakraborty S (2019). Real-Time Performance Analysis of FOI-PD Controller for Twin Rotor MIMO System. IETE Technical Review,Vol 36, (6). p 547-567.

19. Gupta G S, Bhatnagar M, Shikhar Kumar,& Rakesh Kumar Sinha (2020). A Comparative Study of Application of Different Non-Conventional Filters on Electroencephalogram. Biomedical Research (0970-938X) Vol 31, (1)..

21. Kamlu S, & Laxmi V (2019). Condition-based maintenance strategy for vehicles using hidden Markov models, Advances in Mechanical Engineering, Vol 1, (1). https://doi.org/10.1177/1687814018806380

22. Kishore S, & Laxmi V (2020). Hybrid Coarse and Fine Controller Tuning Strategy for Magnetic Levitation System, Iranian Journal of Science and Technology. Transactions of Electrical Engineering, Vol 44, p 643-657.

23. Kumari S, T Ghose, Kumar D, & Chatterjee K (2020). PN Inference Based Autonomous Sequential Restoration of Distribution System under Natural Disaster. IEEE Systems Journal, 24 24. Jha S K, & Kumar D (2019). Assessment of Battery Energy Storage System with Hybrid Renewable Energy Sources to Voltage Control of Islanded Microgrid Considering Demand-Side Management Capability Iranian Journal of Science and Technology. Transactions of Electrical Engineering (Springer), Vol 44, (2). p 861-877.

25. Jha S K, & Kumar D (2019). Demand side management for stand-alone microgrid using coordinated control of battery energy storage system and hybrid renewable energy sources Electrical Power Components and System [Taylor & Francis], Vol 47, p 1261-1273.

26. Ghose T, Pandey H W, & Gadham K R (2019). Risk assessement of microgrid aggregators considering demand response and uncertain renewable energy sources. Journal of Modern Power Systems and Clean Energy, p 1619-1631, https://doi.org/10.1007/s40565-019-0513-x.

27. Appasani B, & Mohanta D K (2020). Reliability analysis of the PMU microwave communication networks using generalised stochastic Petri nets. International Journal of Power and Energy Conversion, Vol1, (1). p 99-116.

28. Jain T, Ghosh D, & Mohanta D K (2019). Augmentation of situational awareness by fault passage indicators in distribution network incorporating network reconfiguration. Protection and Control of Modern Power Systems, Vol 4, (1). p 26.

29. Jain T, Ghosh D, & Mohanta D K (2019). Augmentation of situational awareness by fault passage indicators in distribution network incorporating network reconfiguration. Protection and control of modern power systems, Springer, Vol. 4, DOI: https://doi.org/10.1186/s41601-019-0140-6

30. Mishra K, & Mishra S K (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. Accepted for publication, Vol12, (3). p 57-70.

31. Gupta G S, Mohanta D K, Ghosh S, Dave G B, Bhatnagar M, & Sinha R K (2020). Ocular Artifacts elimination and feature extraction in motor imagery-based bci using nonlinear adaptive filter. Biomedical Engineering: Applications, Basis and Communications,Vol 32, (02).

32. Gupta G S, Bhatnagar M, Ghosh S, & Sinha R K (2020). Design of control system for motor imagery based neuro-aid application. Biomedical Engineering Applications Basis and Communications, Vol 31, (04).

33. Gupta G S, Bhatnagar M, Mohanta D K, & Sinha R K (2020). Prototype algorithm for three-class motor imagery data classification: a step toward development of human–computer interaction-based neuro-aid. In Smart Biosensors in Medical Care, p 1-28. Academic Press.

34. Kamlu S, & Laxmi V (2019). Design and Analysis of Preventive Health Management System for Vehicles using ANFIS, International Journal of Computational Complexity and Intelligent Algorithms (Inderscience Publishers),Vol 1, (2). p 196-213.

    https://doi.org/10.1504/IJCCIA.2019.103730

35. Kishore S, & Laxmi V (2020). Modeling, Analysis and Experimental Evaluation of Boundary Threshold Limits for Maglev System. International Journal of Dynamics and Control (Springer), Vol 8, pp. 707-716

36. Sahoo A K, & Mishra S K (2020). Analytical FOPID controller design based on Bode's ideal transfer function for desired closed loop response, Journal of Advanced Research in Dynamical and Control Systems (JARDCS), Vol 12, (5). p 9-20.

4.2 Publications in Proceedings:

1. Khalkho, A M. and Mohanta, D K. (2019). Identification and Categorisation of Critical Synchronous Generators for Transient Stability Analysis. IEEE 16th India Council International Conference (INDICON) Rajkot India .

2. Sai, K T. Akhil. Rishabh, D. Suprabhath, N S. Kritesh, Mallikarjuna, P B. Reddy, M J B. and Mohanta, D K. (2019). Dynamic State Estimation of Synchronous Generator Rotor Angle Using PMU and EKF. International Conference on Emerging Trends in Smart Grid Automation and Industry 4.0(ICETSGAI4.0-2019), B.I.T, Mesra, Ranchi.

3. Jnaneswar, K. Devaraj, S. Mallikarjuna, B. Reddy, M J B. and Mohanta, D K. (2019). EHV/UHV Transmission Line Protection Using Travelling Waves and DWT Technique. International Conference on Emerging Trends in Smart Grid Automation and Industry 4.0 (ICETSGAI4.0-2019), B.I.T, Mesra, Ranchi.

4. Khalkho, A M. and Mohanta, D K. (2019). Operational Resilience Enhancement Using Synchro Phasor Measurement. International Conference on Emerging Trends in Smart Grid Automation and Industry 4.0(ICETSGAI4.0-2019), B.I.T, Mesra, Ranchi.

5. Sonal, S. Ghosh, D. and Mohanta, D K. (2019). Resilience Trapezoid based Operational

Reliability of Distribution System. International Conference on Emerging Trends in Smart Grid Automation and Industry 4.0(ICETSGAI4.0-2019), B.I.T, Mesra, Ranchi.

6. Mahto, D K. Kibriya, F. Khalkho, A M. and Mohanta, D K. (2019). Data Driven Approach for Wide Area Generator Coherency Detection Using Synchrophasor Measurements. IEEE Region 10 Symposium (TENSYMP), Kolkata, India,

7. Kibriya, F. Mahto, D K. Khalkho, A M. Mahto, T. and Mohanta, D K. (2019). Determination of Voltage Control Area Based on Bus Coherency Using Synchronized Phasor Measurements. IEEE TENCON,

8. Sonal, S. Sahu, S. Ghosh, D. and Mohanta, D K. (2019). Reliability Analysis of a Distribution Network in Two State Weather Condition. International Conference on Computer, Electrical & Communication Engineering (IEEE), Kolkata, India,

9. Kumari, R. Ghosh, D. and Mohanta, D K. (2019). Petri Net Based Reliability Evaluation Considering Distribution System Protection Coordination. International Conference on Computer, Electrical & Communication Engineering (IEEE), Kolkata, India,

10. Sonal, S. and Ghosh, D. (2019). Impact of Distributed Generation on the ReliabilityAllocation of Distribution System : A mesh-Grid Approach. International conference on Emerging Frontiers in electrical and electronic Technologies, Patna, India, IEEE (Accepted & Presented),

11. Pati, R S. Ghosh, D. and Mohanta, D K. (2020). BusBar Splitting Approach for Fault Level Management for System Integrity Protection Scheme (SIPS). 1st IEEE International Conference on Measurement, Instrumentation, Control and Automation, Kurukshetra, India, IEEE (Accepted & Presented)

12. Raj, S. Singh, V. Rajalwal, N K. and Ghosh, D. (2020). Reliability Prediction of a Distribution Protection Scheme Using Markov Model. 8th International Conference On Reliability, INFOCOM Technologies and Optimization, Noida, India, IEEE (Accepted & Presented)

13. Rajalwal, N K. and Ghosh, D. (2019). Petri net Modeling for Reliability Assessment of Integrity Protection Scheme. International Conference on Emerging Trends for Smart-grid Automation and Industry 4.0, Ranchi, India,Springer. LNEE (Accepted & Presented)

14. Sonal, S. and Ghosh, D. (2019). Resilience Trapezoid based Operational Reliability of Distribution System. International Conference on Emerging Trends for Smart-grid Automation and Industry 4.0., Ranchi, India, Springer. LNEE (Accepted& Presented)

15. Kumar, R. and Sahu, S K. Ghosh, D. and Chakraborty, S. (2019). A Multi HIL Based Approach for a Real-time Monitoring using PMU. International Conference on Emerging Trends for Smart-grid Automation and Industry 4.0., Ranchi, India, Springer. LNEE (Accepted & Presented)

16. Sahu, S K. and Ghosh, D. (2019). Spectral kurtosis based fault detection in a highly penetrated photo-voltaic distributed generation: A real time analysis. International Conference on Emerging Trends for Smart-grid Automation and Industry 4.0., Ranchi, India, Springer. LNEE (Accepted & Presented)

17. Singh, M. Das, S. and Mishra, S K. (2020). Static Obstacle Avoidancein Autonomous Vehicle Navigation using Fuzzy Logic Controller. IEEE Conference,INCET, JCE.

18. Singh, M. Lakra, S. Das, S. and Mishra, S K. (2020). A Brief Review on Application of Probabilistic Modelling in Autonomous vehicle Navigation. 5th International Conference on Microelectronics , Computing and Communication System.

19. Pandey,R N. Shubhankar, S. Mishra, S K. and Acharya, B. (2019). A Review of Spectral

Image Enhancement using Artificial Intelligence Techniques. 5th International Conference on Microelectronics ,Computing and Communication System,

20. Das, S. and Mishra, S K. Development of Artifical Intelligence Techniques for Obstacle Avoidance in Autonomous Ground Vehicles. 105th Indian Science Congress , Bengaluru.
21. Das, P. P. Mishra, S K. and Patra, D. (2019). Animal tracking in wildlife footage with Quantum Particle Filter (QPF). IEEE, 18th International Conference on Information Technology IIIT, Bhubaneswar
22. Das, S. and Mishra S K. (2019). A Review on Vision Based Control of Autonomous Vehicles Using Artificial Intelligence Techniques. International Conference on Information Technology (ICIT), Bhubaneswar, India, p. 500. doi:10.1109/ICIT48102.2019.0009.
23. Acharya, D S. and Mishra, S K. (2019). Baishali Sarkar and Divya Bharti, Fractional Order Particle Swarm Optimization to optimize a Fractional Order PID Controller for a Vertical Take-Off and Landing System, ICETSGAI4.0, BIT, Mesra, Ranchi
24. Acharya, D S. and Mishra, S K. (2019). Shudit Kumar and Shubham Kumar, Design of 2-Degree of Freedom Fractional Order PID Controller for Magnetic Levitation Plant with Time Delay, ICETSGAI4.0, BIT, Mesra, Ranchi
25. Vartika, V. Singh, S. Das, S. and Sahu, S S. (2019). A Review on Intelligent PID Controllers in Autonomous Vehicle, ICETSGAI4.0, BIT, Mesra, Ranchi
26. Dubey, P. and Chakraborty, S. (2019). Avoidance of the relapse condition of Prostate Cancer using Super-twisting Sliding Mode Control. International Conference on Intelligent Computing and Control Systems (ICCS), Madurai, India, p92. doi:10.1109/ICCS45141.2019.9065721.
27. Gope, S. and Chakraborty, S. (2019). Stabilization & Synchronization of Rössler System using T-S Fuzzy Controller. International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN), Vellore, India, p1. doi: 10.1109/ViTECoN.2019.8899709.
28. Gupta, A K. Swain, S K. Mishra, S K. Datta, T. and Chakraborty, S. (2019). Improved Turning Angle Calculation for an Unmanned Ground Vehicle. International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN), Vellore, India, p.1. doi: 10.1109/ViTECoN.2019.8899403.
29. Ranjan, A. and Chakraborty, S. (2019). Phase Portrait Analysis of Continuous Stirred TankReacor (CSTR). 5th International Conference on Nano-electronics, Circuits & Communication Systems (NCCS-2019), Ranchi, India, Springer, LNEE(Accepted).
30. Kumar, R. Sahu,S K. Ghosh, D. and Chakraborty, S. (2019). A Multi HIL Based Approach for Real-time phasor data Monitoring using Phasor Measurement Unit. International Conference on Emerging Trends for Smart-grid Automation and Industry 4.0, Ranchi, India, Springer, LNEE(Accepted).
31. Kumar, S. Chakraborty, S. and Chandra, T S. (2020). Attitude Determination and Control of Gravity-Gradient Controlled Nanosatellites 107th Indian Science Congress, Bangalore, p164.
32. Ganchaudhuri, P. and Chakraborty, S. (2020). SMC tracking control of 2-link robotic manipulator subjected to external disturbances. Accepted for IEEE International Conference for Emerging Technology (IEEE INCET 2020), Belgaum, India.
33. Ranjan, A. Chakraborty, S. and Laxmi, V. (2020). Gain Scheduled Feedback Controller Design for a Nonlinear Continuous Stirred Tank Reactor. Accepted for publication in International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET-2020).

34. Kumar, S. Chakraborty, S. (2019). Phase Portrait Analysis of Small Satellites: With and Without Torque. In Lecture Notes in Electrical Engineering book series LNEE, Vol 556, p 451. Springer, Singapore, eBook ISBN 978-981-13-7091-5.

35. Pedapati, P K. Pradhan, S K. and Kumar, S. (2019) . Kinematíc Control of an Autonomous Ground Vehicle using Inverse Dynamics Controller. In the proceedings of International Conference on emerging trends for smart grid automaton and Industry, 4.0(ICETSGA14.0 2019), springer, (Presented)

36. Saha, P K. Shekhar, S. Laxmi, V. and Thakura, P R. (2019). Improved Speed Response of ECM Drive Using Antiwindup Concept ICECA , RVS technical Campus, Coimbatore, India.

37. Kumari, N. Kumar, S S. and Laxmi, V. (2019). Modified MPPT Topology: A Comparative Analysis. IEEE 16th India Council International Conference (INDICON), Rajkot, Gujrat.

38. Verma, M. Kumar, S S. Singh, S. Kumari, N. and Laxmi, V. (2019). Hardware Design of SEPIC Converter for Battery Charging Application Through PV using P&O MPPT Algorithm. Proceedings of the 3rd International Conference on Microelectronics, Computing and Communication Systems, p 465.

39. Ranjan, A. Laxmi, V. and Chakraborty, S. (2020). Gain-scheduled Feedback Controller Design for a Nonlinear Continuous Stirred Tank Reactor. ICEFEET-2020, Patna. (Accepted)

40. Chakraborty, S. and Kumar, D. (2019). Closed Loop V-f Control Strategy for PV-Battery Energy Storage System in Stand-Alone Microgrid. LNEE Book Chapter, Springer, Proceedings of ICETSGAI4.0 [Accepted] [Springer Conference]

41. Arvind, P. Kumar, D. and Thakura, P R. (2019). PV-fed Single Stage Boost Inverter for an Islanded Operation. LNEE Book Chapter, Springer, Proceedings of ICETSGAI4.0 [Accepted] [Springer Conference]

42. Ali, N. and Kumar, D. (2019). State of the Art Review on Microgrid Control Strategies and Power Management with Distributed Energy Resources. LNEE Book Chapter, Springer, Proceedings of ICETSGAI4.0 [Accepted] [Springer Conference]

44. Jha, S K. and Kumar, D. (2019). Enabling the Technologies for incorporating Battery Energy Storage System with Standalone Microgrid. LNEE Book Chapter, Springer, Proceedings ofICETSGAI4.0 [Accepted] [Springer Conference]

45. Roy, S. Nayar, S. Kumar, S. Alam, A. and Ghose, T. (2019). Bidirectional Power Flow in DC Microgrid and its Islanding Detection Using Support Vector Machine. International Conference on Intelligent Computing and Control Systems[ICICCS 2019], Bit Mesra IEEE,

46. Sinha, S. and Ghose, T. (2019). Operation of virtual droop resistance based parallel connected boost converter for power sharing & minimization of circulating current in DC microgrid. International Conference on 'Emerging Trends for Smart Grid Automation and Industry 4.0, BIT Mesra, Springer

47. Nayar, S, and Ghose, T. (2019). Power Sharing And Management Through Power Based Droop Control in DC microgrid. 3rd International conference on Electronics, Communication and Aerospace Technology (ICECA),978-1-7281-0167-5, BIT Mesra, IEEE

48. Chatterjee, S. Alam, A. and Ghose T. (2019). Evaluation of the performance of droop control scheme for interlinking converter in standalone hybrid microgrid. International Conference on 'Emerging Trends for Smart Grid Automation and Industry 4.0, BIT Mesra, Spring

49. Kibriya, F. Mahto, D K. Khalkho, A M. Mahto, T. and Mohanta, D K. (2019). Determination of Voltage Control Area Based on Bus Coherency Using Synchronized Phasor Measurements.

TENCON 2019 - 2019IEEE Region 10 Conference (TENCON), Kochi, India, pp. 1869. (DOI: 10.1109/TENCON.2019.8929262)

50. Mahto, T. Thakura, P R. and Ghose, T. (2019). Load Frequency Control of Wind Diesel Based Isolated Hybrid Power Systems with Cascaded PID Controller. International Conference on Emerging Trends for Smart Grid Automation and Industry 4.0 (ICETSGAI4.0 – 2019). (Accepted)

51. Goswami, G. and Thakura, P R. (2020). Torque and Current Noise Reduction of BLDC Motor Using Fuzzy Logic Control Strategy. In: Sahana S., Bhattacharjee V. (eds) Advances in Computational Intelligence. Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore. https://doi.org/10.1007/978-981-13-8222-2_3

52. Tripathi, P R. Keshri, R K. and Thakura, P.R (2019). Low Total Harmonic Distortion Quadruple Gain Boost Inverter IECON 2019-45th Annual Conference of the IEEE Industrial Electronics Society.

53. Arvind, P. Kumar, D. and Thakura, P R. (2019). Assessment of single stage three phase Boost Inverter for an Isolded Microgrid. 3rd International Conference on Electronics, Materials Engineering & Nano Technology (IEMENTech).https://doi.org/10.1109/IEMENTech48150.2019.8981143

54. Chakraborty, S. Kumar, D. and Thakura, P R. (2019). PV-fed Dual -Stage Closed Loop V-f Control Scheme of Stand Alone Microgrid. 3rd International Conference on Electronics, Materials Engineering & Nano Technology (IEMENTech) (DOI:10.1109/IEMEN Tech 48150.2019.8981119).

55. Shekhar, S. Saha, P K. and Thakura, P R. (2019). Optimal PID Tuning of BLDC Drive using LQR Technique. IEEE International Conference on Intelligent Systems and Green Technology (ICISGT)(DOI: 10.1109/ICISGT44072.2019.00028)

56. Saha, P. K. Shekhar, S. Laxmi, V. and Thakura, P R. (2019). Improved Speed Response of ECM Drive Using Antiwindup Concept. 3rd International conference on Electronics,Communication and Aerospace Technology (ICECA).(DOI: 10.1109/ICECA.2019.8822174)

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. D. K. Mohanta	Editor	Electric Power Components & Systems (Impact Factor: 1.157, Taylor & Francis Publications)	International	
2.	Dr. D. K. Mohanta	Subject Editor	IET Generation, Transmission & Distribution (Impact Factor: 4.1)	International	

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
3.	Dr. D. K. Mohanta	Guest Editor-in-Chief	Special Issue in IET Generation, Transmission & Distribution on Emerging Trends in System Integrity Protection Schemes (SIPS) for Improving the Performance of Smart Grid (Impact Factor: 4.1)	International	
4.	Dr. D. K. Mohanta	Associate Editor	IEEE Access (Impact Factor: 4.64)	International	
5.	Dr. D. K. Mohanta	Editorial Board Member (Associate Editor)	Electrical Engineering (Impact Factor: 1.296, Springer Nature Publications)	International	
6.	Dr. D. K. Mohanta	Editorial Board Member (Associate Editor)	International Transactions on Electrical Energy Systems (Impact Factor: 1.314, Wiley Publications)	International	

SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Prof. Tirthadip Ghose	Professor	No
2.	Prof. Rakesh Chandra Jha	Professor (on Deputation)	No
3.	Prof. Dusmanta Kumar Mohanta	Professor	No
4.	Dr. Parshuram Thakura	Professor & Head	No
5.	Dr. Vijaya Laxmi	Professor	No
6.	Dr. Sarbani Ray Chakraborty	Professor	No
7.	Mr. Prem Prakash	Assistant Professor	No
8.	Dr. Surendra Kumar	Assistant Professor	No
9.	Dr. Sudhanshu Kumar Mishra	Assistant Professor	No
10.	Dr. Debomita Ghosh	Assistant Professor	No
11.	Dr. Gauri Shanker Gupta	Assistant Professor	No

12.	Mr. Brij Mohan Prasad	Assistant Professor	No
13.	Dr. Sushma Suryaprakash Kamlu	Assistant Professor	No
14.	Mr. S. K. Swain (on Study leave from Feb 2019)	Assistant Professor	No
15.	Dr. Deepak Kumar	Assistant Professor	No
16.	Dr. Aftab Alam	Assistant Professor	No
17.	Dr. S. Shiva Kumar	Assistant Professor	No
18.	Dr. Tarkeshwar Mahto	Assistant Professor	Yes
19.	Mr. Vamshi Kumar	Assistant Professor	Yes

6.2 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Prof. P. R. Thakura	HOD, EEE	Chairman
2.	Prof. Amitava Chartjee	Professor, EE Dept. Jadavpur University	Member
3.	Dr. Anup Kumar Panda	NIT Rourkela	Member
4.	Mr. Sujit Kumar	DGM, MECON, Ranchi	Member (Alumni)
5.	Dr. Nirbhar Neogi	Ex-Executive Director, SAIL, Ranchi	Member
6.	Mr. Deepak Kumar	AGM, Electrical, MECON	Member
7.	Prof. T. Ghose	Professor, Dept. of EEE	Member
8.	Prof. D.K. Mohanta	Professor, Dept. of EEE	Member
9.	Dr. (Mrs.) Vijaya Laxmi	Professor, Dept. of EEE	Member
10.	Dr. (Mrs.) Sarbani Chakraborty	Professor, Dept. of EEE	Member
11.	Dr. (Mrs.) Debomita Ghosh	Asst. Professor, Dept. of EEE	Member
12.	Mr. Prem Prakash	Asst. Professor, Dept. of EEE	Member
13.	Dr. Vibha Rani Gupta	Professor, Dept. of ECE	Member
14.	Prof. G. Sahoo	Professor, Dept. of CSE	Member
15.	Mr Vijay Kumar Karan,	Ph.D. Scholar	Member
16.		One UG Student	Member
17.		One PG Student	Member

SECTION 7 OTHER INFORMATION

7.1 Publication by students

1. **B. Appasani** and D. K. Mohanta, (2019). "A Two-Stage Markov Model Aided Frequency Duration Approach for Reliability Analysis of PMU Microwave Communication Networks," Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, Vol. 233, no. 3, pp.355-368.

2. **Nilesh Kumar Rajalwal**, Debomita Ghosh, (2020). "Recent Trends in Integrity Protection of Power System: A Literature Review", International Transaction on Electrical Energy Systems, Wiley. pp. 1-43, https://doi.org/10.1002/2050-7038.12523.

3. **Sourav Kumar Sahu**, Debomita Ghosh, (2020). "Hosting Capacity Enhancement in

Distribution System in Highly Trenchant Photo-voltaic Environment: A Hardware in Loop Approach", IEEE Access, Vol.8,pp.14441-14451.

4. **Deep Shekhar Acharya**, Sudhansu Kumar Mishra, (2020). "A Multi-Agent based Symbiotic Organisms Search Algorithm for Tuning of Fractional Order PID Controller," Measurement, Elsevier, 155, article 107559.

5. **Deep Shekhar Acharya,** Subrat Kumar Swain, Sudhansu Kumar 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, Springer, Vol.45(8),pp. 6311-6329.

6. **Amit Kumar Sahoo,** Sudhansu Kumar Mishra, (2020) . Design of Lagrangian based FOPID controller for desired closed loop system", Journal of Circuits, Systems and Computers (JCSC), World Scientific.

7. **Deep Shekhar Acharya**, Sudhansu Kumar Mishra, (2020). "Optimal Consensus Recovery of Multi-Agent System subjected to Agent Failure", International Journal of Artificial Intelligent Tools, World Scientific.

8. **Priya Sagar**, **Ashruti Upadhyaya**, Sudhansu Kumar Mishra, **Rudra Narayan Pandey**, Sitanshu Sekhar Sahu, Ganapati Panda, (2020)." A Circular Adaptive Median Filter for Salt and Pepper Noise Suppression from MRI Images", Journal of Scientific and Industrial Research, National Institute of Science Communication and Information Resources (NISCAIR).

9. **Manish Kumar**, Sudhansu Kumar Mishra, Sumit K. Choubey, Sanjay S. Tripathy, Dilip K. Choubey, Dinesh Das, (2020). "Cat Swarm Optimization based Functional Link Multilayer Perceptron for Suppression of Gaussian and Impulse Noise from Computed Tomography Images" Current Medical Imaging Reviews. Bentham Science. Vol.16,pp. 329-339.

10. **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 Reviews. Bentham Science.Vol.16, pp.278-287.

11. **Debdoot Sain**, Subrat Kumar Swain, **Tapas Kumar**, Sudhansu Kumar Mishra."(2020) Robust 2-DOF FOPID Controller Design for Maglev System Using Jaya Algorithm ", IETE Journal of Research,Vol. 66:3, pp.414- 426.

12. **Debdoot Sain**, Subrat Kumar Swain, **Ayan Saha**, Sudhansu Kumar Mishra,Sarbani Chakraborty.(2019) "Real-Time Performance Analysis of FOI-PD Controller for Twin Rotor MIMO System", IETE Technical Review,Vol. 36:6, pp. 547-567.

13. Gupta Gauri Shanker, **Maanvi Bhatnagar**, **Shikhar Kumar**, and Rakesh Kumar Sinha, (2020). "A Comparative Study of Application of Different Non-Conventional Filters on Electroencephalogram." Biomedical Research (0970-938X) 31, no. 1.

14. **Debdoot Sain**, Subrat Kumar Swain, **Ayan Saha**, Sudhansu Kumar Mishra & Sarbani Chakraborty. (2019) "Real-Time Performance Analysis of FOI-PD Controller for Twin Rotor MIMO System", IETE Technical Review,(Taylor & Francis),vol.36,pp547-567, DOI:10.1080/02564602.2018.1528190.

15. **Shradha Kishore**, Vijaya Laxmi, (2020). " Hybrid Coarse and Fine Controller Tuning Strategy for Magnetic Levitation System, Iranian Journal of Science and Technology" Transactions of Electrical Engineering, Vol. 44,pp. 643-657.

16. **Kumari Sandhya**, T. Ghose, Deepak Kumar**,** Kalyan Chatterjee. (2020) "PN Inference

Based Autonomous Sequential Restoration of Distribution System under Natural Disaster" IEEE Systems Journal.

17. **S.K. Jha**, and D. Kumar, (2019). "Assessment of Battery Energy Storage System with Hybrid Renewable Energy Sources to Voltage Control of Islanded Microgrid Considering Demand-Side Management Capability" Iranian Journal of Science and Technology, Transactions of Electrical Engineering (Springer), Vol.44(2), pp.861-877.

18. **S.K. Jha,** and D Kumar, (2019). "Demand side management for stand-alone microgrid using coordinated control of battery energy storage system and hybrid renewable energy sources" Electrical Power Components and System [Taylor & Francis], Vol. 47, pp. 1261-1273.

19. T. Ghose, **H. W. Pandey, K. R. Gadham**, (2019). "Risk assessement of microgrid aggregators considering demand response and uncertain renewable energy sources", Journal of Modern Power Systems and Clean Energy, pp. 1619-1631, https://doi.org/10.1007/s40565-019-0513-x.

20. **B. Appasani** and D.K. Mohanta, (2020). "Reliability analysis of the PMU microwave communication networks using generalised stochastic Petri nets", International Journal of Power and Energy Conversion, Vol1(1), pp.99-116.

21. **T. Jain,** D. Ghosh, and D.K. Mohanta, (2019). "Augmentation of situational awareness by fault passage indicators in distribution network incorporating network re-configuration, Protection and Control of Modern Power Systems, Vol.4(1), pp.26, (Emerging Sources Citation Index).

22. **Tanmay Jain**, Debomita Ghosh, Dusmanta Kumar Mohanta, (2019) "Augmentation of situational awareness by fault passage indicators in distribution network incorporating network re-configuration" Protection and control of modern power systems, Springer, Vol. 4, [ESCI] DOI: https://doi.org/10.1186/s41601-019-0140-6.

23. **Sarat Kumar Mishra**, 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. Accepted for publication, Vol.12(3), pp.57-70.

24. Gupta Gauri Shanker, Dusmanta Kumar Mohanta, Subhojit Ghosh, **Gunjan Bhavnesh Dave**, **Maanvi Bhatnagar**, and Rakesh Kumar Sinha, (2020). "Ocular Artifacts elimination and feature extraction in motor imagery-based bci using nonlinear adaptive filter." Biomedical Engineering: Applications, Basis and Communications 32, no. 02.

25. Gupta Gauri Shanker, **Maanvi Bhatnagar**, Subhojit Ghosh, and Rakesh Kumar Sinha. "Design of control system for motor imagery based neuro-aid application" Biomedical Engineering: Applications, Basis and Communications 31, no. 04.

26. Gupta Gauri Shanker, **Maanvi Bhatnagar**, Dusmanta Kuamar Mohanta, and Rakesh Kumar Sinha, (2020). "Prototype algorithm for three-class motor imagery data classification: a step toward development of human–computer interaction-based neuro-aid". In Smart Biosensors in Medical Care, pp. 1-28. Academic Press.

27. **Shradha Kishore**, Vijaya Laxmi, (2020)." Modeling, Analysis and Experimental Evaluation of Boundary Threshold Limits for Maglev System, International Journal of Dynamics and Control (Springer), 8, pp. 707-716

28. **Amit Kumar Sahoo**, Sudhansu Kumar Mishra.(2020) Analytical FOPID controller design based on Bode's ideal transfer function for desired closed loop response, Journal of Advanced Research in Dynamical and Control Systems (JARDCS),Vol.12 (5),pp. 9-20.

29. **A. M. Khalkho** and D. K. Mohanta,(2019). "Identification and Categorisation of Critical Synchronous Generators for Transient Stability Analysis," IEEE 16th India Council International Conference (INDICON), Rajkot, India.

30. **Anant Milan Khalkho**, D.K. Mohanta, (2019). "Operational Resilience Enhancement Using Synchro Phasor Measurement", International Conference on Emerging Trends in Smart Grid Automation and Industry 4.0(**ICETSGAI4.0-2019)**, B.I.T, Mesra, Ranchi.

31. **Sonal S**, Debomita Ghosh, D.K. Mohanta, (2019). "Resilience Trapezoid based Operational Reliability of Distribution System" , International Conference on Emerging Trends in Smart Grid Automation and Industry 4.0(**ICETSGAI4.0-2019)**, B.I.T, Mesra, Ranchi.

32. **D. K. Mahto**, **F. Kibriya**, **A. M. Khalkho** and D. K. Mohanta, (2019). "Data Driven Approach for Wide Area Generator Coherency Detection Using Synchrophasor Measurements," IEEE Region 10 Symposium (TENSYMP), Kolkata, India.

33. **Kibriya**, **D. K. Mahto**, **A. M. Khalkho**, T. Mahto, D. K. Mohanta, (2019). "Determination of Voltage Control Area Based on Bus Coherency Using Synchronized Phasor Measurements," IEEE TENCON.

34. **Sonal**, **Sourav Sahu**, Debomita Ghosh, D.K. Mohanta, (2019). "Reliability Analysis of a Distribution Network in Two State Weather Condition" International Conference on Computer, Electrical & Communication Engineering (IEEE), Kolkata, India, Jan. 18-19, 2019.

35. **Rani Kumari**, Debomita Ghosh, D.K. Mohanta , (2019). "Petri Net Based Reliability Evaluation Considering Distribution System Protection Coordination" International Conference on Computer, Electrical & Communication Engineering (IEEE), Kolkata, India, Jan. 18-19, 2019.

36. **Sonal**, Debomita Ghosh, **(**2019). "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, Jul. 10-11, Patna, India, IEEE (Accepted & Presented).

37. **Rajesh Saikrishna Pati**, Debomita Ghosh, (2020). "BusBar Splitting Approach for Fault Level Management for System Integrity Protection Scheme (SIPS)", 1st IEEE International Conference on Measurement, Instrumentation, Control and Automation, Jun. 24-26, Kurukshetra, India, IEEE (Accepted & Presented).

38. **Sahil Raj**, **Vibhor Singh**, Nilesh Kumar Rajalwal, Debomita Ghosh, (2020). "Reliability Prediction of a Distribution Protection Scheme Using Markov Model", 8th International Conference On Reliability, INFOCOM Technologies and Optimization, Jun. 4-5, Noida, India, IEEE (Accepted & Presented).

39. **Nilesh Kumar Rajalwal**, Debomita Ghosh, (2019). "Petri net Modeling for Reliability Assessment of Integrity Protection Scheme", International Conference on Emerging Trends for Smart-grid Automation and Industry 4.0, Ranchi, India, Springer. LNEE (Accepted & Presented).

40. **Sonal**, Debomita Ghosh, Dusmanta Kumar Mohanta.(2019) "Resilience Trapezoid based Operational Reliability of Distribution System", International Conference on Emerging Trends for Smart-grid Automation and Industry 4.0., Ranchi, India, Springer. LNEE (Accepted & Presented).

41. **Rohit kumar, Sourav Kumar Sahu**, Debomita Ghosh, Sarbani Chakraborty, (2019). "A Multi HIL Based Approach for a Real-time Monitoring using PMU", International Conference on Emerging Trends for Smart-grid Automation and Industry 4.0., Ranchi, India, Springer. LNEE (Accepted & Presented).

42. **Sourav kumar Sahu**, Debomita Ghosh, (2019). "Spectral kurtosis based fault detection in a highly penetrated photo-voltaic distributed generation: A real time analysis", International Conference on Emerging Trends for Smart-grid Automation and Industry 4.0., Dec. 5-7, Ranchi, India, Springer. LNEE (Accepted & Presented).

43. **Manjari Singh**, **Subhranil Das**, Sudhansu Kumar Mishra, (2020). "Static Obstacle Avoidance in Autonomous Vehicle Navigation using Fuzzy Logic Controller", IEEE Conference, INCET, JCE.

44. **Manjari Singh**, **Shikha Lakra**, **Subhranil Das**, Sudhanshu Kumar Mishra, (2020). "A Brief Review on Application of Probabilistic Modelling in Autonomous vehicle Navigation" 5th International Conference on Microelectronics ,Computing and Communication System.

45. **Rudra Narayan Pandey**, **Shreyas Shubhankar**, Sudhansu Kumar Mishra, Bibhudendra Acharya, (2019). "A Review of Spectral Image Enhancement using Artificial Intelligence Techniques", 5th International Conference on Microelectronics ,Computing and Communication System.

46. **Subhranil Das**, Sudhansu Kumar Mishra, (2020)." Development of Artifical Intelligence Techniques for Obstacle Avoidance in Autonomous Ground Vehicles", 105th Indian Science Congress, Bengaluru.

47. **Promit Kumar Saha**, **Shashank Shekhar**,Vijaya Laxmi**,** P.R Thakura,(2019)."Improved Speed Response of ECM Drive Using Antiwindup Concept". 3rd International conference on Electronics, Communication and Aerospace Technology(ICECA), (DOI: 10.1109/ICECA.2019. 8822174)

48. **Subhranil Das**, Sudhansu Kumar Mishra**,** (2019) "A Review on Vision Based Control of Autonomous Vehicles Using Artificial Intelligence Techniques," 2019 International Conference on InformationT echnology (ICIT), Bhubaneswar, India, pp.500-504, doi :10.1109/ ICIT48102. 2019. 0009.

49. **Deep Shekhar Acharya**, Sudhansu Kumar Mishra, (2019). "Baishali Sarkar and Divya Bharti, Fractional Order Particle Swarm Optimization to optimize a Fractional Order PID Controller for a Vertical Take-Off and Landing System,ICETSGAI4.0,BIT,Mesra,Ranchi.

50. **Deep Shekhar Acharya**, Sudhansu Kumar Mishra, (2019). "Shudit Kumar and Shubham Kumar, Design of 2-Degree of Freedom Fractional Order PID Controller for Magnetic Levitation Plant with Time Delay, ICETSGAI4.0, BIT,Mesra,Ranchi.

51. **Vagisha Vartika**, **Swati Singh**, **Subhranil Das**, Sudhansu Kumar Mishra and Sitanshu Sekhar Sahu, (2019). A Review on Intelligent PID Controllers in Autonomous Vehicle, ICETSGAI4.0, BIT, Mesra, Ranchi.

52. **P. Dubey** and S. Chakraborty, (2019). "Avoidance of the relapse condition of Prostate Cancer using Super-twisting Sliding Mode Control," 2019 International Conference on Intelligent Computing and Control Systems (ICCS), Madurai, India, pp. 92-97, doi: 10.1109/ ICCS45141.2019.9065721.

53. **S. Gope** and S. Chakraborty, (2019). "Stabilization & Synchronization of Rössler System using T-S Fuzzy Controller," 2019 International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN), Vellore, India, pp.1-6, doi: 10.1109/ ViTECoN.2019.8899709.

54. **A. K. Gupta**, S. Kumar Swain, S. K. Mishra, T. Datta and S. Chakraborty, (2019). "Improved Turning Angle Calculation for an Unmanned Ground Vehicle," 2019 International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN), Vellore, India, 2019, pp. 1-4, doi: 10.1109/ViTECoN.2019.8899403.

55. **Ankita Ranjan,** Sarbani Chakraborty, (2019). "Phase Portrait Analysis of Continuous Stirred Tank Reacor (CSTR)", 5th International Conference on Nano-electronics, Circuits & Communication Systems (NCCS-2019), Ranchi, India, Springer, LNEE (Accepted).

56. **Rohit Kumar**, **Sourav Kumar Sahu**, Dr. Debomita Ghosh and Sarbani Chakraborty, (2019). "A Multi HIL Based Approach for Real-time phasor data Monitoring using Phasor Measurement Unit" International Conference on Emerging Trends for Smart-grid Automation and Industry 4.0, Ranchi, India,Springer, LNEE (Accepted).

57. **Shilpee Kumar**, Sarbani Chakraborty, T.S Chandra, (2020). "Attitude Determination and Control of Gravity-Gradient Controlled Nanosatellites", 107th Indian Science Congress,Bangalore, pp 164-165.

58. **Paraj Ganchaudhuri** and Sarbani Chakraborty, (2020). "SMC tracking control of 2-link robotic manipulator subjected to external disturbances", accepted for IEEE International Conference for Emerging Technology (IEEE INCET 2020), Belgaum, India.

59. **Ankita Ranjan**, Sarbani Chakraborty and Vijaya Laxmi, (2020). "Gain Scheduled Feedback Controller Design for a Nonlinear Continuous Stirred Tank Reactor", accepted for publication in International conference on Emerging Frontiers in electrical and electronic Technologies (ICEFEET-2020).

60. **Kumar S.,** Chakraborty S, (2019) "Phase Portrait Analysis of Small Satellites: With and Without Torque". In Lecture Notes in Electrical Engineering book series (LNEE, volume 556), pp 451-463, Springer, Singapore, eBook ISBN 978-981-13-7091-5.

61. **Praneeth Kumar Pedapati**, Santanu Kumar Pradhan and Surendra Kumar, (2019) "Kinematíc Control of an Autonomous Ground Vehicle using Inverse Dynamics Controller", In the proceedings of International Conference on emerging trends for smart grid automaton and Industry 4.0 (ICETSGA14.0 2019), springer, (Presented).

62. **Promit Kumar Saha**, **Shashank Shekhar**, Vijaya Laxmi, P. R. Thakura, (2019) " Improved Speed Response of ECM Drive Using Antiwindup Concept " ICECA , RVS technical Campus, Coimbatore, India.

63. **Niteesha Kumari**, S. Shiva Kumar, V. Laxmi**,** (2019). "Modified MPPT Topology: A Comparative Analysis ", IEEE 16th India Council International Conference (INDICON), Rajkot, Gujrat.

64. **Mriduwani Verma**, S. Shiva Kumar, **Samarjeet Singh**, **Niteesha Kumari**, V. Laxmi, (2019) Hardware Design of SEPIC Converter for Battery Charging Application Through PV using P&O MPPT Algorithm, Proceedings of the 3rd International Conference on Microelectronics, Computing and Communication Systems, pp. 465-479, (Springer).

65. **Ankita Ranjan**, V. Laxmi**,** S. Chakraborty, (2020) Gain-scheduled Feedback Controller Design for a Nonlinear Continuous Stirred Tank Reactor, ICEFEET-2020,Patna.

66. **Sourav Chakraborty,** Deepak Kumar, (2019) "Closed Loop V-f Control Strategy for PV-Battery Energy Storage System in Stand-Alone Microgrid" LNEE Book Chapter, Springer, Proceedings of ICETSGAI4.0 (Accepted in Springer Conference).

67. **P Arvind**, Deepak Kumar**,** P.R. Thakura, (2019). "PV-fed Single Stage Boost Inverter for an Islanded Operation" LNEE Book Chapter, Springer, Proceedings of ICETSGAI4.0 (Accepted in Springer Conference).

68. **Nada Ali**, Deepak Kumar, (2019). "State of the Art Review on Microgrid Control Strategies and Power Management with Distributed Energy Resources" LNEE Book Chapter, Springer, Proceedings of ICETSGAI4.0 (Accepted in Springer Conference).

69. **Sumit Kumar Jha** and Deepak Kumar, (2019). "Enabling the Technologies for incorporating Battery Energy Storage System with Standalone Microgrid" LNEE Book Chapter, Springer, Proceedings of ICETSGAI4.0 (Accepted in Springer Conference).

70. **Soumadeep Roy**, **Saurabh Nayar**, Surendra Kumar, Aftab Alam, T. Ghose, (2019). "Bidirectional Power Flow in DC Microgrid and its Islanding Detection Using Support Vector Machine." International Conference on Intelligent Computing and Control Systems [ICICCS 2019], BIT Mesra, IEEE.

71. **Shalini Sinha**, T. Ghose, (2019). " Operation of virtual droop resistance based parallel connected boost converter for power sharing & minimization of circulating current in DC microgrid", International Conference on 'Emerging Trends for Smart Grid Automation and Industry 4.0, BIT Mesra, Springer.

72. **Saurabh Nayar**, T. Ghose, (2019). "Power Sharing And Management Through Power Based Droop Control in DC microgrid", 2019 3rd International conference on Electronics, Communication and Aerospace Technology (ICECA), 978-1-7281-0167-5, BIT Mesra, IEEE.

73. **Shivaditya Chatterjee**, Aftab Alam, T. Ghose, (2019). **"**Evaluation of the performance of droop control scheme for interlinking converter in standalone hybrid microgrid" International Conference on 'Emerging Trends for Smart Grid Automation and Industry 4.0', 2019-20, BIT Mesra.

74. **Fazle Kibriya**, **Dinesh Kumar Mahto**, **Anant Milan Khalkho**, Tarkeshwar Mahto, Dusmanta Kumar Mohanta, (2019). "Determination of Voltage Control Area Based on Bus Coherency Using Synchronized Phasor Measurements", TENCON 2019 - 2019 IEEE Region 10 Conference (TENCON), Kochi, India, pp. 1869-1874. (**DOI:** 10.1109/TENCON.2019.8929262).

75. **Goswami G**, P.R Thakura, (2020). "Torque and Current Noise Reduction of BLDC Motor Using Fuzzy Logic Control Strategy." In: Sahana S., Bhattacharjee V. (eds) Advances in Computational Intelligence. Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore. https://doi.org/10.1007/978-981-13-8222-2_3.

76. **Prabhat Ranjan Tripathi**, Ritesh Kumar Keshri, P.R Thakura, (2019). " Low Total Harmonic Distortion Quadruple Gain Boost Inverter" IECON 2019-45th Annual Conference of the IEEE Industrial Electronics Society.

77. **P Arvind**, Deepak Kumar**,** P.R Thakura, (2019). "Assessment of single stage three phase Boost Inverter for an Islanded Microgrid." 3rd International Conference on Electronics, Materials Engineering & Nano-Technology (IEMENTech). https://doi.org/10.1109/IEMENTech48150.2019. 8981143

78. **Sourav Chakraborty**,Deepak kumar, P.R Thakura, (2019). "PV-fed Dual -Stage Closed Loop V-f Control Scheme of Stand Alone Microgrid". 3rd International Conference on Electronics, Materials Engineering & Nano-Technology (IEMENTech). (**DOI:**10.1109/IEMENTech 48150.2019.8981119).

79. **Shasank Shekhar**, **Promit Kumar Saha**, P.R. Thakura, (2019). "Optimal PID Tuning of BLDC Drive using LQR Technique." IEEE International Conference on Intelligent Systems and Green Technology (ICISGT) (**DOI:** 10.1109/ICISGT44072.2019.00028).

7.2 Achievements of Students

Sr. No.	Name of Student	Achievement/ Position/ Award etc	Organised by	Date and Venue
1.	Sourya Krishna	Rank 50 in GATE		2020
2.	Kishan Kumar	Rank 5059 in GATE		2020
3.	Richa Raj	Rank 7089 in GATE		2020
4.	Pallavi Singh	Rank 9141 in GATE		2020
5.	Jyothir Latha Aakula	Rank 5560 in GATE		2020
6.	J. Sudarshan Nayak	Certificate 'C'of NCC		2019
7.	Salini Mohapatra	Certificate 'C'of NCC		2019
8.	Vivek Gupta	Runner UP, BC Talent Development Program	ZS Associates	2020

7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
1.	NBA Compliance Visit	07.02.2020-09.02.2020	
2.	BoS Meeting	03.01.2020	
3.	Shri P. K. Agarwal Director and CISO, Power System Operation Corporation Limited (POSOCO) in International conference on Emerging Trends for Smart Grid Automation and Industry 4.0 (ICETSGAI4.0)	05.12.2019-07.12.2019	 

7.4 Any other relevant information

1. Dr. D. K. Mohanta appointed as Editor, Advances in Smart Grid Automation and Industry 4.0 - Select Proceedings of ICETSGAI4.0, Springer Lecture Notes in Electrical Engineering Series.
2. Dr. D. K. Mohanta delivered lecture as Key-note speaker for a Five days Short Term Course on "Microgrid Opportunity: Renewable energy resources and Buildings" (Sponsored by TEQIP) during June 16-20, 2020 at Dayalbagh Educational Institute (DEI), Agra.
3. Dr. D. K. Mohanta appointed as Scientific Advisory Committee Member, The 4th Renewable Energy Sources - Research and Business conference (RESRB) 2019, July 8-9, 2019 in Wrocław (Poland).
4. Dr. D. K. Mohanta appointed as Member, Technical Program Committee for the 9th International Conference on Intelligent Systems and Applications, June 28 - July 02, 2020, Athens, Greece.
5. Dr. D. K. Mohanta appointed as Member, Technical Program Committee for the 7th International Conference SPIN 2020, February 27-28, 2020, Delhi, India.
6. Dr. D. K. Mohanta appointed as Member, Technical Advisory Committee for the 1st International Conference ELECTROCON-2019, October 19, 2019, India.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

SECTION 1 DEPARTMENT PROFILE

1.1 About the Department:

The Department of Electronics and Communication Engineering is one of the largest Departments of the Institute having largest students strength. Due to its modern infrastructure and exposure given to the students, it is one of the elite Departments in India. The Department has modern laboratories and support facilities in all major areas of Electronics and Communication. The Communication laboratories are well equipped with Analog Communication kits and Digital Communication Kits. VSIM Software is also available in the laboratory for designing of wired, wireless and mobile communication systems. The Fiber Optic Laboratory is well equipped with He-Ne Laser Source, Laser Source, Tunable Laser Source, Optical Spectrum Analyzer, Optical Time Domain Reflectometer, Monochromator, Multiplexers, CCD camera, BSO crystal, Vibration Isolation Table, Newport Kit, Falcon Kits and various types of fibers. Recently, Beam Prop software has been installed in the laboratory. Department also has an Advanced Instrumentation Lab which includes Data Acquisition Cards (DAC) from National Instruments and LabView software for real time calibration and measurement experiments. This lab also has acquired a new PLC of Mitsubishi make. The Department has a well-equipped VLSI Design lab. Primary area of research in VLSI lab consists of full-custom Application Specific Integrated Circuits (ASIC) and processors involving analog, digital and mixed signal processing. For this purpose the Cadence software is available which provides full custom with front end and back end facility. Industry compatible design libraries like UMC90nm, SCLPDK180nm are available with us. Our design has been selected for fabrication in SCL Chandigarh and the final product is going to be utilized by SAC ISRO Ahmedabad. VLSI Design has the latest VCU108 FPGA kit for IoT based applications. Number of R&D Projects are running in this lab such as DST (Dr. Vijay Nath), DRDO(Dr. Vijay Nath), MHRD (Dr. Vijay Nath), ISRO (Dr. Vijay Nath), SERB (Dr. S. Kundu), SERB-EMR (Dr. A. Islam). Project outcomes are national and social welfare. Number of UG, PG and PhD. Students are using this lab for academic and research purposes. The Advanced Communication Lab is equipped with GPS Trainer Kit, Satellite Communication Trainer Kit, Mobile Communication Trainer Kit and CDMA - 111 Trainer Kit. This Laboratory also has a Scalar Network Analyzer with Plotter (22 GHz), Spectrum Analyzer, Sweep Oscillators, Pattern Generator and Signal Generator. The Antenna Lab is equipped with most sophisticated and modern equipments such as 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), MIC Kit for S-parameter characterization of Microwave Integrated Circuits, Antenna measurement facility and a small Anechoic Chamber. The Lab also has design software such as IE3D, HFSS, Fidelity, and MD Spice. The MIC Fabrication Lab has been set up with Ultra Violet exposure, Ovens, Spinners, all required for fabrication of high precision microwave integrated circuits. The laboratory is also supplemented with software Sonnet, Advanced Design System, CST and AWR used for simulation of all kinds of microwave circuits. An International Center for Wireless and Mobile Communication has been incorporated to the Department of Electronics & Communication Engineering, BIT Mesra, under ASIA-LINK programmer.

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	RESPOND, ISRO Bangalore India	15th Nov 2015	25.0 lakhs	2015-2020
2.	Computational identification and Validation of genome-wide Protein-protein interaction network in rice and rice blast	Dr. Sitanshu Sekhar Sahu	SERB, DST	13th June 2017	22.62 Lakhs	2017-2020
3.	Modernization of CMOS and Compound Semiconductor Devices and Circuit Laboratory	Dr. Vijay Nath (Co-PI) Dr. S.Pal (PI)	MODROBs AICTE, New Delhi	12th Dec2019	6.8 lakhs	2020-2022
4.	Automated sleep stages classification using advanced wavelet based techniques	Dr. Sitanshu Sekhar Sahu	NPIU, MHRD	18th June 2019	14.42 Lakhs	2019-2020
5.	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 Lakhs	2018-2021
6.	MEMS based piezoelectric energy harvestor for implanted medical devices	N. Chattoraj (Co-PI) Dr. S. Kundu (PI)	SERB (Science & Engineering Research Board) ECR/2016/ 001279	ECR/2016/001279 Date 24-03-2017	38,86 Lakhs	2017-2020

SECTION 3 SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses Conducted

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator/s	Funding / Sponsoring Agency	Date of Event (dd.mm.year)
1.	One-week STTP on 5G Mobile Communication Networks	Dr. Sanjay Kr. Dr. Sanjeet Kr. Mr. J. Sahay	Self-Finance (Through candidate's Registration Fee)	09.12.2019 to 13.12.2019

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 (dd. mm.year)
1.	Vibha Rani Gupta	Digital Transformation In Teaching Learning Process	TEQIP 3	IIT Bombay	Online	6.04.2020 - 22.04.2020
2.	Anjini Kumar Tiwary	Digital Transformation In Teaching Learning Process	TEQIP 3	IIT Bombay	Online	06.04.2020 - 22.04.2020
3.	Nisha Gupta	Digital Transformation In Teaching Learning Process	TEQIP 3	IIT Bombay	Online	06.04.2020 - 22.04.2020
4.	Priyank Saxena	ISI-ICTP Summer School on Internet of Things	TEQIP 3	ISI, Kolkata	ISI, Kolkata	22.07.2019 - 25.07.2019
		FDP program for Student Induction (FDP-SI)		AICTE	BIT, Mesra	13.12.2019-15.12.2019
5.	Rupesh Kumar Sinha	ISI-ICTP Summer School on Internet of Things	TEQIP 3	ISI, Kolkata	ISI, Kolkata	22.07.2019 - 25.07.2019
		FDP program for Student Induction (FDP-SI)		AICTE	BIT, Mesra	13.12.2019-15.12.2019
6.	Soumya Sidhishwari	National Webinar on Artificial Intelligence		Jharkhand Information and Library Association (JILA), Ranchi	Online	27.05.2020
		Digital Transformation In Teaching Learning Process	TEQIP 3	IIT Bombay	Online	06.04.2020 - 22.04.2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date (dd. mm.year)
7.	Sanjeet Kumar	Digital Transformation In Teaching Learning Process	TEQIP 3	IIT Bombay	Online	06.04.2020 - 22.04.2020
		One Week matlab project course on "5G Wireless Technologies: Massive MIMO, mmWave, NOMA, Full Duplex, OFDM/FBMC, NB-IoT"	TEQIP 3	IIT Kanpur in association with Ramaiah Institute of Technology, Bengaluru	Ramaiah Institute of Technology, Bengaluru	08.07.2019 to 14.07.2019
8.	Vishal H Shah	Digital Transformation in Teaching Learning Process	TEQIP 3	IIT Bombay	Online	6.04.2020 - 22.04.2020

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals : (International/National)

1. Meenaketan Babu L P, Pal Srikanta, & Chattoraj Neela (2019). Electromagnetic forward and inverse scattering analysis of a one-dimensional collision system. International Journal of RF & Microwave Computer-Aided Engineering, 29, (8), e21760.
2. Meenaketan Babu L P, Pal Srikanta, & Chattoraj Neela (2019). A Novel Approach for Electromagnetic Inverse Scattering of a Two-Dimensional Perfect Electric Conductor Object. International Journal of RF & Microwave Computer-Aided Engineering, 29, (11), e21908.
3. Chakraborty M, Pal S, & Chattoraj Neela (2019). Quad Notch UWB Antenna Using Combination of Slots and Split Ring Resonator. International Journal of RF and Microwave Computer-Aided Engineering, 30, (3), e22086.
4. Dubey Shashank Kumar, Pal S & Islam Aminul (2019). A 2.4 GHz double balanced down conversion mixer with improved conversion gain in 180-nm technology. Microsystem Technologies, 26, 1721-1731.
5. Singh Shailendra, Upadhayay Madhur Deo, Pal Srikanta (2020). OAM Wave Generation Using Square Shape Patch Antenna as Slot Array Equivalence. IEEE Antennas and Wireless Propagation Letters, 19, (4), 680-684.
6. Ghazali Abu N., Sajid Mohd, & Pal Srikanta (2020). A Miniaturized Low-cost Microstrip-to-CPW Transition based UWB-BPF with Multiple Transmission Zeros. Microwave and Optical Technology Letters, 1-6.
7. Kumar Abhishek, Upadhyay Dileep Kumar, & Pal Srikanta (2020). Design of the Quasi-0 dB Backward Wave-Coupled Line Coupler using CRLH-TL based on Stepped - Impedance Open Stub-Loaded Dual-mode Resonator. Journal of Electromagnetic Waves and Applications, 34, (7), 849-868.
8. Mishra Debasish, Gupta Abhinav, Rajib Pranav, Kumar Aman, Anwarb Saad, Pal Surya K., Chakravarty Debashish, Pal Srikanta, Chakravarty Tapas, Pale Arpan, Mishra Prateep, Mishra

Sudip (2020). Real time monitoring and control of friction stir welding process using multiple sensors. CIRP Journal of Manufacturing Science and Technology, 30, 1-11.

9. Patro K A K, Acharya B, & Nath V (2019). Secure Multilevel permutation diffusion based image encryption using chaotic and hypo chaotic. Microsystem Technologies, 25, 4593-4607.
10. Priyadarshi R, & Nath V (2019). A novel diamond-hexagon search algorithm for motion estimation**.** Microsystem Technologies, 25, 4587-4591.
11. Maiti M, Saw SK, & Nath V, Majumdar A(2019). A power efficient PFD-CP architecture for high speed clock and data recovery application. Microsystem Technologies 25, 4615-4624.
12. Shylashree N., Sangeetha B.G.,Thonse A, & Nath V (2019) $Ge_4Sb_1Te_5$ device case study for NVRAM applications, Microsystem Technologies 25, 4609-4613.
13. Patro KAK, Acharya B, & Nath V (2020). Secure, Lossless and Noise-resistive Image Encryption using chaos, Hyper-chaos and DNA sequence operation, IETE Technical Review, 37, 223-245.
14. Paliwal P., Sharma J.B., Nath V (2020). Comparative study of FFA architectures using different multiplier and adder topologies, Microsystem Technologies, 26, 1455-1462.
15. Verma V.K., Ranjan R.K., Lekshmi V., Azad A.K., Appasani B., Nath V. (2020). A second generation current conveyor based PID controller optimized using a crossover improved genetic algorithm, Microsystem Technologies 26, 1449-1454.
16. Patro KAK, Acharya B, Nath V (2020). Various dimensional colour image encryption based on non-overlapping block-level diffusion operation. Microsystem Technologies 26, 1437-1448.
17. Karan B., Sahu S.S., Mahto K (2020). Parkinson disease prediction using intrinsic mode function based features from speech signal, Biocybernetics and Biomedical Engineering, 40, 249-264.
18. Sahu S.S., Loaiza C.D., Kaundal R (2019). Plant-mSubP: a computational framework for the prediction of single and multi-target protein subcellular localization using integrated machine-learning approaches. AoB PLANTS, 12 (3), plz068.
19. Nayan N., Sahu S.S., Kumar S. (2019). Detecting anomalous crowd behavior using correlation analysis of optical flow, Signal, Image and Video Processing, 13(6). 1233-1241
20. Sinha R.K. and Sahu S.S. (2019). Adaptive firefly algorithm based optimized key generation for image security. Journal of Intelligent & Fuzzy Systems, 36 (5), 4437-4447
21. Kumar S, Saraiyan S, Dubey S K, Pal S & Islam A (2020). A 2.4 GHz Double Balanced Downconversion Mixer with Improved Conversion Gain in 180-nm Technology. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 26, (5), 1721–1731.
22. Roy C & Islam A (2020). Characterization of Single-Ended 9T SRAM Cell. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 26, (5), 1591–1604.
23. Dubey S K & Islam A (2020). Design of Resistive Random Access Memory Cell and Its Architecture. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 26, (4), 1325–1332.

24. Pal S, Bose S & Islam A (2020). Design of SRAM Cell for Low Power Portable Healthcare Applications. Microsystem Technologies-Micro-and Nanosystems -Information Storage and Processing Systems, 104, (1), 47–59.

25. Pal S, Bose S, Ki W & Islam A (2020). A Reliable Write Assist Low Power SRAM Cell for Wireless Sensor Network Applications. IET Circuits, Devices & Systems, 14, (2), 137-147.

26. Pal S, Bose S, Ki W & Islam A (2020). A Highly Stable Reliable SRAM Cell Design for Low Power Applications. Microelectronics reliability, 105, 1-11.

27. Pal S, Bose S, Ki W & Islam A (2020). Half-Select Free Low Power Dynamic Loop-Cutting Write Assist SRAM Cell for Space Applications. IEEE Transactions on Electron Devices, 67, (1), 80-89.

28. Pal S, Bose S, Ki W & Islam A (2020). Characterization of Half-select Free Write Assist 9T SRAM Cell. IEEE Transactions on Electron Devices, 66, (11), 4745-475.

29. Pal S, Gupta V, & Islam A (2019). A Transmission Gate Based 9T SRAM cell For Variation Resilient Low Power and Reliable Internet of Things Applications. IET Circuits, Devices & Systems, 13, (5), 584-595.

30. Pal S, Bose S, Ki W, & Islam A (2019). Design of Power-and Variability-Aware Nonvolatile RRAM Cell Using Memristor as a Memory Element. IEEE Journal of the Electron Devices Society, 7, (1), 701-709.

31. Pal S, Gupta V & Islam A (2019). Design and Development of Memristor-Based RRAM. IET Circuits, Devices & Systems, 13, (4), 548-557.

32. Suraj Priyadarshi, & Gupta Vibha Rani (2020). Gain Enhancement of a Quad Notched CPW Fed Uwb Antenna. Microwave and optical Technology letter, 62, 1752-1759.

33. Biswas Arumita, & Gupta Vibha Rani (2020). Design Aspects of 5G: Frequency Allocation Services and MIMO Antennas. Engineering and Applied Science Research, 47, 103-110.

34. Biswas Arumita, & Gupta Vibha Rani (2020). Design and development of multi-band multi-generation compatible MIMO antenna for wireless devices. Engineering and Applied Science Research, 47, 77-86.

35. Biswas Arumita, & Gupta Vibha Rani (2020). Design and Development of Low Profile MIMO Antenna for 5G New Radio Smartphone Applications. Wireless Personal Communication, 111, 1695-1706.

36. Kumari Sakshi, & Gupta Vibha Rani (2019). Super UltraWideband Planar Inverted F Antenna on Paper based Substrate with Low SAR. ECTI Transactions on Electrical Engineering, Electronics, and Communications, 17, 204-213.

37. Hosain M, Kumari S & Tiwary Anjini Kumar (2020). Sunflower shaped fractal filtenna for WLAN and ARN application. Microwave and Optical Technology Letters, 62, 346-354.

38. Verma V K, Mishra S K, Kaushal K K, Lekshmi V, Sudhakar S, & Gupta N, Appasani B (2020). An Octaband Polarization Insensitive Terahertz Metamaterial Absorber Using Orthogonal Elliptical Ring Resonators. Plasmonics, 15, 75-81.

39. Pandey A K, & Gupta N (2020). An energy efficient distributed queuing random access (EE-DQRA) MAC protocol for wireless body sensor networks. Wireless Networks, 26, 2875–2889.

40. Pandey A K, & Gupta N (2019). An Energy Efficient Clustering-based Load Adaptive MAC (CLA-MAC) Protocol for Wireless Sensor Networks in IoT. International Journal of Wireless and Microwave Technologies, 9. (5), 38-55.

41. Rajak Neha, Chattoraj Neela and Mark Robert (2019). Metamaterial Cell Inspired High Gain Multiband Antenna for Wireless Application. AEU-International Electronics and Communications, 109, 23-30.

42. Sharan Nishant, & Ghorai S.K (2020). PAPR Reduction and Non-linearity Alleviation using Hybrid of Precoding and Companding in a Visible Light Communication (VLC) System. Optical and Quantum Electronics, 52, 304.

43. Kumar A, & Ghorai S. K. (2020). High-gain and volume-efficient concave–convex lens for multiple-input multiple-output visible light communication system. Optical Engineering, 59, (3), 035106.

44. Mukherjee Ramtanu, Ghorai S. K., Gupta Bharat, & Chakravarty Tapas (2020). Development of a Wearable Remote Cardiac Health Monitoring with Alerting System. Instruments and Experimental Techniques, 63, (2), 273–283.

45. Kumar A, & Ghorai S. K.(2020). BER Performance Analysis of OFDM based Integrated PLC and MIMO-VLC System. IET Optoelectronics, 1-11.

46. Kumar A, & Ghorai S. K. Effect of LED Radiation Pattern on BER Performance in Indoor Multipath MIMO-VLC System. Wireless Personal Communications, 1-18.

47. Ojha Mukesh Kumar and Mukul Manoj Kumar (2020). Frequency Recognition in SSVEP-based BCI using EMD CCA Technique. International Journal of Advanced Science and Technology, 29, (12), 1029-1036.

48. Ojha Mukesh Kumar, Mukul Manoj Kumar, Nath Ravinder Rajotia, Tyagi Nitin (2019). Frequency Detection of Single channel Steady State Visual Evoked Potential using Canonical correlation Analysis, International Journal of Recent Technology and Engineering (IJRTE), 8, (3S2), 136-139.

49. Kumar R. S. and Saxena Priyank (2019). A locally adaptive edge preserving filter for denoising of low dose CT using Multi-level fuzzy reasoning concept. International Journal of Biomedical Engineering & Technology, 31, 388-404.

50. Sahay Janardan and Kumar Sanjay (2020). Compact reconfigurable triple notch ultra-wideband bandpass filter for cognitive radio system. Int. J. Computational Vision and Robotics, 10, (4). 337-344.

51. Sidhishwari Soumya , Basu Mainak, & Ghorai S. K. (2019). A Modal interference-based Fiber Optic Sensor for Dual Parameter Measurement using an Artificial Neural Network. Optical Fiber Technology, 50, 216–224.

52. Dash Prajna Parimita and Patra Dipti (2019). Mutation based Self Regulating and Self Perception Particle Swarm Optimization for Efficient Object Tracking in a Video. Measurement. Elsevier, 144, 311-327.

53. Dash Prajna Parimita, and Patra Dipti (2020). An efficient hybrid framework for visual tracking using Exponential Quantum Particle Filter and Mean Shift Optimization. Multimedia Tools and Applications, Springer, 79, (29), 21513-21537.

54. Kumar Manish, Mishra S. K., Choubey S. K., Tripathy S S , Choubey D. K. , Das Dinesh (2020). Cat Swarm Optimization based Functional Link Multilayer Perceptron for Suppression of Gaussian and Impulse Noise from Computed Tomography Images, Current Medical Imaging Reviews. Bentham Science. 16, (4), 329-339.

55. Asheer S, & Kumar Sanjeet (2020). Lifetime Enhancement of a WSN Through Duty Cycle in an Aggregation Based Cooperative MIMO Framework. Wireless Pers Commun, 112, 1783–1808.

4.2 Publications in Proceedings:

1. Saha Abhirupa, Basak Piyali, Sanjib, Sil, Gupta Bhaskar, and Pal, Srikanta. (2020). Meta sensing Ovarian Cancer Cells at THz from C Band Radiation. 6th International Conference on OPTRONIX**,** UEM, Kolkata, 8-10 June 2020

2. Saha, Abhirupa. Basak, Piyali. and Pal, Srikanta (2020). A THz Metasurface Coated SoC For SPR Excited Carcinoma Sensing. International Conference On Electrical And Electronics Engineering (ICE3 2020), 723-727.

3. Singh, Shailendra. Upadhayay, Madhur Deo. and Pal, Srikanta (2020). Dual-Band Triple Mode OAM Generation Using Annular Slot Microstrip Radiator. 7th International Conference on Signal Processing and Integrated Networks (SPIN 2020), Amity University, Delhi-NCR, India 27-28 February 2020, IEEE, DOI: 10.1109/SPIN48934.2020.9071390.

4. Singh, Shailendra. Upadhayay, Madhur Deo. and Pal, Srikanta (2020). OAM Wave Generation Using Inner feed Annular Slot Microstrip Radiator. 7th International Conference on Signal Processing and Integrated Networks (SPIN 2020), Amity University, Delhi-NCR, India 27-28 February 2020, IEEE, DOI: 10.1109/SPIN48934.2020.9071174.

5. Karan, B. Sahu, S S. and Mahto, K. (2020). Stacked auto-encoder based Time-frequency features of Speech signal for Parkinson disease prediction. IEEE International Conference on Artificial Intelligence and Signal Processing, 1-4. ISBN: 978-1-7281-4458-0

6. Mahapatra, S. and Sahu, S.S. (2020). Boosting predictions of Host-Pathogen protein interactions using Deep neural networks. IEEE International Students' Conference on Electrical, Electronics and Computer Science, 1-4. ISBN: 978-1-7281-4862-5

7. Mahapatra, S. Kumar, A., Sharma, A. and Sahu, S.S. (2020). Effect of Dimensionality Reduction on Classification Accuracy for Protein–Protein Interaction Prediction. Advanced Computing and Intelligent Engineering, 3-12 ISBN: 978-981-15-1080-9

8. Karan, B. Mahapatra S. and Sahu, S.S. (2019). Prediction of Protein Interactions in Rice and Blast Fungus Using Machine Learning. IEEE International Conference on Information Technology, 33-36. ISBN**:** 978-1-7281-6052-8

9. Vansh, V. Kumar, C. Anil, C.R. and Sahu, S.S. (2020). Improved Face detection using YCbCr and Adaboost. Computational Intelligence and Data Mining, 689-699. ISBN: 978-981-13-8675-6

10. Anu, Sri and Sahu, S.S. (2019). Improved fractal-SPIHT hybrid image compression algorithm. IEEE International Conference on Computing, Communication and Networking Technologies (ICCCNT), 1-4. ISBN: 978-1-5386-5906-9

11. Kumari, S. Swain, S. K. Sahu, S.S. Kumar, A. Kumar, P. and Gupta, B. (2019). A Closed loop robust controller for SSHI based piezoelectric energy harvester. Computer-Aided Developments in Electronics and Communication, 113-119. ISBN: 978-0-429-34071-0

12. Kumari S., Gupta, V. R. (2019). Characterization of Laminated Paper based Substrate for the ISM Band Antenna Design, Lecture Notes in Engineering and Computer Science. Proceedings of The World Congress on Engineering and Computer Science 2019, 124-128, ISBN: 978-988-14048-7-9.

13. Biswas Arumita, Gupta, Vibha Rani (2019). Multiband Antenna Design for Smartphone Covering 2G, 3G, 4G and 5G NR frequencies. 3rd International Conference on Trends in Electronics and Informatics (ICOEI 2019), 84-87, ISBN: 978-1-5386-9440-4.

14. Kumari, Sakshi, Singh Shivali, Gupta, Vibha Rani (2019). Paper Based Conformal Antenna.

3rd International Conference on Trends in Electronics and Informatics (ICOEI 2019), 170-173, ISBN: 978-1-5386-9440-4.

15. Tirkey, Manish Mathew, and Gupta, Nisha (2019). Design Simulation and Analysis of a Polarization-Independent Ultrathin Pixelated Metasurface Absorber. IEEE MTT-S International Microwave and RF Conference (IMARC), 13-15, ISBN: 978-1-7281-4040-7

16. Anand, Satvika, Mukul, M K (2019). Early Epileptic seizure detection, 10th International Conference on Computing, Communication and Network Technologies (ICCCNT), ISBN: 978-1-5386-5906-9

17. Kumar, A. and Ghorai, S K. (2019). Performance of MIMO-VLC System for Different Radiation Patterns of LED in Indoor Optical wireless Communication System. IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), Goa, India, 1-5. ISBN: 978-1-7281-3715-5.

18. Kumar, Abhinav and Saxena, Priyank (2019). Quantification of Cartilage loss for Automatic Detection and Classification of Osteoarthritis using Machine Learning approach. 10th International Conference on Computing, Communication and Network Technologies (ICCCNT), Kanpur, India, ISBN: 978-1-5386-5906-9.

19. Deopa, Ashish, Sinha, Abhishek, Prakash Aditya, and Sinha, Rupesh Kumar (2019). Facial Expression Recognition using Convolutional Neural Network and SoftMax function on Captured Images. Proceedings of the Fourth International Conference on Communication and Electronics Systems (ICCES 2019), 273-279, ISBN: 978-1-7281-1261-9

20. Srivastava, Sourabh, Dash, Prajna Parimita and Kumar Sanjay (2020). Analysis of NOMA: in Capacity Domain. International Symposium on 5G & Beyond for Rural Upliftment, ISBN: 9788770222174

21. Dash, Prajna Parimita, Mishra, Sudhansu Kumar and Patra, Dipti (2020). Animal tracking in wildlife footage with Quantum Particle Filter (QPF). IEEE, 18th International Conference on Information Technology, 515-520, ISBN: 978-1-7281-6052-8.

4.3 Book:

4.3.1 Co-Authored

1. Nath, Vijay, Mandal, J. K. (Eds.)(2020). Nanoelectronics, Circuits and Communication Systems, Proceeding of NCCS 2018, Lecture Notes in Electrical Engineering, Springer, Singapore. ISBN: 978-981-15-2854-5

4.3.2 Chapter(s) in Edited Book:

1. Rao N.S., Prasad D., Nath V. (2020) Broad Band Capacitive Coupling Antenna for C-Band Applications. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_1

2. Surshetty S.K., Anwer S., Deep Y., Gandhi M., Nath V. (2020) Smart Irrigation System Using Custom Made PCB. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_9

3. Surshetty S.K., Anand J., Chowdhury S., Nath V. (2020) Smart Communication in Coal Mines. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_12

4. Surshetty S.K., Oraon A., Kumari R., Shreya S., Nath V. (2020) FPGA-Based Smart Irrigation System. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_14

5. Patel R., Sinha N., Raj K., Prasad D., Nath V. (2020) Smart Healthcare System Using IoT. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_15

6. Goel V., Surshetty S.K., Prasad D., Nath V. (2020) Design and Implementation of an Accurate 3-Bit System-on-Chip (SoC) Flash ADC for Aerospace Application in 90 nm CMOS Technology. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_18

7. Kumar R., Gupta R.P., Sankar M.M., Nath V. (2020) Performance Evaluation of PV Module with Battery Storage in a Microgrid. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_19

8. Kumar A., Oraon A., Agarwal S., Prasad D., Nath V. (2020) Intelligent Streetlight System Using GSM. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_25

9. Sharma V.K., Acharya B., Mahapatra K.K., Nath V. (2020) Learning Discriminative Classifier Parameter for Visual Object Tracking by Detection. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_31

10. Maiti M., Saw S.K., Nath V., Chakraborty S.K., Majumder A. (2020) A 46.8 μW/1.12 GHz 7th Stage New Ring Voltage Controlled Oscillator. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_32

11. Saw S.K., Maiti M., Nath V., Majumder A. (2020) A Current Mode VCO Design Approach for Higher Oscillation Frequency. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_33

12. Sharma A., Deopa A., Ahuja A., Goel V., Nath V. (2020) Internet of Things Based Smart Lighting System Using ESP8266 and Zigbee. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_34

13. Charan R., Kumar A., Harika B., Goel V., Nath V. (2020) IoT-Based Moisture Sensor in Cement Industry. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_45

14. Gupta D., Nayak P.K., Parashar Y., Goel V., Nath V. (2020) Internet of Things for Smart Class Rooms: A Review. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_46

15. Chaudhary G., Agrawal H., Tirkey S., Nath V. (2020) Study and Design of Smart City with Internet of Things: A Review. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_47

16. Garapati S.N., Venkatesh K., Reddy K., Unkili S., Prasad D., Nath V. (2020) Development of Heart Rate Monitoring Controller Using Fingertip Sensors. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_48

17. Prashant, Ritesh, Hrithik, Vishal, Pandey A., Nath V. (2020) Bluetooth-Controlled Electronics Home Appliances. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_49

18. Agarwal S.K., Singh A., Aniraj V., Pandey A., Prasad D., Nath V. (2020) RFID (MF-RC522) and Arduino Nano-Based Access Control System. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_50

19. Bitla S., Santhan S., Bhagat S., Pandey A., Nath V. (2020) Smart Irrigation System: A Review. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_51

20. Kumar R., Abz M., Sinha A., Pandey A., Nath V. (2020) Enactment of Advanced Traffic Control System Using Verilog HDL. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_52

21. Kumari, S. Sahu, S.S. Gupta, B. and Mishra, S.K. (2020) Energy harvesting via human body activities. Smart Biosensors in Medical Care, Elsevier, 87-106. https://10.1016/B978-0-12-820781-9.00005-X

22. Sinha R.K., Agrawal I., Jain K., Gupta A., Sahu S.S. (2020). Image Encryption Using Modified Rubik's Cube Algorithm. In: Sahana S., Bhattacharjee V. (eds) Advances in Computational Intelligence. Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore. https://doi.org/10.1007/978-981-13-8222-2_6

23. Ghosh T., Tiwari S., Sahay J. (2019) MIMO Wideband Antenna Technique in DGS for Enhanced Wireless Communication. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511. Springer, Singapore. https://doi.org/10.1007/978-981-13-0776-8_45

24. Prerna P., Tripathy S.S. (2020) Glucometer: A Survey. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_40

25. Nagi Reva, Tripathy Sanjaya Shankar (2020), Application of Fuzzy Logic in Plant Disease Management, Fuzzy Expert Systems and Applications in Agricultural Diagnosis, pp 261-302, IGI Global, DOI: 10.4018/978-1-5225-9175-7.

26. Asheer S., & Kumar Sanjeet (2020) Design of an Energy-Efficient Cooperative MIMO Transmission Scheme Based on Centralized and Distributed Aggregations. In: Sahana S., Bhattacharjee V. (eds) Advances in Computational Intelligence. Advances in Intelligent

Systems and Computing, vol 988. Springer, Singapore. https://doi.org/10.1007/978-981-13-8222-2_23

27. Nagi R., Tripathy S. S. (2020) Infected Area Segmentation and Severity Estimation of Grapevine Using Fuzzy Logic. In: Sahana S., Bhattacharjee V. (eds) Advances in Computational Intelligence. Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore. https://doi.org/10.1007/978-981-13-8222-2_5

28. Ojha, M.K., Mukul, M. K. Detection of Target Frequency from SSVEP Signal Using Empirical Mode Decomposition for SSVEP Based BCI Inference System. Wireless Pers Commun (2020). https://doi.org/10.1007/s11277-020-07738-9

29. Akhtar Ayesha, Chattoraj Neela, Kundu sudip (2020), Bandwidth Enhancement in MEMS-Based Energy Harvester for Cochlear Implants, Innovative Product Design and Intelligent Manufacturing Systems,ICIPDIMS 19. Lecture Notes in Mechanical Engineering book series, volume 167, Singapore, https://doi.org/10.1007/978-981-15-2696-1

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.	Prof. S. Pal	Senior Member	IEEE, USA	International	2019
2.	Dr. Sanjeet Kumar	Reviewer of innovative ideas/ innovations under INSPIRE Award-MANAK Scheme	National Innovation Foundation, India (DST Govt. of India)	National Level	2019-2020
3.	Dr. Sanjeet Kumar	Reviewer of innovative ideas/ innovations under INSPIRE Award-MANAK Scheme	National Innovation Foundation, India (DST Govt. of India)	National Level	2019-2020

5.2 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	GISFI & CTS, Aarhus University Denmark	Wireless Communication Research	2019
2.	Infineon	T&P	2019
3.	Synopsis	T&P	2019

SECTION 6 **ACTIVITIES/ FACULTY MEMBERS / BOS /DAS**

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Coordinator	Faculty Coordinator	Date / Duration
1.	Online Webinar on insight into Industry.	Dev Gupta, Pratik Kumar, Tanmay Gupta,	Dr. Vijay Nath & Dr. S.S Tripathy	27/06/2020, 04/07/2020-05/07/2020
2.	Online quiz	Tanmay Gupta, Dev Gupta	Dr. Vijay Nath & Dr. S.S Tripathy	29/03/2020
3.	Online series on IOT	Tanmay Gupta, Pratik Kumar	Dr. Vijay Nath & Dr. S.S Tripathy	07/03/2020-25/03/2020
4.	Seminar -How to pursue career in electronics?	Pratik Kumar, Tanmay Gupta, Dev Gupta	Dr. Vijay Nath & Dr. S.S Tripathy	03/02/2020
5.	Workshop on Analog Circuit design	Tanmay Gupta, Pratik Kumar	Dr. Vijay Nath & Dr. S.S Tripathy	02/02/2020-04/02/2020
6.	Workshop on Open CV	Tanmay Gupta, Dev Gupta	Dr. Vijay Nath & Dr. S.S Tripathy	19/10/2019-20/10/2019
7.	Verilog & VHDL Workshop	Dev Gupta Pratik Kumar	Dr. Vijay Nath & Dr. S.S Tripathy	30/10/2019-01/11/2019
8.	Gateway to Analog Electronics	Dev Gupta, Pratik Kumar	Dr. Vijay Nath & Dr. S.S Tripathy	10/08/2019-11/08/2019
9.	Gateway to Digital Electronics	Tanmay Gupta, Pratik Kumar	Dr. Vijay Nath & Dr. S.S Tripathy	08/08/2019-10/08/2019

6.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. Srikanta Pal	Professor & Head	NO
2.	Dr. R. Sukesh Kumar	Professor	NO
3.	Dr. Nisha Gupta	Professor	NO
4.	Dr. S. K. Ghorai	Professor	NO
5.	Dr. V. R. Gupta	Professor	NO
6.	Dr. S. S. Solanki	Professor	NO
7.	Mr. B.B. Pal	Associate Professor	NO
8.	Dr. N. Chattoraj	Associate Professor	NO
9.	Dr. Vijay Nath	Associate Professor	NO
10.	Dr. Aminul Islam	Associate Professor	NO
11.	Dr. Sitanshu Sekhar Sahu	Assistant Professor	NO
12.	Dr. Kartik Mahato	Assistant Professor	NO
13.	Dr. Dileep Kumar Upadhyay	Assistant Professor	NO

Sr. No.	Name	Designation	TEQIP Sponsored
14.	Dr. M. K. Mukul	Assistant Professor	NO
15.	Dr. S. S. Tripathy	Assistant Professor	NO
16.	Mr. Janardan Sahay	Assistant Professor	NO
17.	Dr. Sanjeet Kumar	Assistant Professor	NO
18.	Mr. Vishal H. Shah	Assistant Professor	NO
19.	Dr. S. Sengupta,	Assistant Professor	NO
20.	Mr. S.K. Dash	Assistant Professor	NO
21.	Dr. A.K. Tiwary	Assistant Professor	NO
22.	Dr. Swati Prasad	Assistant Professor	NO
23.	Dr. P. Saxena	Assistant Professor	NO
24	Dr. G.K. Mishra	Assistant Professor	NO
25.	Dr. S. Sidhishwari	Assistant Professor	NO
26.	Mr. Santashrya Prasad	Assistant Professor	NO
27.	Dr. Rupesh Kumar	Associate Lecturer	NO
28.	Dr. Prajna Parimita Dash	Assistant Professor	NO

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Prof. S. Pal	HOD, ECE Chairman (Ex-Officio)	Chairman
2.	Prof. Nisha Gupta	Professor	Internal
3.	Prof. R. Sukesh Kumar	Professor	Internal
4.	Prof. S. K. Ghorai	Professor	Internal
5.	Prof. S. S. Solanki	Professor	Internal
6.	Prof. S. Pal	Professor	Internal
7.	Prof. Vibha Rani Gupta	Professor	Internal
8.	Dr. N. Chattoraj	Associate Professor	Internal
9.	Dr. M. K. Mukul	Assistant Professor	Internal
10.	Dr. D. Mohanta	Professor (EEE)	Internal
11.	Dr. S. Konar	Professor (Physics)	Internal
12.	Prof. Debatosh Guha	Calcutta University	External
13.	Prof. Gautam Saha	IIT, KGP	External
14.	Prof. Iti Saha Mishra	Jadavpur University	External
15.	Prof. Rowdra Ghatak	NIT, Durgapur	External
16.	Prof. Sajal Kumar Paul	IIT-ISM Dhanbad	External
17.	Mr. Atish Dipankar Mitra	Retd, AGM, BEL	External
18.	Dr. Tapas Chakraborty	TCS, Kolkata	External

SECTION 7 OTHER INFORMATION

7.1 Publication by students

1. **Meenaketan Babu L P,** Pal Srikanta, & Chattoraj Neela (2019). A Novel Approach for Electromagnetic Inverse Scattering of a Two-Dimensional Perfect Electric Conductor Object. International Journal of RF & Microwave Computer-Aided Engineering, 29, (11), e21908.
2. **Meenaketan Babu L P,** Pal Srikanta, & Chattoraj Neela (2019). Electromagnetic forward and inverse scattering analysis of a one-dimensional collision system. International Journal of RF & Microwave Computer-Aided Engineering, 29, (8), e21760.
3. **Chakraborty M,** Pal S, & Chattoraj Neela (2019). Quad Notch UWB Antenna Using Combination of Slots and Split Ring Resonator. International Journal of RF and Microwave Computer-Aided Engineering, 30, (3), e22086.
4. **Dubey Shashank Kumar,** Pal S & Islam Aminul (2019). A 2.4 GHz double balanced down conversion mixer with improved conversion gain in 180-nm technology. Microsystem Technologies, 26, 1721-1731.
5. **Singh Shailendra, Upadhayay Madhur Deo,** Pal Srikanta (2020). OAM Wave Generation Using Square Shape Patch Antenna as Slot Array Equivalence. IEEE Antennas and Wireless Propagation Letters, 19, (4), 680-684.
6. **Ghazali Abu N., Sajid Mohd,** & Pal Srikanta (2020). A Miniaturized Low-cost Microstrip-to-CPW Transition based UWB-BPF with Multiple Transmission Zeros. Microwave and Optical Technology Letters, 1-6.
7. **Kumar Abhishek,** Upadhyay Dileep Kumar, & Pal Srikanta (2020). Design of the Quasi-0 dB Backward Wave-Coupled Line Coupler using CRLH-TL based on Stepped - Impedance Open Stub-Loaded Dual-mode Resonator. Journal of Electromagnetic Waves and Applications, 34, (7), 849-868.
8. **Mishra Debasish, Gupta Abhinav, Rajib Pranav, Kumar Aman, Anwarb Saad, Pal Surya K., Chakravarty Debashish,** Pal Srikanta**, Chakravarty Tapas, Pale Arpan, Mishra Prateep, Mishra Sudip** (2020). Real time monitoring and control of friction stir welding process using multiple sensors. CIRP Journal of Manufacturing Science and Technology, 30, 1-11.
9. **Karan B.,** Sahu S.S., Mahto K (2020). Parkinson disease prediction using intrinsic mode function based features from speech signal, Biocybernetics and Biomedical Engineering, 40, 249-264.
10. Sahu S.S.**, Loaiza C.D., Kaundal R** (2019). Plant-mSubP: a computational framework for the prediction of single and multi-target protein subcellular localization using integrated machine-learning approaches. AoB PLANTS, 12 (3), plz068.
11. **Nayan N.,** Sahu S.S., **Kumar S.** (2019). Detecting anomalous crowd behavior using correlation analysis of optical flow, Signal, Image and Video Processing, 13(6). 1233-1241
12. **Kumar S, Saraiyan S, Dubey S K, Pal S** & Islam A (2020). A 2.4 GHz Double Balanced Down conversion Mixer with Improved Conversion Gain in 180-nm Technology. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 26, (5), 1721–1731.
13. **Dubey S K** & Islam A (2020). Design of Resistive Random Access Memory Cell and Its Architecture. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 26, (4), 1325–1332.

14. **Pal S, Bose S** & Islam A (2020). Design of SRAM Cell for Low Power Portable Healthcare Applications. Microsystem Technologies-Micro-and Nanosystems -Information Storage and Processing Systems, 104, (1), 47–59.

15. **Pal S, Bose S, Ki W** & Islam A (2020). A Reliable Write Assist Low Power SRAM Cell for Wireless Sensor Network Applications. IET Circuits, Devices & Systems, 14, (2), 137-147.

16. **Pal S, Bose S, Ki W** & Islam A (2020). A Highly Stable Reliable SRAM Cell Design for Low Power Applications. Microelectronics reliability, 105, 1-11.

17. **Pal S, Bose S, Ki W** & Islam A (2020). Half-Select Free Low Power Dynamic Loop-Cutting Write Assist SRAM Cell for Space Applications. IEEE Transactions on Electron Devices, 67, (1), 80-89.

18. **Pal S, Bose S, Ki W** & Islam A (2020). Characterization of Half-select Free Write Assist 9T SRAM Cell. IEEE Transactions on Electron Devices, 66, (11), 4745-475.

19. **Pal S, Gupta V,** & Islam A (2019). A Transmission Gate Based 9T SRAM cell For Variation Resilient Low Power and Reliable Internet of Things Applications. IET Circuits, Devices & Systems, 13, (5), 584-595.

20. **Pal S, Bose S, Ki W,** & Islam A (2019). Design of Power-and Variability-Aware Nonvolatile RRAM Cell Using Memristor as a Memory Element. IEEE Journal of the Electron Devices Society, 7, (1), 701-709.

21. **Pal S, Gupta V** & Islam A (2019). Design and Development of Memristor-Based RRAM. IET Circuits, Devices & Systems, 13, (4), 548-557.

22. **Suraj Priyadarshi,** & Gupta Vibha Rani (2020). Gain Enhancement of a Quad Notched CPW Fed Uwb Antenna. Microwave and optical Technology letter, 62, 1752-1759.

23. **Biswas Arumita,** & Gupta Vibha Rani (2020). Design Aspects of 5G: Frequency Allocation Services and MIMO Antennas. Engineering and Applied Science Research, 47, 103-110.

24. **Biswas Arumita,** & Gupta Vibha Rani (2020). Design and development of multi-band multi-generation compatible MIMO antenna for wireless devices. Engineering and Applied Science Research, 47, 77-86.

25. **Biswas Arumita,** & Gupta Vibha Rani (2020). Design and Development of Low Profile MIMO Antenna for 5G New Radio Smartphone Applications. Wireless Personal Communication, 111, 1695-1706.

26. **Kumari Sakshi,** & Gupta Vibha Rani (2019). Super UltraWideband Planar Inverted F Antenna on Paper based Substrate with Low SAR. ECTI Transactions on Electrical Engineering, Electronics, and Communications, 17, 204-213.

27. **Hosain M,** Kumari S & Tiwary Anjini Kumar (2020). Sunflower shaped fractal filtenna for WLAN and ARN application. Microwave and Optical Technology Letters, 62, 346-354.

28. **Pandey A K,** & Gupta N (2020). An energy efficient distributed queuing random access (EE-DQRA) MAC protocol for wireless body sensor networks. Wireless Networks, 26, 2875–2889.

29. **Pandey A K,** & Gupta N (2019). An Energy Efficient Clustering-based Load Adaptive MAC (CLA-MAC) Protocol for Wireless Sensor Networks in IoT. International Journal of Wireless and Microwave Technologies, 9. (5), 38-55.

30. **Rajak Neha,** Chattoraj Neela and Mark Robert (2019). Metamaterial Cell Inspired High Gain Multiband Antenna for Wireless Application. AEU-International Electronics and Communications, 109, 23-30.

31. **Sharan Nishant,** & Ghorai S.K (2020). PAPR Reduction and Non-linearity Alleviation using Hybrid of Precoding and Companding in a Visible Light Communication (VLC) System. Optical and Quantum Electronics, 52, 304.

32. **Kumar A,** & Ghorai S. K. (2020). High-gain and volume-efficient concave–convex lens for multiple-input multiple-output visible light communication system. Optical Engineering, 59, (3), 035106.

33. **Mukherjee Ramtanu,** Ghorai S. K., Gupta Bharat, & Chakravarty Tapas (2020). Development of a Wearable Remote Cardiac Health Monitoring with Alerting System. Instruments and Experimental Techniques, 63, (2), 273–283.

34. **Kumar A,** & Ghorai S. K.(2020). BER Performance Analysis of OFDM based Integrated PLC and MIMO-VLC System. IET Optoelectronics, 1-11.

35. **Kumar A,** & Ghorai S. K. Effect of LED Radiation Pattern on BER Performance in Indoor Multipath MIMO-VLC System. Wireless Personal Communications, 1-18.

36. **Ojha Mukesh Kumar,** and Mukul Manoj Kumar (2020). Frequency Recognition in SSVEP-based BCI using EMD CCA Technique. International Journal of Advanced Science and Technology, 29, (12), 1029-1036.

37. **Ojha Mukesh Kumar,** Mukul Manoj Kumar, Nath Ravinder Rajotia, Tyagi Nitin (2019). Frequency Detection of Single channel Steady State Visual Evoked Potential using Canonical correlation Analysis, International Journal of Recent Technology and Engineering (IJRTE), 8, (3S2), 136-139.

38. Sidhishwari Soumya, **Basu Mainak ,** & Ghorai S. K. (2019). A Modal interference-based Fiber Optic Sensor for Dual Parameter Measurement using an Artificial Neural Network. Optical Fiber Technology, 50, 216–224.

39. Dash Prajna Parimita and **Patra Dipti** (2019). Mutation based Self Regulating and Self Perception Particle Swarm Optimization for Efficient Object Tracking in a Video. Measurement. Elsevier, 144, 311-327.

40. Dash Prajna Parimita, and **Patra Dipti** (2020). An efficient hybrid framework for visual tracking using Exponential Quantum Particle Filter and Mean Shift Optimization. Multimedia Tools and Applications, Springer, 79, (29), 21513-21537.

41. **Kumar Manish, Mishra S. K., Choubey S. K.,** Tripathy S S , **Choubey D. K. , Das Dinesh** (2020). Cat Swarm Optimization based Functional Link Multilayer Perceptron for Suppression of Gaussian and Impulse Noise from Computed Tomography Images, Current Medical Imaging Reviews. Bentham Science. 16, (4),329-339.

42. **Asheer S,** & Kumar Sanjeet **(**2020). Lifetime Enhancement of a WSN Through Duty Cycle in an Aggregation Based Cooperative MIMO Framework. Wireless Pers Commun, 112, 1783–1808.

7.2 Publications in Proceedings:

1. **Saha Abhirupa, Basak Piyali, Sanjib, Sil, Gupta Bhaskar,** and Pal Srikanta.(2020). Meta sensing Ovarian Cancer Cells at THz from C Band Radiation. 6th International Conference on OPTRONIX, UEM, Kolkata, 8-10 June 2020

2. **Saha, Abhirupa. Basak, Piyali.** and Pal, Srikanta (2020). A THz Metasurface Coated SoC For SPR Excited Carcinoma Sensing. International Conference On Electrical And Electronics Engineering (ICE3 2020), 723-727.

3. **Singh, Shailendra. Upadhayay, Madhur Deo.** and Pal, Srikanta (2020). Dual-Band Triple Mode OAM Generation Using Annular Slot Microstrip Radiator. 7th International Conference on Signal Processing and Integrated Networks (SPIN 2020), Amity University, Delhi-NCR, India 27-28 February 2020, IEEE, DOI: 10.1109/SPIN48934.2020.9071390.

4. **Singh, Shailendra. Upadhayay, Madhur Deo.** and Pal, Srikanta (2020). OAM Wave Generation Using Inner feed Annular Slot Microstrip Radiator. 7th International Conference on Signal Processing and Integrated Networks (SPIN 2020), Amity University, Delhi-NCR, India 27-28 February 2020, IEEE, DOI: 10.1109/SPIN48934.2020.9071174.

5. **Karan, B.** Sahu, S S. and Mahto, K. (2020). Stacked auto-encoder based Time-frequency features of Speech signal for Parkinson disease prediction. IEEE International Conference on Artificial Intelligence and Signal Processing, 1-4. ISBN: 978-1-7281-4458-0

6. **Mahapatra, S.** and Sahu, S.S. (2020). Boosting predictions of Host-Pathogen protein interactions using Deep neural networks. IEEE International Students' Conference on Electrical, Electronics and Computer Science, 1-4. ISBN: 978-1-7281-4862-5

7. **Mahapatra, S. Kumar, A., Sharma, A.** and Sahu, S.S. (2020). Effect of Dimensionality Reduction on Classification Accuracy for Protein–Protein Interaction Prediction. Advanced Computing and Intelligent Engineering, 3-12 ISBN: 978-981-15-1080-9

8. **Karan, B. Mahapatra S.** and Sahu S.S. (2019). Prediction of Protein Interactions in Rice and Blast Fungus Using Machine Learning. IEEE International Conference on Information Technology, 33-36. ISBN: 978-1-7281-6052-8

9. **Vansh, V. Kumar, C. Anil, C.R.** and Sahu, S.S. (2020). Improved Face detection using YCbCr and Adaboost. Computational Intelligence and Data Mining, 689-699. ISBN: 978-981-13-8675-6

10. **Anu, Sri** and Sahu S.S. (2019). Improved fractal-SPIHT hybrid image compression algorithm. IEEE International Conference on Computing, Communication and Networking Technologies (ICCCNT), 1-4. ISBN: 978-1-5386-5906-9

11. **Kumari, S. Swain, S. K.** Sahu, S.S**. Kumar, A. Kumar, P. and Gupta, B**. (2019). A Closed loop robust controller for SSHI based piezoelectric energy harvester. Computer-Aided Developments in Electronics and Communication, 113-119. ISBN: 978-0-429-34071-0

12. **Kumari S.,** Gupta V. R. (2019). Characterization of Laminated Paper based Substrate for the ISM Band Antenna Design, Lecture Notes in Engineering and Computer Science. Proceedings of The World Congress on Engineering and Computer Science 2019, 124-128, ISBN: 978-988-14048-7-9.

13. Biswas Arumita, Gupta Vibha Rani (2019). Multiband Antenna Design for Smartphone Covering 2G, 3G, 4G and 5G NR frequencies. 3rd International Conference on Trends in Electronics and Informatics (ICOEI 2019), 84-87, ISBN: 978-1-5386-9440-4.

14. **Kumari Sakshi, Singh Shivali,** Gupta Vibha Rani (2019). Paper Based Conformal Antenna. 3rd International Conference on Trends in Electronics and Informatics (ICOEI 2019), 170-173, ISBN: 978-1-5386-9440-4.

15. **Tirkey Manish Mathew,** and Gupta Nisha (2019). Design Simulation and Analysis of a Polarization-Independent Ultrathin Pixelated Metasurface Absorber. IEEE MTT-S International Microwave and RF Conference (IMARC), 13-15, ISBN: 978-1-7281-4040-7

16. **Anand Satvika,** Mukul M K (2019). Early Epileptic seizure detection, 10th International Conference on Computing, Communication and Network Technologies (ICCCNT), ISBN: 978-1-5386-5906-9

17. **Kumar A.,** and Ghorai S K. (2019). Performance of MIMO-VLC System for Different Radiation Patterns of LED in Indoor Optical wireless Communication System. IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), Goa, India, 1-5. ISBN: 978-1-7281-3715-5.

18. **Kumar Abhinav** and Saxena Priyank (2019). Quantification of Cartilage loss for Automatic Detection and Classification of Osteoarthritis using Machine Learning approach. 10th International Conference on Computing, Communication and Network Technologies (ICCCNT), Kanpur, India, ISBN: 978-1-5386-5906-9

19. **Deopa Ashish, Sinha Abhishek, Prakash Aditya,** and Sinha Rupesh Kumar (2019). Facial Expression Recognition using Convolutional Neural Network and SoftMax function on Captured Images. Proceedings of the Fourth International Conference on Communication and Electronics Systems (ICCES 2019), 273-279, ISBN: 978-1-7281-1261-9

20. **Srivastava Sourabh,** Dash Prajna Parimita and Kumar Sanjay (2020). Analysis of NOMA: in Capacity Domain. International Symposium on 5G & Beyond for Rural Upliftment, ISBN: 9788770222174

21. Dash Prajna Parimita, **Mishra Sudhansu Kumar and Patra Dipti** (2020). Animal tracking in wildlife footage with Quantum Particle Filter (QPF). IEEE, 18th International Conference on Information Technology, 515-520, ISBN: 978-1-7281-6052-8

7.3 Chapter(s) in Edited Book

1. **Rao N.S., Prasad D.,** Nath V**.** (2020) Broad Band Capacitive Coupling Antenna for C-Band Applications. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_1

2. **Surshetty S.K., Anwer S., Deep Y., Gandhi M.,** Nath V. (2020) Smart Irrigation System Using Custom Made PCB. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_9

3. **Surshetty S.K., Anand J., Chowdhury S.,** Nath V**.** (2020) Smart Communication in Coal Mines. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_12

4. **Surshetty S.K., Oraon A., Kumari R., Shreya S.,** Nath V. (2020) FPGA-Based Smart Irrigation System. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_14

5. **Patel R., Sinha N., Raj K., Prasad D.,** Nath V**.** (2020) Smart Healthcare System Using IoT. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_15

6. **Goel V., Surshetty S.K., Prasad D.,** Nath V. (2020) Design and Implementation of an Accurate 3-Bit System-on-Chip (SoC) Flash ADC for Aerospace Application in 90 nm CMOS Technology. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_18

7. **Kumar R., Gupta R.P., Sankar M.M.,** Nath V. (2020) Performance Evaluation of PV Module

with Battery Storage in a Microgrid. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_19

8. **Kumar A., Oraon A., Agarwal S., Prasad D.,** Nath V. (2020) Intelligent Streetlight System Using GSM. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_25

9. **Sharma V.K., Acharya B., Mahapatra K.K.,** Nath V. (2020) Learning Discriminative Classifier Parameter for Visual Object Tracking by Detection. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_31

10. **Maiti M., Saw S.K.,** Nath V.**,** Chakraborty S.K., Majumder A. (2020) A 46.8 μW/1.12 GHz 7th Stage New Ring Voltage Controlled Oscillator. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_32

11. **Saw S.K., Maiti M.,** Nath V.**,** Majumder A. (2020) A Current Mode VCO Design Approach for Higher Oscillation Frequency. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_33

12. **Sharma A., Deopa A., Ahuja A., Goel V.,** Nath V. (2020) Internet of Things Based Smart Lighting System Using ESP8266 and Zigbee. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_34

13. **Charan R., Kumar A., Harika B., Goel V.,** Nath V**.** (2020) IoT-Based Moisture Sensor in Cement Industry. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_45

14. **Gupta D., Nayak P.K., Parashar Y., Goel V., Nath V.** (2020) Internet of Things for Smart Class Rooms: A Review. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_46

15. **Chaudhary G., Agrawal H., Tirkey S.,** Nath V**.** (2020) Study and Design of Smart City with Internet of Things: A Review. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_47

16. **Garapati S.N., Venkatesh K., Reddy K., Unkili S., Prasad D., Nath V.** (2020) Development of Heart Rate Monitoring Controller Using Fingertip Sensors. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_48

17. **Prashant, Ritesh, Hrithik, Vishal, Pandey A.,** Nath V**.** (2020) Bluetooth-Controlled Electronics Home Appliances. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_49

18. **Agarwal S.K., Singh A., Aniraj V., Pandey A., Prasad D.,** Nath V**.** (2020) RFID (MF-RC522) and Arduino Nano-Based Access Control System. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_50

19. **Bitla S., Santhan S., Bhagat S., Pandey A.,** Nath V. (2020) Smart Irrigation System: A Review. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_51

20. **Kumar R., Abz M., Sinha A., Pandey A.,** Nath V. (2020) Enactment of Advanced Traffic Control System Using Verilog HDL. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_52

21. **Kumari, S.** Sahu, S.S. **Gupta, B. and Mishra, S.K.** (2020) Energy harvesting via human body activities. Smart Biosensors in Medical Care, Elsevier, 87-106. https://10.1016/B978-0-12-820781-9.00005-X

22. Sinha R.K., **Agrawal I., Jain K., Gupta A**., Sahu S.S. (2020). Image Encryption Using Modified Rubik's Cube Algorithm. In: Sahana S., Bhattacharjee V. (eds) Advances in Computational Intelligence. Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore. https://doi.org/10.1007/978-981-13-8222-2_6

23. **Ghosh T., Tiwari S.,** Sahay J. (2019) MIMO Wideband Antenna Technique in DGS for Enhanced Wireless Communication. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511. Springer, Singapore. https://doi.org/10.1007/978-981-13-0776-8_45

24. **Prerna P.,** Tripathy S.S. (2020) Glucometer: A Survey. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, vol 642. Springer, Singapore. https://doi.org/10.1007/978-981-15-2854-5_40

25. **Nagi Reva,** Tripathy Sanjaya Shankar (2020), Application of Fuzzy Logic in Plant Disease Management, Fuzzy Expert Systems and Applications in Agricultural Diagnosis, pp 261-302, IGI Global,, DOI: 10.4018/978-1-5225-9175-7.

26. **Asheer S.,** & Kumar Sanjeet (2020) Design of an Energy-Efficient Cooperative MIMO Transmission Scheme Based on Centralized and Distributed Aggregations. In: Sahana S., Bhattacharjee V. (eds) Advances in Computational Intelligence. Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore. https://doi.org/10.1007/978-981-13-8222-2_23

27. **Nagi R.,** Tripathy S.S. (2020) Infected Area Segmentation and Severity Estimation of Grapevine Using Fuzzy Logic. In: Sahana S., Bhattacharjee V. (eds) Advances in Computational Intelligence. Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore. https://doi.org/10.1007/978-981-13-8222-2_5

28. **Ojha, M.K., Mukul, M.K.** Detection of Target Frequency from SSVEP Signal Using Empirical Mode Decomposition for SSVEP Based BCI Inference System. Wireless Pers Commun (2020). https://doi.org/10.1007/s11277-020-07738-9

7.4 Achievements of Students

Sr. No.	Name of Student	Achievement/ Position/ Award etc	Organised by	Date and Venue
1.	D. Sukesh and Krishna Sai Kushal	First position in the hackathon.	CK Birla Hospitals and Amazon Web Services Academy	29.05.2020, Online

7.5 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	Abhishek Sinha,BE, ECE Batch of 1999	Eko India Financial Services Co-founder & CEO
2.	Ashutosh Pande BE, Electronics and Communication Engg. Batch of 1987	Arogya mHealth Pvt. Ltd. Founder
3.	Niraj Sharan, BE, Electronics and Communication Engg. Batch of 1980	Aura Inc Chairman & CEO

7.6 Any other relevant information

An interdisciplinary project proposal worth 100 crores on NM-ICPS project on Advanced Communication Systems (ACS) to DST in July. Recently, after online presentation and defense, DST has informed the Institute that BIT is selected as one of the two SPOKE Institutes for the NM-ICPS project on BIG Data analytics, with ISI, Kolkata as the Technology innovation hub (TIH) and COE, Pune as another Spoke Institute.

FIST-II Project proposal on research area of Advanced Signal Processing & Embedded System had been submitted of Rs.10.00 Crore on 31.05.2020 and acknowledgement received (Project PI: Prof. S. Pal and Project Coordinator: Dr. Vijay Nath).

DEPARTMENT OF HOTEL MANAGEMENT AND CATERING TECHNOLOGY

SECTION 1 DEPARTMENT PROFILE

1.1 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, The Park hotels, Specialty Restaurant Ltd. 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.	e-FDP on "Outcome Based Education and online Learning-Teaching"	Dr. Nishikant Kumar & Dr. Praveen Srivastava	N.A.	29th June' 20 to 3rd July'20
2.	Webinar on "Impact of Pandemic (COVID – 19) on Hospitality Industry: Shifting challenges and opportunities"	Moderator Dr. Nishikant Kumar & Organizing Secretary – Dr. Praveen Srivastava	N.A.	28th May'20-29th May'20

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	Effective & Efficient online teaching in the age of corona, a hands-on workshop	Self	Teaching Learning Center, (ICT), IIT Mumbai	Online	16th May 2020
2.	Abhinav Kumar Shandilya	Workshop on Excellence in Pedagogy and Quantitative Research	TEQIP III, BIT	Department of Management and Department of Computer Science & Engineering, Birla Institute of Technology, Mesra, Ranchi	Birla Institute of Technology, Mesra, Ranchi	26th -30th August 2019
3.	Abhinav Kumar Shandilya	LaTeX101x: LaTeX for students, Engineers, and Scientists	Self	IITBombayX, an online learning initiative of Indian Institute of Technology, Bombay	Online	24th September–2nd December 2019
4.	Abhinav Kumar Shandilya	Digital Transformation in Teaching Learning Proces	N/A	Indian Institute of Technology, Bombay	Online	06th – 22th April 2020
5.	Abhinav Kumar Shandilya	Outcome based Education and Online Learning Teaching	N/A	Department of Management and Department of Hotel Management and Catering Technology, BIT Mesra	Online	29th June-3rd July 2020
6.	Nishikant Kumar	MOOC on digital transformation in teaching learning process	NR	IIT Mumbai	Virtual	6th – 22 nd April 2020
7.	Nishikant Kumar	Aftermath of Covid'19: Hopes and Horizons for Tourism Growth	NR	University of Delhi and Bundelkhand University, Jhansi	Virtual	7th - 8th May 2020
8.	Nishikant Kumar	Self Reliant India Post Covid'19: Challenge and Opportunities	NR	Vinoba Bhave University, Hazaribag	Virtual	30th May 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
9.	Nishikant Kumar	Open FOAM	NR	IIT Mumbai	Virtual	1st - 5th June 2020
10.	Nishikant Kumar	Reflect, Reboot, Recreate & be Relevant for tomorrow	NR	TCSC, University of Mumbai	Virtual	6th June 2020
11.	Nishikant Kumar	Re-imagining Heritage Tourism on the Lives & Livelihood in Post Pandemic World	NR	Siksha O Anusandhan, Bhubneshwar	Virtual	12th June 2020
12.	Nishikant Kumar	Post Covid'19 – Issues, Challenges & Strategies for revival of Tourism Sector	NR	CMTHS, Garhwal Universit, Srinagar	Virtual	13th June 2020
13.	Nishikant Kumar	Environmental Issues & opportunities after Covid'19	NR	Government College Rajgarh, Alwar	Virtual	14th June 2020
14.	Nishikant Kumar	Transformation in the Food Industry in times of Corona	NR	NIMIT, University of Calicut	Virtual	22th June 2020
15.	Nishikant Kumar	Hospitality 2.0- Redefining Careers in Hospitality	NR	Ansal University, Gurugram	Virtual	23rd July 2020
16.	Nishikant Kumar	Delivering online course using CANVAS LMS	TEQIP- III	BIT Mesra	Virtual BIT Mesra	27th July - 5th August 2020
17.	Abhisek Jana	NBA & NAAC Accreditation	TEQUIP-III	Engineering Staff College of India	Lonavla, (MH)	27th -31st July 2019
18.	Abhisek Jana	ICT Enabled Higher Education in India: Challenges & Opportunities	MHRD	SGTB Khalsa College, University of Delhi	Webinar	17th April, 2020
19.	Abhisek Jana	Transforming Hospitality & Tourism Learning Through Easy E-Solutions		Department of Commerce & Management, Shavitribai Phule Pune University	Webinar	26th May, 2020
20.	Abhisek Jana	Impact of Pandemic (Covid-19) on Hospitality Industry: Shifting Challenges & Opportunities		Dept. of HMCT, BIT, Mesra	Webinar	28th – 29th May 2020.

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
21.	Abhisek Jana	Outcome Based Education and Online Learning Teaching		Dept. of Management & Dept. of HMCT, BIT, Mesra	Webinar	29th June-3rd July 2020
22.	Sanjiv Kumar Srivastava	FDP for Student Induction	AICTE	AICTE	BIT, Mesra	13th -15th December, 2019
23.	Sanjiv Kumar Srivastava	"Impact of Pandemic (COVID-19) on Hospitality Industry: Shifting Challenges and Opportunities"		Department of HMCT, BIT, Mesra		28th -29th May 2020
24.	Sanjiv Kumar Srivastava	"Outcome Based Education Software"		Vmedulife software services	Online	4th June, 2020
25.	Sanjiv Kumar Srivastava	"Outcome Based Education and Online Learning Teaching"		Dept. of management and Dept. of HMCT, BIT Mesra	BIT Mesra	29th June to 3rd July 2020.
26.	Rajeshwari Chatterjee	Workshop on Teaching Learning in Digital Age: MOOCS	TEQIP	BIT, Mesra	BIT, Mesra	13th September, 2019
27.	Rajeshwari Chatterjee	National Webinar on Impact of Pandemic (COVID-19) on Hospitality Industry: Shifting Challenges and Opportunities		Department of HMCT, BIT, Mesra	Online	28th -29th May, 2020
28.	Rajeshwari Chatterjee	Impact Of Covid-19 On Global & Indian Economy		Mahatma Phule Arts, Science & Commerce College, Panvel	Online	1st June 2020
29.	Rajeshwari Chatterjee	"Outcome Based Education Software"		Vmedulife software services	Online	4th June, 2020
30.	Rajeshwari Chatterjee	Bioindicators for biodiversity monitoring and ecosystem health		Department of Environmental Science, Sacred Heart College	Online	5th June 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
31.	Rajeshwari Chatterjee	Nanomaterials for Smart and Sustainable Energy Solutions		Department of Physics, Mahatma Phule Arts, Science & Commerce College, Panvel	Online	8th June 2020
32.	Rajeshwari Chatterjee	Future trends in Green Technology		Energy Centre, Maulana Azad National Institute of Technology, Bhopal	Online	22nd June – 26th June 2020
33.	Rajeshwari Chatterjee	Advanced Materials for Functional & Sustainable Application		Dept of Physics, S.M.Joshi College, Pune	Online	29th -30th June 2020
34.	Amit Saran	Impact of Covid-19 on socio-economic and political scenario in global perspective		Markhom college of commerce, Hazaribag	Online	13th May 2020
35.	Amit Saran	Adhyogik chetro se pravasi mazdooro ke palayan se bhartiye arthvyavastha per pravav: kovid19 ke paripeksh me.		Markhom college of commerce, Hazaribag	Online	16th May 2020
36.	Amit Saran	Additive manufacturing in bio medical application		Laxmi Narayan College of Technology, Bhopal	Online	13th June 2020
37.	Amit Saran	Impact of pandemic(COVID-19)on hospitality industry:shifting challenges and opportunities		Department of HMCT, BIT, Mesra		28th -29th May 2020
38.	Amit Saran	Post covid-19 Science and technology		The Hindu & SRM UNIV. Andhra pradesh	Online	29th May 2020
39.	Amit Saran	Essential skills for job in a post-Covid 19world.		Tata power & RKDF Univ. Mumbai	Online	9th June2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
40.	Amit Saran	Leadership and crisis		Godrej industries, Mumbai	Online	20th June 2020
41.	Amit Saran	Opportunities in solar - Becoming # "aatmnirbhar"		Tata power co. ltd. Mumbai	Online	23th June 2020
42.	Gautam Shandilya	Workshop on Teaching Learning in Digital Age: MOOCS	TEQIP	BIT, Mesra	BIT, Mesra	13th September, 2019
43.	Gautam Shandilya	FDP for Student Induction	AICTE	AICTE	BIT, Mesra	13th -15th December, 2019
44.	Gautam Shandilya	Course on Digital Transformation in Teaching Learning Process	TEQIP (Ministery of HRD)	IIT, Bombay	Online	06th -22th April, 2020
45.	Gautam Shandilya	FDP on Outcome Based Education Software		Vmedulife software services	Online	28th May, 2020
46.	Gautam Shandilya	National Webinar on Impact of Pandemic (COVID-19) on Hospitality Industry: Shifting Challenges and Opportunities			Online	28th -29th May, 2020
47.	Pratima Ekka	Impact of Pandemic (COVID-19) on Hospitality Industry: Shifting Challenges and opportunities		HMCT, BIT Mesra		28th -29th May 2020
48.	Pratima Ekka	Impact Of Covid-19 On Global & Indian Economy		Mahatama Phule Arts Science And Commerce College	Online	1st June 2020
49.	Pratima Ekka	Outcome Based Education Software		Vmedulife software services	Online	4th June 2020
50.	Pratima Ekka	Water Pollution in India		Arts, Commerce & Science College Gangakhed Dist. Parbhani-431514	Online	5th June 2020
51.	Pratima Ekka	Becoming An Aatmanirbhar Bharat: A Managent Perspective		XITE College	Online	6th June 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
52.	Pranjal Kumar	Teaching learning in a digital age:MOOCS	TEQIP	BIT, Mesra	BIT, Mesra	13th September, 2019
53.	Pranjal Kumar	Impact of Pandemic (COVID-19) on Hospitality industry:Shiftinf challenges and opportunities		Department of HMCT, BIT, Mesra	Online	28th -29th May 2020
54.	Pranjal Kumar	FDP on Outcome Based Education Software		Vmedulife software services	Online	4th June, 2020
55.	Pranjal Kumar	FDP on Research and its role in Academic Development		Institute of Hotel Management and catering Technology, Bhopal	Online	12th -17th June 2020
56.	Pranjal Kumar	Future of culinary industry post covid-19		IHM Bangalore	Online	27th June, 2020
57.	Pranjal Kumar	"Outcome Based Education and Online Learning Teaching"		Dept. of management and Dept. of HMCT, BIT Mesra	Online	29th June to 3rd July 2020.

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals : (International/National)

- Sinha A P, Srivastava S K, Pandey R K, & Asthana A K (2019). Identification and Validation of CRM Factors on Customer Satisfaction and Loyalty in the Mid-Market Segments of the Hotel Industry, IJRAT, 7(11), 12-19.
- Pandey R K, Sinha A P, Srivastava S K, & Shandilya G (2020). A study on accessing factors leading to the purchase of BYJU's "Education Learning App" as a curriculum. IJMPERD, 10(3), 1217-1230.
- Hasnain S . M, Chatterjee R, & Sharma R P (2020). Spectroscopic Performance and Emission Analysis of Glycine max Biodiesel, Journal of The Institution of Engineers (India): Series C, 101(3), 587-594
- Ekka P (2020). Challenges of Technology in tourism and hospitality Industries. Asian Mirror International Journal of Research, Vol, (7). 49-54

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. Praveen Srivastava	Resource Person on e-FDP on "Moodle – Learning Management System"	CIMAGE Professional College, Patna in association with Spoken Tutorials Project, IIT Mumbai.	National	22nd June'20 to 26th June'20

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.	Mughlai Theme Party organized by Vth Semester students.	Mr. Yuvraj Kumar	Dr. Abhisek Jana	18.10.19
2.	Chef Competition and Celebration of International Chef's Day.	Ms. Sumitra Lama	Dr. Abhisek Jana	20.10.19
3.	Industrial Visit-Ist Semester students were taken to Hotel Radisson Blu, Ranchi.	N/A	Prof. Gautam Shandilya	25.10.19
4.	Seminar on "Importance of Japanese Language and Culture in Hospitality Industry".	N/A	Dr. Nishikant Kumar	20.11.19
5.	Seminar on "Scope of Higher Studies & Career Opportunities with Reference to Canada".	N/A	Dr. Nishikant Kumar & Dr. Abhisek Jana	06.02.2020

6.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
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

Sr. No.	Name	Designation	TEQIP Sponsored
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

6.3 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 7 OTHER INFORMATION

7.1 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	Name:Rajeev Shankar Batch: 2K5 Affiliation: P & O Cruise, Australia	Working as a Sous Chef in reputed Luxury Cruise company P & O in Australia.
2.	Name: Himanshu Shekhar Batch: 2K6 Affiliation: Sheraton Kosgoda Turtle Beach Resort, Colombo, Sri Lanka	Working as an associate director sales at Sheraton Kosgoda Turtle Beach Resort, Colombo, Sri Lanka. Key responsiblitiy is to develop the business among corporates.
3.	Name: Sikander Kumar Batch: 2K9 Affiliation: Grand Barbeque Restaurant, Colombo, Sri Lanka	Working at a Restaurant Manager at Grand Barbeque Restaurant, Colombo, Sri Lanka. Looks after the entire restaurant business development.
4.	Name: Shantanu Siddharth Batch: 2K10 Affiliation: Qatar Airways, Doha	Working as senior cabin crew in Qatar Airways, Doha. Travelled across the globe and serving passenger of vivid country through Qatar Airways.
5.	Name: Nikita Rai Batch: 2K13 Affiliation: Supervisor, Housekeeping Dept, Oberoi Rajvilas, Jaipur	Working as a supervisor in housekeeping dept. at Oberoi Rajvilas, Jaipur.

DEPARTMENT OF MANAGEMENT

SECTION 1 DEPARTMENT PROFILE

1.1 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 frontrunner 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 frontrunner 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 Post Graduate and Doctoral level to perform challenging managerial jobs in industry as a leader and achieve excellence as Entrepreneurs and Researchers.
- To provide excellent research and development facilities for faculty and students to undertake pathbreaking theoretical and applied research.
- To build national capabilities in management education and research in emerging areas.
- To uphold the values of Personal Integrity and Social Responsibility in all our decisions.

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 (dd.mm.year)
1.	FDP (Excellence in Pedagogy and Quantitative Research)	Dr. Shradha Shivani (Coordinator) Dr Supriyo Roy and Dr Sraboni Dutta (Joint Coordinators)	TEQIP	26th August to 30th August, 2019

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. Rohini Jha	Teaching learning in a digital age	TEQIO-III	BIT Mesra	BIT Mesra	13/9/19
2.	Dr. Rohini Jha	AI & Its Applications (Online Mode	Edulabs(Esoir Business Solutions	Edulabs(Esoir Business Solutions	Online Mode	18/5/20 to 22/5/20 5 days
3.	Dr. Rohini Jha	Faculty Development program on Blockchain Technology	IIT Roorkee	Finland Labs(A Unit of Revert Technology Pvt Ltd.) In Association with IIT Roorkee	Online Mode	8/6/20 to 12/6/20 5 Days
4.	Dr. Rohini Jha	"Building Economic and Business Resilience Agility and Sustainability in the Post COVID -19 Era" (Online webinar)	Globsyn business school	Globsyn business school	Online Mode	20/6/20 1 Day International webinar
5.	Mrs. Sujata Priyambada Dash	Digital Transformation in Teaching Learning Process	Ministry of HRD, Govt. of India	TEQIP-3	Online Mode	6th April to 22nd April, 2020
6.	Dr. Rohini Jha	Training on Digital Marketing (Online Training)	Tirutsava IIT Tirupati	Edulakes Solutions LLP	Online Mode	29/6/20 to 3/7/20 5 days
7.	Dr. Rohini Jha	Emerging Technologies for Education and Research in Industry (Online Mode FDP)	IEEE Delhi Section & Industry Institute Partnership	Bharti Vidyapeeth's Institute of Computer Applications and Management (BVICAM	Online Mode	6/7/20 to 10/7/20 5 days
8.	Mrs. Sujata Priyambada Dash	Strategic Management, Decision Theory and Data Science	CSIR-CGCRI	Indian Association for Productivity, Quality and Reliability and CSIR-Central Glass and Ceramic Research Institute	CSIR-CGCRI, Kolkata	4th January to 6th January, 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
9.	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
10.	Dr. Anupam Ghosh	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
11.	Dr. Anand Pd. Sinha	Faculty Development Programme on Outcome Based Education (OBE) & Online Learning-Teaching	BIT Mesra Ranchi	Management Department & HMCT Department	Online Mode	29th June – 3rd July 2020.
12.	Dr. Anand Pd. Sinha	Faculty Development Programme(How to write publish paper in Springer and Elsevier)	Jharkhand Rai University	Indian Academic and Research Association (IARA)	Online Mode	1st June 2020.
13.	Dr. Anupam Ghosh	Digital Transformation in Teachng Learning Process"	IIT Bombay	IIT Bombay, MHRD-Government of India, Swayam	Online Mode	April 6th - April 22nd, 2020
14.	Dr. Anupam Ghosh	"To Promote Innovation, IPR, Entrepreneurship and Startups among HEIs".	Institute's Innovation Cell (IIC) of MHRD's Innovation Cell,	MHRD's Innovation Cell	Online Mode	April 28- May 22, 2020
15.	Dr. S. Dutta	Training programme on Technical Education Leadership Development	Dudley College of Technology, UK	UKIERI AICTE	UK	14th-19th Oct. 2019.

SECTION 3 RESEARCH PUBLICATIONS

3.1 Publications in Journals : (International/National)

- Sujata P. Dash & Supriyo, Roy. (2020). Performance evaluation under human capital perspective: empirical evidence. International Journal of Productivity and Performance Management. Emerald, UK, Earlycite, I.F : 3.19
- Shailendra Singh & Supriyo, Roy. (2020). Greening the Grey: Measuring Adoption of Green Logistics in Indian Logistics sector. Accepted for Publication: International Journal of Logistics Systems and Management (IJLSM), InderScience Ltd., UK. (I.F: 1.9).
- Bhagat M. & Dutta M. (2020). Jharcraft an Initiative towards bringing Social and Economic Growth in Silk, Handicraft & Handloom Industry in Jharkhand., Purukala, Vol. 31(14). ISSN 0971-21.
- Roy Supriyo. & Bhagat M. (2020). Sustainable Green Policy by Managing Flare Gas Recovery: A case with middle east oil and gas industry, The Journal of Business Perspective, Sage, Vol. 24(1), 35-36.
- Rohit Kr. Pandey, Anand Pd. Sinha, Sanjeev Kr. Srivastava, Gautam shandilya.(2020). A Study On Accessing Factors Leading To The Purchase of Byju's "Educational Learning App"- As A Curriculum. International Journal of Mechanical and Production Engineering Research and Development (IJMPERD),Vol. 10, Issue 3, 1217–1230.ISSN(P): 2249-6890; ISSN(E):2249-8001.
- Ghosh, A., Mukherjee, K., Dasgupta Ghosh, B., & Dutta, S. (2020). COVID-19 Outbreak – The Role of Worldwide Interventions as a Preventive Measure, Social Work in Public Health., 1937190X/19371918.
- 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.
- Sodhi,S & Ghosh, A. (2020). Green Marketing: An empirical study on Jharkhand context – "Consumer Perception and Preferences, ANWESH: International Journal of Management & Information Technology.5(1). 2455-9245.
- Rohini Jha. (2020). A Detail Review On Statistical Analysis And Prediction Methods of COVID-19, Solid State Technology, 0038-111X.
- Sujata Priyambada & Supriyo Roy (2020). Role of Human Capital in Organizational Performance: A Theoretical Framework, OPUS HR, 0973-9866.
- Kumari P, Dutta M & Bhagat M. (2020). Employee Branding and its role in effective recruitment, AIMS International Journal of Management, ISSN No.1939-701.
- Supriyo Roy, K. Kumar & Biswajit Satpathy. (2019). Strategic Planning of Optimizing Productivity: A '5S under Lean Quality' Approach. Accepted for Publication- In Press: International Journal of Productivity and Quality Management (IJPQM). Inderscience, UK.
- Santosh Pattanayak, Supriyo Roy & Biswajit Satpathy. (2019). Strategic Alliance between Business Processes and Enterprise Resource Planning towards Performances: An Empirical Study. Accepted for Publication: In Press: International Journal of Business Excellence (IJBEX). Inderscience, UK.
- Santosh Pattanayak, Supriyo Roy and Biswajit Satpathy. (2109). Does Integration of BPM and 157

- ERP Improve Supply Chain Performances? - Evidence from Indian Capital Goods Industry. Published: VISION - The Journal of Business Perspective, by SAGE of MDI-Gurgaon, 23(4), 341-356.
- Supriyo Roy & R.P. Mohanty. (2019). Optimizing Production Plan for Underground Coal Mining: A Genetic Algorithm Application. International Journal of Operational Research (IJOR), Inderscience, UK.ISSN: 1745-7645.
- Anand Pd. Sinha, Sanjeev Kr. Srivastava, Rohit Kr. Pandey. (2019). Indentification and Validation of CRM Factors on Customer Satisfaction and Loyalty in the Mid-Market Segments of the Hotel Industry. International Journal of Research in Advent Technology, Vol.7, No.11, pp.12-19,E-ISSN: 2321-9637.
- Malpani, R & Ghosh, A.(2019). Business Sustainability measures in tribal Jharkhand, Drishtikon : A Management Journal, 11(1), 66-88. ISSN No. 0975-7848.
- Fatima, S, Malpani, R, Sodhi, S, Ghosh, A. (2019). E-buying of medicines: Trends and factors influencing Online Pharmacy, International Journal of Marketing & Business Communication, Vol. 8 (2&3), 1-7.
- Ghosh, A.,Banerjee,B., Malhotra, A., Malpani, R. and Fatima, S., (2019),. Gearing up of Corporate Social Responsibility with Artificial Intelligence: An Indian Forecast, ANWESH: International Journal of Management & Information Technology, 4(2). 56-59.

3.2 Publications in Proceedings: (International/National) with ISBN numbers only

- Preeti, Supriyo Roy, Biswajit Satpathy. (2019). Efficiency Analysis by Non Parametric Method: Evidence from Indian Public Sector Banks. Presented at 13th Annual ISDSI Conference 'Managing Industry Transformation in Post-Digital Era', Organised by IIM –Sambalpur, Odisha, Dec., 27-30, 2019.

3.3 Book:

- Roy, S., Kumar, K. and Devim, P.(2019). Soft Computing for Engineering Optimization CRC Press - Taylor and Francis Group . Published. ISBN 978-0-367-14861-4.
- Jha, R. and Shivani, S., (2020). Adoption of E-Governance In India. ISBN: 978-81-946587-3-3, publisher: Kripa Drishti , Pune.

3.3.1 Chapter(s) in Edited Book

- Preeti, Supriyo Roy & Kaushik Kumar.(2020). Radial Data Envelopment Analysis Approach to Performance Measurement: Study on Indian Banking System. Published in International Book Title 'Supply Chain Intelligence: Application and Optimization -Management and Industrial Engineering', Springer Nature, Switzerland AG.
- Singh S.K., Roy, Supriyo. (2020). Internet of Things (IoT) Based Green Logistics Operations for Sustainable Development in the Indian Context. In: Nath V., Mandal J.K. (eds.) Nanoelectronics, Circuits and Communication Systems. NCCS 2018. Lecture Notes in Electrical Engineering, Vol. 642. Springer, Singapore, April 2020, pp.301-313.
- Ghosh, S. and Dutta, S.(2020). Foreign Direct Investments: Concepts, Methodologies, Tools and Applications, M&A Deals and Corporate Governance Framework: A Study in Indian Telecom Sector, IGI Global, Hershey PA, USA
- Sujata Priyambada Dash. (2020). 'Emotional Intelligence: Key to Business Success'. Published in a National Book titled' Business Management Practices-Emerging Trends'. Archers and Elevators Publishing, Bangalore, India. ISBN: 978-93-88805-95-7.

- Preeti & Supriyo Roy.(2019). Data Envelopment Analysis: Application to Manufacturing Sector. Published: 'Optimization Using Evolutionary Algorithms and Meta-heuristics: Application in Engineering', International Book Title Edited by K. Kumar and J. Paulo Devim, ISBN: 13978-0-367-26044-6, CRC Press, T & F Group, Florida, USA, in Series: Science, Technology and Management, Chap.-3, pp. 37-56.
- Supriyo Roy & K. Kumar.(2019). Strategic Planning of Cold Supply Chain towards Good Manufacturing Practices: Issues and Challenges in Indian Market. Published: as Book Chapter in International book title: 'Supply Chain and Logistics Management: Concepts, Methodologies, Tools and Application', Published by Information Resources Management Association, IGI Global-USA, ISBN: 9781799809456.

SECTION 4 AWARD / PATENT / COLLABORATIONS

4.1 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. Supriyo Roy	Awarded Most Prestigious Post-Doctoral Degree (By Thesis) : D.Litt. In Management (In Area of Supply Chain Intelligence)	Sambalpur University-Burla, Odisha	National Level	17.01.2020
2.	Dr. Anupam Ghosh	Research paper is accepted and archived in National Digital Library of India (NDLI) (Government of India & IIT Kharagpur	IIT Kharagpur	National Level	2020
3.	Dr. Sraboni Dutta	Selection for 'STUDY TOUR TO UK' sponsored by AICTE and British Council	UKIERI AICTE	International Level	October 2019

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.	National Level Awareness Program, Ministry of MSME, Govt. of India, MSME Development Instititute	Rishav Tiwari & Shruti Sree	Dr. S. Dutta	04.03.2020
2.	Industrial Visit to JSPL, Patratu	Rishav Tiwari & Shruti Sree	Dr. Anand Pd. Sinha	22.02.2020

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
3.	Motor Haat 2.0: Inter-College Business Case Study Competitions	Abdur	Dr. S. Dutta & Dr. Anand Pd Sinha	18.02.2020
4.	Education & Gender Equality	Rishav Tiwari & Shruti Sree	Dr. S. Dutta	13th Jan 2020
5.	INTERNICO'19	Rishav Tiwari, Shruti Sree & Abdur	Dr. S. Dutta	7/11/2019
6.	SEBI Visit	Shreya and Siwani Kasyap	Dr. Anand Pd Sinha	31st Aug '19
7.	QUIZZARD'19	Rishav Tiwari , Shruti Sree & Abdur	Dr. S. Dutta & Dr. Anand Pd Sinha	10/08/2019

5.2 List of Faculties

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

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.

5.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Shrrdha Shivani	HOD/Incharge-	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.Amitabh Verma	Assistant Professor	Internal Member
7.	Dr. Vinay Sharma	Professor	Internal Member BIT Depghar
8.	Dr. G. Sahoo	Retd. Professor	Internal Member
9.	Prof. Partha Pratim Sengupta	Sr. Professor, NIT Durgapur	External Member
10.	Mr. Priyobrata Bhattacharee	DGM (Knowledge Managemnt, Birla Co-operation Ltd.	External Member
11.	Dr. P. K. Chatterjee	General Manager,Mecon	External Member
12.	Dr. A. N. Jha	Professor, (Incharge-BIT Lalpur)	External Member

SECTION 6 OTHER INFORMATION

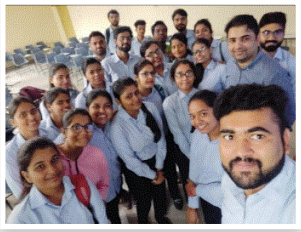
6.1 Achievements of Students

Sr. No	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
1.	Sunit Prasad	Full Term Doctoral Fellowship of Indian Council of Social Science Research (ICSSR).	(ICSSR)	2019
2.	Raj Vardhan	Winner, Case Study Competition, "Trailblazers"	Central University of Jharkhand, Ranchi	2020
3.	Shreya	Winner, Case Study Competition, "Trailblazers"	Central University of Jharkhand, Ranchi	2020
4.	Santosh Singh	1st Runners Up, Business Quiz, "Trailblazers"	Central University of Jharkhand, Ranchi	2020
5.	Santosh Singh	Winner, Case Study Competition, "Trailblazers"	Central University of Jharkhand, Ranchi	2020
6.	Subham Padhi	Winner, Case Study Competition, "Trailblazers"	Central University of Jharkhand, Ranchi	2020
7.	Anzee Nahid	Runners Up at Motorhaat 2.0, A Intercollege Business Case Study Competition	Management Department, BIT Mesra	2020
8.	Priyanka Suman Keshri	Winners of Pitch Your Idea, Best Business Plan as part of MarkBuzz 2.0	Central University of Jharkhand, Ranchi	2020
9.	Pratyay Das	Winner, Stressor, Best Manager, "Trailblazers",	Central University of Jharkhand, Ranchi	2020

Sr. No	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
10.	Swati Jha	Featured on Prabhat Khabar Newspaper for Food Blogging. She has 10K followers on her Instagram Handle	Prabhat Khabar	2020
11.	Rajni	1st Runners Up, Business Quiz, "Trailblazers"	Central University of Jharkhand, Ranchi	2020
12.	Vatsyayan Akshat	Runners Up at Motorhaat 2.0 , A Intercollege Business Case Study Competition	Management Department , BIT Mesra	2020
13.	Pratyay Das	Runners Up at Vaakta, Arunya 4.0, the annual management fest	of IIM Amritsar	2019
14.	Pratyay Das	Best Parliamentarian at Youth Lok Sabha Debate	organized by Shining Youth Foundation, Agra	22nd December, 2019
15.	Pratyay Das	Runners Up at the event Tarkash 5.0 as part of Annual Management Fest, Karmantra	IIM Raipur's	12th November, 2019

6.2 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Mr. Manish Piyush. (Distinguished alumnus & entrepreneur,)	27th of Febuary, 2020	
2.	Shri Pulkit Trivedi, Director, Google Pay - India	24th January, 2020	
3.	Mr. Naveen Kejriwal, General Manager at Lenovo for Eastern India & and Overseas	February, 2020	

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
4.	Dr. Alok Kumar Sen, former faculty MDI Gurgaon	February 2020	
5.	Dr. J.B David , a former faculty of BIT Mesra	24 Oct. 2019	
6.	Mrs.Tuhina David (Manager Employee Engagement, Center of Excellence, Mahindra Finance	24 Oct. 2019	
7.	Mr Rahul Kashyap, SHL Assessor, NLP practitioner and expert in retail training	20 August 2019	
8.	Mr. Shivesh Singh (Head Business HR, Bandhan Bank)	24 - 25 August 2019	
9.	Dr Tanmay Chattopadhyay (Principal Consultant at Littler Associates),	18 - 19 September 2019	

6.3 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	Mr. Raj Vardhan (1989-91)	Independent Director, Mcleod Russel India Ltd.
2.	Mr. Vivek Chaturvedi (1989-91)	Regional Business Director, Solar India, Middle East and Africa, DSM
3.	Mr. Avaneesh Nirjar, (1990-92)	Co-Founder & Chief Operating Officer Policybazaar.com
4.	Mr. Pritam Pritu (1997-99)	Global IP CoC Leader,IBM Japan
5.	Ms. Jayita Sarkar (2004-06)	Senior HR Business Partner, PayPal, San Francisco Bay Area

6.4 Any other relevant information

➲ **Dr. S. Shivani**

- Member of UGC Review Committee for Review of Deemed University status of: ICFAI University, Sikkim
- Contributed as member of UGC working group for designing Curriculum and teacher's manual for Life Skills Programme for UG students across the country
- AICTE Evaluator for proposals seeking financial support from the agency.
- Coordinator of 5 day FDP on "Excellence in Pedagogy and Quantitative Research", 26th ugust to 30th August, 2019. organised by the Department of Management, BIT Mesra
- Convener of FDP on Outcome Based Education and Online Teaching – Learning. From 29th June, 2020 onwards.

➲ **Dr. Anupam Ghosh**

- Invited as Speaker at a webinar organized by Department of Bioengineering (sponsored by TEQIP III), BIT Mesra, in the topic "Battle against COVID-19: Challenges and Interventions" on 27th June 2020.
- Invited as Key Note Speaker at a two Day International Webinar on 'Managing Business in a Post COVID-19 World: Changes, Challenges and Strategies' held on 18th and 19th July 2020 organized by St. Xavier's College (Autonomous), Kolkata.
- Invited as Speaker at TEQIP sponsored online FDP on 'Artificial Intelligence and Machine Learning in Healthcare' held 27th- 31st July 2020 organized by Department of Bioengineering and Department of Electronics & Communications Engineering, BIT Mesra.
- Research paper on COVID-19 accepted to be archived in National Digital Library of India (NDLI), IIT Kharagpur on 22/05/2020.

➲ **Dr. Supriyo Roy**

- Act as a resource person in the Seminar "Business Management and Social Innovation (BMSI)" in Sambalpur University-Burla. Honor to have a session chair. 29th Feb.-1st March, 2020.
- Acts as Subject Expert for Faculty Selection for MBA at Kolhan University - Chaibasa on 18th and 19th Feb., 2020.

DEPARTMENT OF MATHEMATICS

SECTION 1 DEPARTMENT PROFILE

1.1 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 10 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 Modeling, Differential Equations, Operations Research, Vedic Mathematics, Discrete Mathematics, Music and Mathematics, 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. It also has initiated organizing seminars (two seminars in each month) aiming at distribution of knowledge about research areas among graduate and Ph.D. students. The Department is equipped with a modern computer laboratory with latest scientific software such as MATLAB, Mathematica, Mathcad, Minitab, SPSS, LINGO, Systat. etc..

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.	S. Padhi	Invited lecture in 7th Ariel Conference on Functional Differential Equations, 2019	Ariel University	Ariel University	Ariel University Israel	22.9.2019 27.9.2019
2.	S. Padhi	Invited lecture in 47th National Conference of Odisha Mathematical Society	TEQIP funded	Odisha Mathematical Society	NIST, Berhampur, Odisha	15.2.2020 16.2.2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
3.	S D Jabeen	International Congress on Industrial and Applied Mathematics (ICIAM2019)	SERB & BIT	Universitat de València, Valencia, Spain	Universitat de València	15.7.2019 -19.7. 2019
4.	S D Jabeen	Conference on Nonlinear Systems and Dynamics	BIT	IIT Kanpur	IIT Kanpur	12.12.2019 - 15.12. 2019
5.	Dhriti Sundar Patra	85th Annual Conference on Indian Mathematical Society,	Indian Institute of Technology Kharagpur	G.P. Raja Sekhar	Indian Institute of Technology Kharagpur	20.11.2019 -25.11.2019
6.	Dhriti Sundar Patra	International Conference on Advances in Higher Mathematics, Mathematical Sciences and Mathematical Modelling	Calcutta Mathematical Society, Kolkata, India	Prof. Arindam Bhattacharyya	Calcutta Mathematical Society, Kolkata, India	20.12.2019 -22.12.2019
7.	Dhriti Sundar Patra	International Conference on Analysis, Algebra, Combinatories and their Applications	NBHM, CSIR	Kallol Paul	Department of Mathematics, Jadavpur University, Kolkata, India	20.1.2020- 22.1.2020
8.	Pawan Kumar Shaw	Faculty Training Program on Data Science & Analytics	NPIU TEQIP-3	IIT Indore	IIT Indore	02.03.2020 -12.03. 2020

SECTION 3 RESEARCH PUBLICATIONS

3.1 Publications in Journals :

1. Pati S, Graef, J R & Padhi S (2019). Positive periodic solutions to a system of nonlinear differential equations with applications to Lotka–Volterra-type ecological models with discrete and distributed delays. J. Fixed Point Theory Appl. 21, 80. https://doi.org/10.1007/s11784-019-0715-x
2. Padhi S, Graef J R and KanaujiyaA (2019).Positive solutions to nonlinear elliptic equations depending on a parameter with Dirichlet boundary conditions, Differential equations and Dynamical Systemshttps://doi.org/10.1007/s12591-019-00481-z
3. Padhi S, Prasad B S R V and Mahendru D, (2019). System of Riemann-Liouville fractional differential equations with nonlocal boundary conditions - Existence, uniqueness and multiplicity of solutions,Mathematical Methods in the Applied Scienceshttps://doi.org/10.1002/mma.593.

4. Padhi S, Ali J & Graef J R (2020), Positive solutions to a derivative dependent p-Laplacian equation with Riemann-Stieltjes integral boundary conditions, Annals of Communications in Mathematics, 3(1), 7-25.

5. Guru N K & Jain S K (2020). Free axisymmetric vibrations of composite annular sandwich plates by higher- order theory using Chebyshev collocation technique. Thin-Walled Structures https://doi.org/10.1016/j.tws.2020.106823 (Available online: 29/06/2020).

6. Bhattacharya T, Narayan T, Chakraborty S, Konar S & Singh S (2020). Statistics as a Technology to Predict the Seasonal Variation of Air Pollution, International Journal of Innovative Technology and Exploring Engineering (IJITEE), Vol.9, No. 3, pp 1426-1431.

7. Nayancy, Dutta S & Chakraborty S (2020): A survey on implementation of lightweight block ciphers for resource constraints devices, Journal of Discrete Mathematical Sciences and Cryptography, https://doi.org/10.1080/09720502.2020.1766764).

8. Saha N & Chakraborty S (2020) Using Chebyshev's inequality to predict a random determinant for i.i.d. Gamma and Weibull elements, Journal of Statistics & Management Systems https://doi.org/10.1080/09720510.2020.1766766

9. Tandon A (2020). Dynamical behavior of tribal-forest system in the presence of development activities: Leslie–Gower - based nonlinear modeling study, Natural Resource Modeling (NRM), 33(2), e12261.

10. Shahni J & Singh R (2020). An efficient numerical technique for Lane–Emden–Fowler boundary value problems: Bernstein collocation method, The European Physical Journal Plus, 135, 475.

11. Singh R (2020). Solving Coupled Lane-Emden Equations by Green's Function and Decomposition Technique, International Journal of Applied and Computational Mathematics, 6 (1), 80.

12. Singh R, Guleria V & Singh M (2020). Haar wavelet quasilinearization method for numerical solution of Emden-Fowler type equations, Mathematics and Computers in Simulation, 174, 123-133.

13. Singh M, Singh R, Singh S, Singh G & Walker G (2020). Finite volume approximation of multidimensional aggregation population balance equation on triangular grid, Mathematics and Computers in Simulation, 172, 191-212.

14. Singh R (2019). Analytic solution of singular Emden-Fowler type equations by Green's function and homotopy analysis method, The European Physical Journal Plus, 134, 583.

15. Singh R, Shahni J, Garg H & Garg A (2019), Haar wavelet collocation approach for Lane-Emden equations arising in mathematical physics and astrophysics, The European Physical Journal Plus, 134, 548.

16. Kaur G, Singh R, Singh M, Kumar J & Matsoukas T, Analytical approach for solving population balances: a homotopy perturbation method, Journal of Physics A: Mathematical and Theoretical, 52 (38).

17. Khan M A, Maity D, & Jabeen S D (2019). Spatiotemporal synchronization in asymmetrically bidirectionally coupledneurons over a complex network, International Journal of Modern Physics B, Vol. 33 (19), Pages 1950213.

18. Jabeen S D, Mukherjee R N & Saha J. (2019). DART algorithm forconstrained optimization

with applications in suspension design, International Journal of Heavy Vehicle Systems, Vol. 26, No. 2,Pages 136-157.

19. Khan M A, Jabeen S D & Mazumdar H P. (2019). Anti-synchronization phenomenon of discrete chaotic maps using linear transformations, Journal of Information &Optimization Sciences. https://doi.org/10.1080/02522667.2017.1321766.
20. Patra D S, Ghosh A & Bhattacharyya A. (2020). The Critical Point Equation on Kenmotsu and almost Kenmotsu manifolds, PublicationesMathematicae, 97(1-2), 85-99.
21. Patra D S. (2019). Ricci solitons and paracontact geometry, Mediterranean Journal of Mathematics, 16:137.
22. Patra D S. (2019). Ricci solitons and Ricci almost solitons on para-Kenmotsu manifold, Bulletin of the Korean Mathematical Society, 76(1), 1315-1325.

3.2 Publications in Proceedings:

1. Choudhury S.D, Chakraborty S & Chatterjee N (2020), Raga Identification in Rabindra Sangeet Using Motif Discovery, in S. K. Sahana and V. Bhattacharjee (eds.), Advances in Computational Intelligence, Advances in Intelligent Systems and Computing 988,https://doi.org/10.1007/978-981-13-8222-2_20, p.245-253Springer Nature Singapore Pte Ltd..
2. Tewari S & Chakraborty S (2020). Modeling a Raga - based song and Evaluating its Raga content: Why it Matters in a Clinical Setting, S. K. Sahana and V. Bhattacharjee (eds.), Advances in Computational Intelligence, Advances in Intelligent Systems and Computing 988, https://doi.org/10.1007/978-981-13-8222-2_21p. 255-264, Springer Nature Singapore Pte Ltd.
3. Bal A B & Chakraborty S (2020), An Experimental Study of a Modified Version of Quicksort, in S. K. Sahana and V. Bhattacharjee (eds.), Advances in Computational Intelligence, Advances in Intelligent Systems and Computing 988 https://doi.org/10.1007/978-981-13-8222-2_27, p. 345-353, Springer Nature Singapore Pte Ltd.
4. Sarkar S, Solanki S S & Chakraborty S (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 Lecture Notes in Electrical Engineering, 642, p.315-321, Springer Nature Singapore Pte Ltd.
5. Priyanka S, Dutta S a& Chakraborty S (2020) Human Tracking System Based on GPS and IOT (Internet of Things), in A. P. Pandian et al. (Eds.): ICCBI 2018 LNDECT 31, pp. 514-521, https://doi.org./10.1007/978-3-030-24643-3-61 Springer Nature Switzerland AG.

3.3 Books Co-Authored

1. Princila & Chakraborty S (2020), Predicting Maximum and Minimum Eigenvalues of a Random Matrix: A Study in Simulation, Rathore Academic Research Publications, ISBN 978-81-946310-3-3 [research monograph]

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.	S. Padhi	Member of Editorial Board of the Journal "Functional Differential Equations"	Ariel University	International	Since May 2020.

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
2.	S. Padhi	Editor of the "Proceeding on of FDEA2019"	Springer Nature	International	April 2020
3.	S D Jabeen	SERB International travel grant for attending International Congress on Industrial and Applied Mathematics (ICIAM2019), Universitat de València, Valencia, Spain	SERB	National	July 15-19, 2019

SECTION 5 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

5.1 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored (Yes / No)
1.	Dr. S. K. Jain	Professor	No
2.	Dr. S. Chakraborty	Professor	No
3.	Dr. S. Padhi	Professor	No
4.	Dr. A. P. Ghorai	Associate Professor	No
5.	Dr. P. Kaur	Assistant Professor	No
6.	Dr. Abhinav Tandon	Assistant Professor	No
7.	Dr. Randhir Singh	Assistant Professor	No
8.	Dr. S. D. Jabeen	Assistant Professor	No
9.	Dr. Vandana	Assistant Professor	No
10.	Dr. Dhriti Sundar Patra	Assistant Professor	Yes
11.	Mr. Pawan Kumar Shaw	Assistant Professor	Yes
12.	Mr. Tanmay Choudhury	Assistant Professor	Yes

5.2 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
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. Dr. A. Mustafi	Associate Professor, Dept. of CSE,	Internal
9.	Dr. P. Kaur	Assistant Professor	Internal
10.	Dr. Abhinav Tandon	Assistant Professor	Internal

Sr. No.	Name of the Member	Designation	Role
11.	Nishith Mohan	Research Scholar, Department of Mathematics, IIT, Mandi	External (Alumni)
12.	Kumar Shivam	Data Scientist, Flipshope, Bengalaru	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 Publication by students

1. **Guru N K** &Jain S K (2020). Free axisymmetric vibrations of composite annular sandwich plates by higher- order theory using Chebyshev collocation technique. Thin-Walled Structures https://doi.org/10.1016/j.tws.2020.106823 (Available online: 29/06/2020).

2. **Shahni J** & Singh R. (2020).An efficient numerical technique for Lane–Emden– Fowler boundary value problems: Bernstein collocation method, The European Physical Journal Plus, 135, 475.

3. **Padhi S**, Prasad B S R V and Mahendru D (2019). System of Riemann-Liouville fractional differential equations with nonlocal boundary conditions - Existence, uniqueness and multiplicity of solutions,Mathematical Methods in the Applied Scienceshttps://doi.org/10.1002/mma.593.

6.2 Achievements of Students

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
1.	Sweta Kumari	Qualified JRF (NET)-CSIR Dec 2019	National Testing Agency (NTA)	15.01.2020
2.	Dhirendra Sharma	Inspire Fellowshipfor pursuing full-time doctoral (PhD) Program	DST	08.09.2019
3.	Satyam Narayan Srivastava (Roll No. IMH/10023/15)	Best Presentation Award for the paper entitled "Monotone Iterative Methods for solutions of Fractional Differential Equations"	47th International Conference of Odisha Mathematical Society held at NIST, Berhampur.	15.2.2020 - 16.2 2020
4.	Utkarsh Mishra (Roll No. IMH/10051/17), and Hritik Shubham (IMH/10064/17), Nagendra Kumar (IMH/10029/17) Ashok Priyadarshi (IMH/10084/17)	First Prize for start upMeOW (Mechanics on Wheels) in an event BIT Shark Tank conducted in BITOSA Mumbai Biz Fete 2019.	BITOSA Mumbai in association with BITMAA - NA	9.2. 2020

DEPARTMENT OF MECHANICAL ENGINEERING

SECTION 1 DEPARTMENT PROFILE





1.1 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. Computer Aided Analysis and Design
- M.Tech. Energy Technology
- M.Tech. Heat Power Engineering
- M.Tech. Design of Mechanical Equipments

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

a) Ongoing Projects

Sr. No.	Project Title	PI / Co PI	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Cost Effective Building Integrated Photovoltaic Thermal System (BIPVT) with inbuilt Solar water Heating System for Commercial Hotels and Hospitals: A Make in India Concept	Dr. Om Prakash/ Prof. Shalin	NPIU: National Project Implementation Unit	18.07 2019	18.5 Lakh	01 year

Sr. No.	Project Title	PI / Co PI	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
2.	Liquid-liquid flow through horizontal non uniform conduits coupled with return bends	PI- Dr. Mukesh Sharma	NPIU-AICTE	18.07 2019	20.91 lacs	One year
3.	Development and characterization of under-water friction stir welding process	PI- Dr. Ratnesh Kumar	NPIU-AICTE	18.07 2019	13.82 lakh	One year
4.	Establishment of PoC of Project -Development and Optimization of Performance and Emission Characteristics of CI, SI and Stirling Engine Using Hydrogen Enriched BIO-CNG Produced from Anaerobic Co-digestion with Food Waste, Tannary Waste, Stubble Waste and STP Sludge	PI - Dr. Rajeev Kumar	DST	12.06.20	1.683 Lakh	4 months
5.	Development of Energy Efficient Textured Bearing for Improving the Performance of Rotor Systems	PI - Dr. Faisal Rahmani, Co-PI- Dr. Rajeev Kumar	NPIU- MHRD	18.06.19	19.83 Lacs	One year
6.	Technical Interventions in Rural Areas	Pi- Rajeev Kumar	UBA-MHRD	06.01.2020	1.5 Lacs	One year
7.	Development and characterization of under-water friction stir welding process	Co-PI- Dr. Abhijit Nag	NPIU-AICTE	18.07 2019	13.82 lakh	One year
8.	Bobbin Tool Friction Stir Welding of Aluminium to Copper	PI- Dr. Chandrahas Patel	NPIU-AICTE	18.07 2019	10.67 lakh	One year

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 Village development plan under Unnat Bharat Abhiyan	PI- Dr. Rajeev Kumar	UBA-MHRD	02.06.17	1.75 Lacs	19.01.20

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. Lakhbir Singh Brar	Digital transformation in teaching-learning process	TEQIP-3	P.M. Khodke	IIT Bombay	06.04.2020-22.04.2020
2.	Dr. Arkadeb Mukhopadhyay	International Conference on Advancements in Mechanical Engineering (ICAME - 2020)		Mr. Rafiqul Haque	Aliah University, Kolkata, India.	16.01.2020-18.01.2020
3.	Prof. Shalin	Promote Innovation, IPR, Entrepreneurship, and Start-ups among HEIs	MHRD	Institution's Innovation Council (IIC)	Institution's Innovation Council (IIC) of MHRD's Innovation Cell, New Delhi	28.04.2020 to 22.05.2020
4.	Dr. Sujeet Kumar Mishra	Concepts and Applications of the Finite Elements Method	TEQIP - III	IIT Hyderabad	Hyderabad	02.09.2019-07.09.2019
5.	Dr. Abhijit Nag	Digital Transformation In Teaching Learning Process	TEQIP 3	IIT Bombay	BIT Mesra	06.04.2020-22.04.2020
6.	Dr. Abhijit Nag	LaTeX for Students, Engineers, and Scientists		IITBombayX	BIT Mesra	24.09.2019-02.12.2019
7.	Dr. Om Prakash	TEACHING LEARNING IN A DIGITAL AGE: MOOCS	TEQIP 3	Birla Institute of Technology Mesra, Ranchi	Birla Institute of Technology Mesra, Ranchi	13.09.2019
8.	Dr. S. K. Dhiman	Two week Digital transformation in teaching-learning process	TEQIP-3	P.M. Khodke	IIT Bombay	06.04.2020 to 22.04.2020
9.	Dr. S. K. Dhiman	WorksWorkshop on Future trends in Green Technologyhop on Future trends in Green Technology		Dr. P. Baredar & Dr. Gaurav Dwivedi	Organized by Energy Centre, Maulana Azad National Institute of Technology, Bhopal	22.06.2020-26.06.2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
10.	Dr. S. K. Dhiman	Two-week online FDP on Delivering Online Course using Canvas LMS	TEQIP - 3	Dr. Joyjeet Ghose Dr. Priyank Kumar	Birla Institute of Technology, Mesra Ranchi	27.07.2020-05.08.2020
11.	Dr. S.K. Dhiman	International Conference on Innovations in Thermo-Fluid Engineering and Sciences [ICITFES-2020],	TEQIP-3	Dr. Murugan	NIT Rourkela,	10.02.2020-12.02.2020
12.	Dr. S. K. Dhiman	Int. Conf. on Vision Towards Emerging Trends in Communication and Networking (ViTECoN 2019	IEEE	Dr. Thanikaiselvan V.	VIT Vellore	30.03.2019-31.03.2019
13.	Dr. Faisal Rahmani	One-week online Faculty Development Programme on "Recent Advances in Mechanical Engineering"		Mr. Ashok Atulkar Mr. PranabeshGanai	SGSITS, Indore	8.06.2020-13.06.2020
14.		Five Day Faculty Development Program on "Advances in Thermo-Fluids and Turbomachines"			SDIET, Faridabad.	06.06.2020-10.06. 2020
15.	Shazee Rahmani	Summer School on Internet of Things	TEQIP3	ISI Kolkata	ISI Kolkata, Department of Computer Sc.	22.06.2019-25.06.2019
16.	Dr. Praveen Mishra	Two week Digital transformation in teaching-learning process	TEQIP-3	P.M. Khodke	IIT Bombay	06.04.2020 to 22.04.2020
17.	Dr. Praveen Mishra	One day National Webinar on the Topic "Online Teaching: Challenges and Opportunities in Post Covid-19 Perspective" .		Department of Commerce and Business Management and IQAC	G.C.Jain Commerce College, Chaibasa	23.06.2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
18.	Dr. Praveen Mishra	Webinar on " Insights to INDUSTRY 4.0"		Department of Mechanical Engineering,	S.A. Engineering College, Chennai	29.05.2020
19.	Dr. Praveen Mishra	Webinar on " Self-actualization for success in career and life through the principles of Shrimad Bhagavad Geeta".		MIT Moradabad	MIT Moradabad	26.05.2020
20.	Dr. Praveen Mishra	Online Workshop on "Awareness on Industrial Safety during COVID 19"		Department of Mechanical Engineering,	S.A.Engineering College, Chennai	23.05.20
21.	Dr. Praveen Mishra	E-FDP on " Publishing research papers in premier journals-Do's and Don'ts"		I.T.S Ghaziabad	I.T.S Ghaziabad	21.05.20
22.	Dr Richa Pandey	Two week Digital transformation in teaching-learning process	TEQIP-3	P.M. Khodke	IIT Bombay	06.04.2020 to 22.04.2020
23.	Dr Richa Pandey	International Webinar onRecent Advances in Science and Technology during the Coronavirus Pandemic	TEQIP 3	DEPTT OF CHEMISTRY	BIT Mesra	18.07.2020-20.07.2020

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals :

1. 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, pp. 1-17.
2. 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, pp. 339-352.
3. Wasilewski M, Brar L S, & Ligus G (2020). Experimental and numerical investigation on the performance of square cyclones with different vortex finder configurations, Separation and Purification Technology, 239, pp. 1-20.
4. Wasilewski M, & Brar L S (2019). Effect of the inlet duct angle on the performance of cyclone separators, Separation and Purification Technology, 213, pp. 19-33.

5. Dayal A, Shrivastava M, Upadhyaya R, & Brar L S (2019). Numerical study using detailed chemistry combustion comparing effects of wall heat transfer models for compression ignition diesel engine, SN Applied Sciences.

6. Sharma M, Kumar R, Majumdar P, & Mukhopadhyay D (2019). Effect of PT/CT contact on the circumferential temperature distribution over a fully voided nuclear channel of IPHWR, Nuclear Engineering and Technology, 51(5), pp. 1314-1321.

7. Mukhopadhyay A, Barman T K, Sahoo P, & Davim J P (2019). Tribological characteristics of electroless Ni-B-W-Mo coatings under dry sliding condition. Journal of Manufacturing Technology Research, 11(1/2), pp. 13-23.

8. Mitra A, Bara R, Meena K K, & Bhaduri S (2020).Vibration reduction of a simply supported beam with electromagnetic actuator, International Journal of Advanced Science and Technology, 29(08), pp. 2621-2630.

9. Kumar R, Kumar G, & Kumar R (2020). Optimization of process parameters of friction stir welded AA5082-AA7075 butt joints using resonance fatigue properties, Bulletin of Polish Academy of Sciences Technical Sciences, 68(1), pp. 99-108.

10. Kumar R, Chattopadhyaya S, Bora B, & Krolczyk G (2019). Critical investigation of mechanical and micro-structural properties of friction stir welded joints of AA 6061 T6, Academic Journal of Manufacturing Engineering, 17 (4), pp. 37-45

11. Bora B, Kumar R, & Chattopadhyaya S (2019). Development of mathematical model for Friction Stir Welded joints using 'R' programming, Materials Today: Proceedings, 27(3), pp. 2214-7853.

12. Bhushan C, Latta D B, & Mahto D (2020). Analysis of ignition delay by taking Di- tertiary butyl peroxide as an additive in a dual fuel diesel engine using hydrogen as a secondary fuel, International Journal of Hydrogen Energy, 45(28), pp. 14806-14820.

13. Sinha A, Mittal S, Jakhmola A, & Mishra S K (2020). Design of power generating speed breakers, International Journal of Advanced Science and Technology, 29(7), pp. 11790-11799.

14. Sinha A, Mittal S, Jakhmola A, & Mishra S K (2020). Green energy generation from road traffic using speed breakers, Materials Today: Proceedings, https://doi.org/10.1016/j.matpr.2020.06.248.

15. Mishra S K, & Misra A (2020). Effect of shape geometry on electromagnetic radiation under quasi-static compression in sintered aluminium Preforms. International Journal of Energy Technology, 2(1), pp. 12-25.

16. Kumar A, NaggapaneniP, Samad M, & Kumar R (2020). Design and Fabrication of a Low-cost Mixer for Biogas Digester, 29(7), pp. 2207-6360.

17. Kumar R, Kumar G, & Kumar R (2020). Optimization of process parameters of friction stir welded AA5082-AA7075 butt joints using resonance fatigue properties. Bulletin of Polish Academy of Sciences Technical Sciences, Polish academy of sciences, 68(1), pp. 99-108.

18. Roy A K, & Kumar K (2019). Sustainability in Bio-Metallic Orthopedic Implants, Biointerface Research in Applied Chemistry, 9(1), pp. 3825 – 3829.

19. Kumar M, Mishra P, & Roy A K (2020). Infuence of Submerged Entry Nozzle Port Blockage on the Meniscus Fluctuation Considering Various Operational Parameters, Metals, 10(2), 269, pp. 1-16.

20. Zindani D, Roy A K & Kumar K (2019). Design of Mixed Flow Pump Impeller Blade using Mean Stream Line Theory and its Analysis, Scientia Iranica Transactions B: Mechanical Engineering, 27(1), pp. 350–360.

21. Roy A K, & Kumar K (2019). CFD Assisted Investigation on Adiabatic Film Cooling Effectiveness over a Flat Plate. Materials Today: Proceedings, 18, pp. 3711-3716.

22. Minj A, Kumar K, Roy A K, & Vardhan T V (2019). Analysis of film cooling effectiveness using computational approach. AIP Conference Proceedings, 2200(1), p. 020003.

23. Minj A, Roy A K, & Kumar K (2020). Modeling and Simulation of Film Cooling Effectiveness on a Flat Plate. Materials Today: Proceedings, 22, pp. 3261-3267.

24. Chandra S, Kumar K, Roy A K, Prashanth D, & Balram Y (2019). Forced convection heat transfer in a twin cylinder system under static condition using computational approach. AIP Conference Proceedings, 2200(1), p. 020006.

25. Roy A K, & Kumar K (2019). CFD Assisted Investigation on Adiabatic Film Cooling Effectiveness over a Flat Plate. Materials Today: Proceedings, 18, pp. 3711-3716.

26. Chandra S, Kumar K, Roy A K, Prashanth D, & Balram Y (2019). Forced convection heat transfer in a twin cylinder system under static condition using computational approach. AIP Conference Proceedings, 2200(1), p. 020006.

27. Roy A K, & Kumar K (2020). Cooling of Rotating Turbine Blades – A Novel Approach, International Journal of Advanced Materials Manufacturing & Characterization, 10 (1), pp. 1-8.

28. Nag A, Ramachandran H, & Srivastava A (2020). Optimization of the interference parameters of an Orbit motor using genetic algorithm, Proc IMechE, Part C: J Mechanical Engineering Science, onlinefirst, https://doi.org/10.1177/0954406220924700.

29. Sarangi S K, Mishra D P, & Mishra P, (2019) Numerical Analysis of Thermo-Fluid Performance of Fin-and-tube Heat Transfer Surface using Rectangular Winglets, Journal of Heat Transfer ASME, 141 (10), pp. 101801-1 – 101801-13.

30. Sarangi S K, Mishra D P, & Mishra P, (2020) Parametric Investigation of Wavy Rectangular Winglets for Heat Transfer Enhancement in a Fin-and–Tube Heat Transfer Surface, Journal of Applied Fluid Mechanics, 13(2), 615-628.

31. Mishra D P, & Paramanik S C, (2019) Computation of Air Entrainment into a Mixing Pipe: An Experimental and Numerical Analysis, Journal of Mechanical Engineering, 16(2), 11-28.

32. Aman A, Bhushan B, & Prakash O (2020) Energy Audit of a small commercial hospital building in Ranchi-A case study. International Journal of Energy Technology, 2(1), pp. 1-11.

33. Ahmad A, Kumar A, Prakash O, & Aman A. (2020). Daylight availability assessment and application of energy simulation software-A literature review. Material Science and Energy Technology, 3, pp. 679-689.

34. Ahmad A, & Prakash O (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, 142, pp. 1-6.

35. Ahmad A, & Prakash O (2019). Thermal analysis of north wall insulated greenhouse dryer at different bed conditions operating under natural convection mode. Environ Prog Sustainable Energy, 38(6), e1325729.

36. Kumar A, Dwivedi A K, Prakash O, & Baredar P (2019). Bamboo as a complementary crop to address climate change and livelihoods - Insights from India, Forest Policy and Economics, 102, pp. 66–74.

37. Dhiman S K, Kumar A, & Prasad J K (2019). Heat transfer by satellite cluster of cylinders at subcritical Reynolds number, Heat & Mass Transfer, 55, pp. 595-612.

38. Mahato A C, & Ghoshal S K (2020). Energy saving strategies on power hydraulic system: An overview. The Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering (SAGE Publication). https://doi.org/10.1177%2F0959651820931627

39. Mahato A C, & Ghoshal S K (2020). An overview of energy savings approaches on hydraulic drive systems. International Journal of Fluid Power (River Publication), Vol. 21, No. 1, pp. 81–118.

40. Sarangi S K, Mishra D P, & Mishra P (2019). Numerical Analysis of Thermo-Fluid Performance of Fin-and-tube Heat Transfer Surface using Rectangular Winglets, Journal of Heat Transfer ASME, 141(10), pp. 101801-1 – 101801-13.

41. Kumar M, Mishra P, & Roy A K (2020). Influence of Submerged Entry Nozzle Port Blockage on the Meniscus Fluctuation Considering Various Operational Parameters. Metals, 10(2), 269.

42. Sarangi S K, Mishra D P, & Mishra P (2020). Parametric Investigation of Wavy Rectangular Winglets for Heat Transfer Enhancement in a Fin-and–Tube Heat Transfer Surface, Journal of Applied Fluid Mechanics, 13(2), pp. 615-628.

43. Pandey R (2020). Application Of Expert System With Fuzzy Logic And Artificial Intelligence (AI) For Recognizing Alzheimer, Intelligent Decision Technologies, 14(2), pp. 253-258.

44. Pandey R, Aryan D,.Nair R M, & Singhania Y (2019). Experimental Analysis of Various Materials on Custom Fit Ankle Foot Orthosis, International Journal of Advanced Science and Technology, 29(7), pp. 23-30

45. Pandey R (2020). Data Mining for Assessment of Final Year Major Project (FYMP) Marks in Mechanical Engineering, International Journal of Engineering and Technical Research, 9(03), DOI: 10.17577/IJERTV9IS030101.

46. Pandey R, & Mukherjee T (2020). QFD based Selection of Design Parameters for Hydraulic Tilt and Transfer Trolley, First International Online and Multidisciplinary Conference (Online Conference), Buddha Institute of Technology, Gorakhpur, May. http://joics.net/

4.2 Publications in Proceedings:

1. Wasilewski M. and Brar, L S. (2019) Investigations of the flow field inside a square cyclone separator using DPIV and CFD, E3S Web of Conferences, EKO-DOK, pp. 1-8. (https://doi.org/10.1051/e3sconf/201910000083).

2. Ahmed, A., Prakash, O., Ranjan, S., Dhamankar, N. (2020). Energy Consumption Analysis in a Hospital Building in the Composite Climate Area. In Proceeding of International Conference on Energy And Environmental Technologies For Sustainable Development Chem-Conflux 20, February 14-16, 2020. ISBN: 978-93-86238-86-3

4.3 Book:

4.3.1 Co-Authored

1. Kumar, A. and Prakash, O. (2019). Solar Desalination Technology, Green Energy and Technology, Springer Singapore, ISBN-10: 9811368864, ISBN-13: 978-9811368868.

2. Prakash, O. (2019). Proceedings of National Conference on Recent Advancement In Mechanical Engineering (NCRAME 2019) publisher: BS Publication, India. e-ISBN: 978-93-8830-572-3.
3. Kumar, A. and Prakash, O., Chowhan, P.S. Samsher. (2020). Energy Management: Conservation and Audits. CRC Press, Taylor and Francis Group. ISBN-13: 978-0367343835 and ISBN-10: 0367343835.5.
4. Shalin. (2019). Proceedings of National Conference on Recent Advancement In Mechanical Engineering (NCRAME 2019) publisher: BS Publication, India. e-ISBN: 978-93-8830-572-3.
5. Kumar, K., Roy, A.K. and Dash, N. (2020). Material Science and Engineering (ISBN 978–93–89583–08–3), Dreamtech Press, New Delhi, INDIA.
6. Kumar, K., Roy, A.K. and Kumari, N. (2020). Understanding CREO Parametric Through Examples (ISBN 978– 93–89583–13–7), Dreamtech Press, New Delhi, INDIA.
7. Kumar, K., Roy, A.K. and Debta, S. (2020). Basic Mechanical Engineering(ISBN 978–93–89583–91–5), Dreamtech Press, New Delhi, INDIA.

4.3.2 Chapter(s) in Edited Book

1. Mukhopadhyay, A. and Sahoo, S. (2020). Corrosion Protection of Construction Steel In P. Sahoo (Ed.) Handbook of Research on Developments and Trends in Industrial and Materials Engineering (pp. 327-347), Hershey, PA: IGI Global. ISBN10: 1799818314.
2. Ahmad, A., Prakash, O., Kumar, A. and Pandey, A. (2020). A Review of Solar Air Heater. In A. Sharma, A. Shukla, R. Singh(Ed.) Low Carbon Energy Supply Technologies and Systems (pp. 1-10). CRC Press.ISBN 9780429353192.
3. Kaviti, A. K., Kumar, A. and Prakash, O. (2019). Effect of design parameters on productivity of various passive solar stills. In A. Kumar and O. Prakash(Ed.) Solar Desalination Technology (pp. 49-73). Springer, Singapore.ISBN-10: 9811368864, ISBN-13: 978-9811368868.
4. Pandey, P., Prakash, O. and Kumar, A. (2019). Desalination and Solar Still: Boon to Earth. In A. Kumar and O. Prakash (Ed.) Solar Desalination Technology (pp. 1-24). Springer, Singapore. ISBN-10: 9811368864, ISBN-13: 978-9811368868.
5. DevRoy, A., Prakash, O., Singh, S. and Kumar, A. (2019). Application of Software in Predicting Thermal Behaviours of Solar Stills. In A. Kumar and O. Prakash (Ed.) Solar Desalination Technology (pp. 105-148). Springer, Singapore.ISBN-10: 9811368864, ISBN-13: 978-9811368868.
6. Kumar, D., Pandey, A., Prakash, O., Kumar, A. and DevRoy, A. (2019). Simulation, Modeling, and Experimental Studies of Solar Distillation Systems. In A. Kumar and O. Prakash (Ed.) Solar Desalination Technology: Concept, Design, Testing, Modeling, Economics, and Environment (pp. 149-166). Springer, Singapore.ISBN-10: 9811368864, ISBN-13: 978-9811368868.
7. Kant, R., Prakash, O., Tripathi, R. and Kumar, A. (2019). Exergy Analysis of Active and Passive Solar Still. In A. Kumar and O. Prakash (Ed.) Solar Desalination Technology: Concept, Design, Testing, Modeling, Economics, and Environment (pp. 261-273). Springer, Singapore.ISBN-10: 9811368864, ISBN-13: 978-9811368868.
8. Sarmah, T. and Dhiman, S. K. (2019). Design and analysis of solar cabinet dryer for drying of potatoes. In A. Prasad, S.S. GuptaR and K. Tyagi (Ed.) Advances in Engineering Design (pp. 105-115). Springer, Singapore. ISBN 978-981-13-6468-6.
9. Zindani, D., Kumar, K. and Davim, J.P. (2019). Bio Composite for Orthotic Calipers. In Bajpai, P. K., (ed.) Processing of Natural Fiber Reinforced Bio-Composites. Woodhead Publishing India pp 175 – 187.

10. Zindani, D., Kumar, K. and Davim, J.P. (2019). Fire Performance of Natural Fiber Reinforced Polymeric Composites in Bajpai, Singh (eds.) Reinforced Polymer Composites Processing, Characterization and Post Life Cycle Assessment, Wiley_VCH, Germany. pp 209 – 224 https://doi.org/10.1002/9783527820979.ch11

11. Kalita, H., Zindani, D. and Kumar, K. (2019). Additive Manufacturing: A Tool for Better Education, In Kumar, K., Zindani, D. and Davim, J.P. (eds.) Additive Manufacturing Technologies from an Optimization Perspective, IGI Global USA. pp 41 – 76, https://doi.org/10.4018/978-1-5225-9167-2.ch003.

12. Kalita, H., Zindani, D. and Kumar, K. (2019). Industries of Future. In Kumar, K., Zindani, D. and Davim, J.P. (eds.) Digital Manufacturing and Assembly Systems in Industry 4.0, CRC Press, USA pp. 59 – 71.

13. Zindani, D., Kumar, K. and Davim, J.P. (2019). Metallic Biomaterials – A Review. In Davim, J. P. (eds.) Mechanical Behaviour of Biomaterials. WoodHead/Elsevier (USA). pp. 83 – 99. https://doi.org/10.1016/B978-0-08-102174-3.00004-8.

14. Kalita, H., Kumar, K. and Davim, J.P. (2020). Closed Loop Supply Chain System – A Review of Modelling Methods and Strategies, In Kumar, K. and Davim, J.P., (eds.) Supply Chain Intelligence: Application and Optimization (Under book series Management and Industrial Engineering), Springer Nature, Germany, pp 19–36 https://doi.org/10.1007/978-3-030-46425-7_2.

15. Roy, S. and Kumar, K. (2020). Strategic Planning of Cold Supply Chain towards Good Manufacturing Practices: Issues and Challenges in Indian Market. In Information Resources Management Association, USA (eds.) Supply Chain and Logistics Management: Concepts, Methodologies, Tools, and Applications IGI Global USA pp. 1682 – 1694. https://doi.org/10.4018/978-1-7998-0945-6.ch081.

16. Kalita, H. and Kumar, K. (2020). Generation of slip line fields incorporating BUE and shear zone to model machining using MATLAB. In BBVL. Deepak, DRK Parhi and Pankaj C. Jena (eds.), Innovative Product Design and Intelligent Manufacturing Systems, Lecture Notes in Mechanical Engineering, Springer, pp 409 – 419, https://doi.org/10.1007/978-981-15-2696-1_40.

17. Kalita, H. and Kumar, K. (2020). Digital Technology Integration in Different Educational Fields: Design, Architecture, Tourism and Business Engineering, In Kumar, K. and Davim, J.P., (eds.) Methodologies and Outcomes of Engineering and Technological Pedagogy, IGI Global USA. pp 112-131. https://doi.org/10.4018/978-1-7998-2245-5.ch008.

18. Zindani, D., Kumar, K. and Davim, J.P. (2020). Sustainability Manufacturing Systems Design. In Hashmi, S. and Choudhury, I. (eds.) Encyclopedia of Renewable and Sustainable Materials, Elsevier (USA). vol. 5 pp 512 – 518 https://doi.org/10.1016/B978-0-12-803581-8.11493-6.

SECTION 5 AWARD / PATENT / COLLABORATIONS

5.1 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	CSIR (CLRI) - Chennai, VIT Vellore and BIT Mesra Ranchi	Development of PoC of DST CONSORTIA Project	22.10.2019/3 years

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.	Technical Intervention in Rural Areas	Sahyog Ahinsha (BE/10400/2017)	Dr. Rajeev Kumar	22.07.19
2.	Basic Automobile and AutoCAD Workshop	Divyang Gupta (BE/10672/17)	Dr. Paritosh Mahata	30.08.2019 to 31.08.2019
3.	Pit Stop-PANTHEON'19	Utkarsh Raj (BE/10096/17)	Dr. Paritosh Mahata	28.09.2019
4.	Save the Egg-PANTHEON'19	Gunjit Dave (BE/10724/17)	Dr. Paritosh Mahata	29.09.2019
5.	Auto Quiz-BITOTSAV'20	Y Tarun Raghav (BE/10513/17)	Dr. Paritosh Mahata	16.02.2020
6.	Robolution Club	Saurabh Khemka	Dr. Richa Pandey	16.02.2020

6.2 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.	Dr. Sankha Bhaduri	Assistant Professor	No
7.	Dr. Lakhbir Singh Brar	Assistant Professor	No
8.	Dr. Sushil Kumar Dhiman	Assistant Professor	No
9.	Dr. Dhaneshwar Mahto	Assistant Professor	No
10.	Dr. Sujeet Kumar Mishra	Assistant Professor	No
11.	Dr. Praveen Mishra	Assistant Professor	No
12.	Dr. Abhijit Nag	Assistant Professor	No
13.	Dr. Om Prakash Pandey	Assistant Professor	No
14.	Dr. Om Prakash	Assistant Professor	No

Sr. No.	Name	Designation	TEQIP Sponsored
15.	Dr. Paritosh Mahata	Assistant Professor	No
16.	Dr. Nirmal Kumar	Assistant Professor	No
17.	Dr. Anil Chandra Mahato	Assistant Professor	No
18.	Dr. Arun Kumar Kadian	Assistant Professor	No
19.	Dr. Arkadeb Mukhopadhyay	Assistant Professor	No
20.	Dr. Mukesh Sharma	Assistant Professor	No
21.	Dr. Anuj Bajpai	Assistant Professor	Yes
22.	Dr. Ratnesh Kumar	Assistant Professor	Yes
23.	Dr. Chandrahas Patel	Assistant Professor	Yes
24.	Dr. Faisal Rahmani	Assistant Professor	Yes
25.	Prof. Shalin	Assistant Professor	Yes
26.	Prof. Shazee Rahmani	Assistant Professor	Yes

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. R.P. Sharma	Professor & HOD(Ex-officio)	Chairman
2.	Dr. D.P. Mishra	Professor	Internal Member
3.	Dr. A.K. Roy	Associate Professor	Internal Member
4.	Dr. Kaushik Kumar	Associate Professor	Internal Member
5.	Dr. Rajeev Kumar	Associate Professor	Internal Member
6.	Dr. Praveen Mishra	Assistant Professor	Internal Member
7.	Dr. Dhaneshwar Mahto	Assistant Professor	Internal Member
8.	Dr. Anand Kumar Sinha	Professor, Civil Engg.	External Member
9.	Dr. Sanjay Kumar Jha	Associate Professor, Prod. Engg	External Member
10.	Dr. Arbind Kumar	Professor and Director, BIT Patna	External Member
11.	Dr. Arbind Kumar	Professor and Incharge, Mechanical Engineering, BIT Deoghar	External Member
12.	Dr. Saroj Kumar Acharya	Professor, SOA University	External Member
13.	Sri Amit Kumar Pandey	Sr. D.G.M., Usha Martin, Tatisilwai, Ranchi.	External Member

SECTION 7 OTHER INFORMATION

7.1 Publication by students

1. **Mitra A., Bara R., Meena K. K.** and Bhaduri S (2020), Vibration reduction of a simply supported beam with electromagnetic actuator, International Journal of Advanced Science and Technology,29(08),pp. 2621-2630.
2. **Akshat Kumar, P. Naggapaneni, M. Samad** and Kumar R. **(2020)**. Design and Fabrication of a Low-cost Mixer for Biogas Digester, IJAST, 29(7).
3. Nag A., **Ramachandran H., Srivastava A. (2020)**. Optimization of the interference parameters of an Orbit motor using genetic algorithm, Mech Engg Sc, Proc IMechE, onlinefirst, https://doi.org/10.1177/0954406220924700.

4. **Sinha A., Mittal S., Jakhmola A.,** & Mishra S. K. (2020). Design of power generating speed breakers, International Journal of Advanced Science and Technology,29(7), pp. 11790-11799.
5. **Sinha A., Jakhmola A., Mittal S.,** & Mishra S. K. "Green energy generation from road traffic using speed breakers" Materials Todaydoi.org/10.1016/j.matpr.2020.06.248.
6. **Ahmed, A.**, Prakash, O., **Ranjan, S., Dhamankar, N.** (2020). Energy Consumption Analysis in a Hospital Building in the Composite Climate Area. In Proceeding of International Conference on Energy And Environmental Technologies For Sustainable Development Chem-Conflux 20, February 14-16, 2020. ISBN: 978-93-86238-86-3.
7. **Aman A., Bhushan B.**, Prakash O. (2020) Energy Audit of a small commercial hospital building in Ranchi-A case study. International Journal of Energy Technology, 2 (1), 1-11.
8. **Ahmad A., Kumar A.**,Prakash O, & **Aman A**. (2020). Daylight availability assessment and application of energy simulation software-A literature review. Material Science and Energy Technology. 3, 679-689.
9. **Ahmad A.**, & Prakash O. (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, 142, 1-6.
10. **Ahmad A**, & Prakash O. (2019). Thermal analysis of north wall insulated greenhouse dryer at different bed conditions operating under natural convection mode. Environ Prog Sustainable Energy, 38 (6) e1325729.
11. **Samrah T**, & Dhiman S. K., Design and Analysis of Solar Cabinet Dryer for Drying of Potatoes", Lecture Note of Mechanical Engineering "Advances in Engineering Design", Springer Nature Singapore Pte Ltd. (SCOPUS indexed) (2019) (DOI: 10.1007/978-981-13-6469-3_10).

7.2 Achievements of Students

Sr. No.	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1.	Akshat Kumar and P. Naggapaneni	Frist Prize on paper presentation in National Science Day	BIT Mesra- Ranchi	28.02.2020

7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Mr. Tulsi Tiwari	11.11.2019	
2.	Mr. Pinakin Patel	11.11.2019	

7.4 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	Dr. Alok Chaturvedi, 82 batch Professor in Purdue Univ.	He is professor in Management deptt. In Perdue univ. He did B.E. from BIT Mesra in Mechanical Engg. and joined Tata Motors and then moved to US for his master and Ph.D and joined Purdue Univ.

8.1 Any other relevant information

1. Dr. Om Prakash is nominated as guest editor in Special issue on Renewable Energy for International Journal of Energy Technology in 2020. ISSN: Online: 2633-0717; Print: 2633-0709.
2. Dr. Om Prakash is nominated to be in the Conference Advisory Board of 2nd International Conference on Recent Advances In Mechanical Engineering (18-19th September, 2020), Department of Mechanical, Automobile and Production & Industrial Engineering And Centre for Energy and Environment Delhi Technological University (Formerly Delhi College of Engineering) Bawana Road, Delhi-110 042 (India).
3. Dr. D. Mahto has been nominated in international advisory board of 2nd International Conference on Future Engineering System and Technologies (FEST 2020) Dr. S. K. Dhiman, Reviewer of SCI Journal Paper: Elsevier Publication; Springer Publication Ltd.

DEPARTMENT OF PHARMACEUTICAL SCIENCES & TECHNOLOGY

SECTION 1 DEPARTMENT 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:**

i. B. Pharm. and M. Pharm. courses are recognized by both Pharmacy Council of India and AICTE.

ii. Ranked 16th in Overall by National Institutional Ranking Framework (NIRF) 2019, Ministry of HRD, GOI in category of Pharmacy.

iii. B. Pharm. Programme is accredited by NBA for Five Years (2017-2022).

iv. Recognized amongst the 10 centres in the country for AICTE- Quality Improvement Program (QIP) in Pharmacy, since 2007.

v. One of the Nodal Centre for the award of prestigious AICTE- National Doctoral Fellowship.

vi. 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:**

1. B. Pharm (Seats: 60; Duration: 4-year; 8-semester)
2. M. Pharm (Seats: 15/ Specialization; Duration: 2-year, 4-semester)
   i. Pharmaceutical Chemistry
   ii. Pharmaceutics
   iii. Pharmacology
   iv. Pharmaceutical Quality Assurance
   v. Pharmacognosy

1. M. Pharm. Programme under AICTE Q.I.P (offered to academia sponsored candidates only).
2. Ph.D (in Pharmaceutical Sciences and allied research applications).

❖ **Research:**

➲ An array of research strategies is being encouraged in the field of:

f. Novel Drug Delivery Systems

g. Natural Products Chemistry

h. Development of Synthetic Medicinal Agents

i. Biochemical Pharmacology & Toxicology

j. Computer Aided Drug Design

- Total Research Grants of 390.36 Lacs during 2013-2018, from National and International funding agencies like DST, UGC, AICTE, DRDO, CSIR, ICAR, ICMR, BMBF (Germany), UGC-UKIERI etc.
- No. of SCI publication/ faculty/ year: 2.40
- Contemporary state of the art laboratories for Instrumental Analysis, Molecular Biology and Molecular Modelling supporting high end research.

❖ **Major recruiters:**

- 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

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 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
2.	Packaging design and some clinical study of hair dyes	Dr. K. Jayaram Kumar (PI)	TRIFED, GOI.	4.1.2019	6.3	7 months
3.	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
4.	Development of a robust method for enrichment of shellac and isolation of Laccaic acid B from lac dye.	Dr. Manik (PI)	Tajna Shellac Pvt. Ltd. - Industry Sponsored Research Project	19.5.2019	2.80	2 Years

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lacs)	Duration of the Project
5.	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
6.	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
7.	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
8.	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
9.	Prophylactic Transdermal Patch Against Neurotoxin Poisoning Biological Warfare Situations	Dr. Animesh Ghosh	BIRAC-SRISTI (PMU) (Society for Research)	11.03.2017	7.5 Lacs	2 years

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lacs)	Duration of the Project
10.	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.	A Green Therapeutic Approach Towards Cancer	Chief Coordinator: Dr. S. Samanta Coordinator: Dr. K. Jayaram Kumar Faculty coordinator: Dr. A. Pandey & Dr. S.P. Pattanayak	AICTE-QIP	February 07 –20, 2020
2.	Application of Recent Innovations in Industry and Hospital Pharmacy	Chief Coordinator: Dr. S. Samanta Coordinator: Dr. K. Jayaram Kumar Faculty coordinator: Dr. R. N. Gupta & Dr. Animesh Ghosh	AICTE-QIP	February 21 – March 05, 2020
3.	Application of Modern Analytical Techniques in Drug Discovery and Development	Chief Coordinator: Dr. S. Samanta Coordinator: Dr. K. Jayaram Kumar Faculty coordinator: Dr. Venkatesan J & Dr. K. K. Pradhan	AICTE-QIP	March 06 –19, 2020
4.	One day Seminar (Webinar) cum workshop on Antimicrobial Resistance	Resource person: Dr. Sanjiv Bhakta, Professor of Molecular Microbiology and Biochemistry, University College of London Faculty coordinator: Dr. Venkatesan J	Dept. of Pharm. Sci. & Tech	April 16, 2020
5.	A webinar series on Antitubercular Drug Design & Development	Resource person: Dr. Sanjiv Bhakta, Professor of Molecular Microbiology and Biochemistry, University College of London Dr Federico Brucoli Senior Lecturer Leicester School of Pharmacy De Montfort University Faculty coordinator: Dr. Venkatesan J	Dept. of Pharm. Sci. & Tech	May 26, 2020

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
6.	COVID-19 Webinar Series Vaccine and Therapeutics Research on COVID-19	Resource person: Dr Arindam Mondal, Assistant Professor, School of Biosciences, IIT-KGP & Dr. Velmurugan Devadasan Research Professor School of Bioengineering Department of Biotechnology SRM Institute of Science and Technology, Chhenai Faculty coordinator: Dr. Venkatesan J	Dept. of Pharm. Sci. & Tech	May 29, 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. Subir Samanta	AICTE -QIP on "Application of Modern Analytical Techniques in Drug Discovery and Development"	AICTE-QIP	Dept. of Pharm Sci & Technology, BIT Mesra Ranchi	Dept. of Pharm Sci & Technology	06.03.20-19.03.20
2.	Dr. R.N. Gupta	Indian Phaeramceutical Convention	IPA	IPA	Science Bhawan DELHI	21-22 July, 2019
3.	Dr. R.N. Gupta	Indian Phaeramceutical Congress & AGM and Award Function	BIT	IPCA	Chennai	21-23 Dec, 2019
4.	Dr Papiya Mitra Mazumder	TEQIP online certification course in Digital Transformation in Teaching Learning Process	Ministry of HRD, Govt. of India	NPIU in association with IIT Bombay	Online	6th-22nd April, 2020
5.	Dr. Abhimanyu Dev	TEQIP online certification course in Digital Transformation in Teaching Learning Process	Ministry of HRD, Govt. of India	NPIU in association with IIT Bombay	Online	6th-22nd April, 2020
6.	Dr. B. Sarkar	AICTE sponsored ATAL Academy 1 Week FDP "A Workshop on Bioanalysis and Correlation of in-vivo Pharmacokinetic with its in-vitro Dissolution"	AICTE-ATAL	NIPER, Ahmedabad	NIPER, Ahmedabad	January 21-25, 2020

Sr. No.	Name of the Faculty	Title of the Conference/Seminar	Funding Agency	Organizers	Venue	Date
7.	Dr. B. Sarkar	TEQIP online certification course in Digital Transformation in Teaching Learning Process	Ministry of HRD, Govt. of India	NPIU in association with IIT Bombay	Online	6th-22nd April, 2020
8.	Dr. B. Sarkar	Webiner on 'Antimicrobial Resistance"	TEQIP-III	Dept. of Pharm Sci & Technology, BIT Mesra Ranchi	Online	16th April, 2020
9.	Dr. Sandeep Kumar Singh	AICTE -QIP on "Application of Recent Innovations in Industry and Hospital Pharmacy"	AICTE-QIP	Dept. of Pharm Sci & Technology, BIT Mesra Ranchi	Dept. of Pharm Sci & Technology	21 Feb-05 March, 2020
10.	Dr. Trishna Bal	AICTE -QIP on "A Green Therapeutic Approach Towards Cancer"	AICTE-QIP	Dept. of Pharm Sci & Technology, BIT Mesra Ranchi	Dept. of Pharm Sci & Technology	7-20 Feb, 2020

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals : (International/National)

1. N. K. Rangra, S. Samanta, K. K. Pradhan (2019) A comprehensive review on phytopharmacological investigations of Acacia auriculiformis A. Cunnex Benth., Asian Pacific Journal of Tropical Biomedicine 9(1), 1.
2. N. K. Rangra, S. Samanta, K. K. Pradhan (2019) in vivo Anti-inflammatory Potential of Leaf Extracts of Acacia auriculiformis Benth. Indian Journal of Pharmaceutical Sciences 81(4)
3. P. Pal, N. K. Rangra, S. Samanta, A. Aryan, P. Pandey, G. Sen; (2019) Graft copolymer of PVP-A Sutureless, Haemostatic Bioadhesive for Wound Healing Application, Polymer Bulletin (Springer) 1-22.
4. M. Shyam, A. Dev, B. N. Sinha, V. Jayaprakash (2019). Scaffold Based Search on the Desferithiocin Archetype, Mini-Reviews in Medicinal Chemistry, 19, 1564-1576.
5. P. Bose, M. U. M. Siddique, R. Acharya, V. Jayaprakash, B. N. Sinha, A. Lapenna, S. K. Pattanayak (2020). Quinazolinone derivative BNUA-3 ameliorated {NDEA+2-AAF]-induced liver carcinogenesis in SD rats by modulating AhR-CYP1B1-Nrf2-Keap1 pathway, Clinical and Experimental Pharmacology and Physiology, 47, 143-157.
6. Gupta, R. N. (2020). Atmanirbhar Pharmacist, Pharmatimes, 40.
7. Tripathi S, Mazumder P M (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), Apr-Jun, S67 – S74. (SCIE)
8. Abdullah, S. M. and Mazumder, P. M. (2020). Augmentation of Mast Cell Stability, a TherapeuticStrategy for Idiopathic Pulmonary Fibrosis, Indian Journal of Pharmaceutical Sciences, 82(2):193-202. (SCIE).

9. Aggarwal, Y., Das, J., Mazumder, P. M., Kumar R, 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, Volume 40, Issue 3, July–September, Pages 1002-1009. (SCIE) (IF 2.537)

10. Sharma, N., Kispotta, S., Mazumder, P. M. (2020). Immunomodulatory and anticancer activity of Bombax ceiba Linn leaf extract, Asian Pacific Journal of Tropical Biomedicine,10(9): 426-432. (SCIE) (IF 1.90).

11. P. Rawat, S. M. Verma, P. Kumar; (2019) Novel Chroman Analogs as Promising Heterocyclic Compounds: Their Synthesis and Antiepileptic Activity, Indian Journal of Pharmaceutical Education and Research 53(4s), s655-s665

12. R. Rawat, S. M. Verma; (2019) An exclusive computational insight toward molecular mechanism of MMV007571, a multitarget inhibitor of Plasmodium falciparum, Journal of Biomolecular Structure and Dynamics 9, 1-12

13. R. Rawat, S. M. Verma; High-throughput virtual screening approach involving pharmacophore mapping, ADME filtering, molecular docking and MM-GBSA to identify new dual target inhibitors of PfDHODH and PfCytbc1 complex to combat drug resistant malaria, Journal of Biomolecular Structure and Dynamics DOI: 10.1080/07391102.2020.1784288 (2020)

14. D. Das, & K. J. Kumar. (2019). Enhancing resilient property of Kaempferia galangal rhizome starch by succinylation. International journal of biological macromolecules, 124, 1033-1039

15. D Deshkar, R. N. Gupta, & K. J. Kumar. (2019). Studies on effect of co-processing on palmyrah and maize starch mixtures using DOE approach. International journal of biological macromolecules, 122, 417-424.

16. A. Mondal, & K. J. Kumar. (2019). Effect of thermal modification on the release characteristics of pink potato starch of Jharkhand, India. International journal of biological macromolecules, 140, 1091-1097.

17. Kankata, D, S. G. Panpalia & K. J. Kumar (2020). Studies to predict the effect of pregelatinization on excipient property of maize and potato starch blends International journal of biological macromolecules, 164, 1206-1214.

18. S. Saptarshi, & K. J. Kumar. (2020). Impact on stabilization of ionic gum emulsions by natural and thermally modified Chironji gum International Journal of Biological Macromolecules, 156, 233-238.

19. P. Singh, V. K. Varshney, K Jayaram Kumar, Sanjay Singh A (2019) Review on Nutritional and Biological Potential of Earthstar Mushrooms, Species of Genus Astraeus (Agaricomycetes) Int J Med Mushrooms.21(6):523-536.

20. S. Nayan, C. K. Mishra, D. Priyadarshini, K. K. Pradhan, M. Ghosh, A. Pattnaik. (2019). Wound Healing Activity of Gel Formulated Leaves Extract of Neolamarckia cadamba (Roxb) Bosser, Indian Journal of Pharmaceutical Education and Research, 53(3), S416-S422.

21. Kamal Kant, Uma Ranjan Lal, Ravi Rawat, Anoop Kumar, Manik Ghosh (2020). Genus Arisaema: A Review of Traditional Importance, Chemistry and Biological Activities. Combinatorial Chemistry & High Throughput Screening (https://doi.org/10.2174/1386207323666200416150754)

22. Rittà, Massimo; Marengo, Arianna; Civra, Andrea; Lembo, David; Cagliero, Cecilia; Kant, Kamal; Lal, Uma Ranjan; Rubiolo, Patrizia; Ghosh, Manik*; Donalisio, Manuela. (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 (https://doi.org/10.1055/a-1087-8303)

23. Suddhasattya Dey, Souvik Basak, Anjan De, Shahreja Parvez, Tabassum Hossain, Achintya Saha, Manik Ghosh, Tanushree Karmakar, (2020) Simultaneous Pharmacokinetics Estimation of Nateglinide and Pioglitazone by RP-HPLC: Computational Study to Unlock the Synergism, Journal of Chromatographic Science, 58(4): 309–322. (https://doi.org/10.1093/chromsci/bmz116)

24. Singh N., Hussain A., & Singh S.K. (2020). Morphological transitions of Bacillus subtilis in the presence of food-grade lipidic nanoemulsions. Journal of Food Science Vol. 85 (4), 1223-1230.

25. Hussain A., Altamimi M.A., Alshehri S., Imam S.S., Shakeel F., & Singh S.K. (2020). Novel Approach for Transdermal Delivery of Rifampicin to Induce Synergistic Antimycobacterial Effects Against Cutaneous and Systemic Tuberculosis Using a Cationic Nanoemulsion Gel. International Journal of Nanomedicine. 15:1073-94.

26. Mallick A., Gupta A., Hussain A., Aparajay P., Singh S., Singh S.K., & Dev A. (2020). Intranasal delivery of gabapentin loaded optimized nanoemulsion for augmented permeation. Journal of Drug Delivery Science and Technology. 56:101606.

27. Das S.S., Verma P.R.P., & Singh S.K. (2020). Screening and preparation of quercetin doped nanoemulsion: characterizations, antioxidant and anti-bacterial activities LWT Food Science and Technology. 124:109141.

28. Singh A., & Singh S.K. (2020). The impact of various drug ferrying additives on phase transitions behavior of Calcite, Vaterite and Aragonite Phase Transitions. 92(11):990-1008.

29. Altamimi M.A., Hussain A., Imam S.S., Alshehri S., Singh S.K., & Webster T.J. (2020). Transdermal delivery of isoniazid loaded elastic liposomes to control cutaneous and systemic tuberculosis Journal of Drug Delivery Science and Technology. 59: 101848.

30. Hussain A, Shakeel F, Singh SK, Alsarra IA, Faruk A, Alanazi FK, & Christoper GVP (2019). Solidified SNEDDS for the oral delivery of rifampicin: Evaluation, proof of concept, in vivo kinetics, and in silico GastroPlusTM simulation. International Journal of Pharmaceutics, 566, 203-217.

31. 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

32. Singh S., Gupta A., Qayoom I., Teotia A. K., Gupta S., Padmanabhan P., Dev A. & Kumar A. (2020). Biofabrication of gold nanoparticles with bone remodeling potential: an in vitro and in vivo assessment. Journal of Nanoparticle Research, 22, 152.

33. Madhyastha H., Madhyastha R., Thakur A., Kentaro S., Dev A., Singh S., Chandrashekharappa R. B., Kumar H., Acevedo O., Nakajima Y., Daima H. K., Aradhya A., Nagaraj P. N., Maruyama M (2020). c-Phycocyanin primed silver nano conjugates: Studies on red blood cell stress resilience mechanism. Colloids and Surfaces B: Biointerfaces,194, 111211.

34. Singh S., Dev A., Gupta A., Nigam V. K., Poluri K. M. (2019). Nitrate Reductase mediated synthesis of surface passivated nanogold as broad-spectrum antibacterial agent. Gold Bulletin, 52, 197-216.

35. Trishna Bal, Sabyasachi Swain, Microwave assisted synthesis of polyacrylamide grafted

polymeric blend of fenugreek seed mucilage-Polyvinyl alcohol (FSM-PVA-g-PAM) and its characterizations as tissue engineered scaffold and as a drug delivery device, DARU Journal of Pharmaceutical Sciences (2019) 1-12

36. Nikhil Rai, Trishna Bal, Sabyasachi Swain, In vitro Evaluations of Biodegradable Polyacrylamide Grafted Moringa Bark Gum Graft Copolymer (MOG-g- PAAM) as Biomedical and Controlled Drug Delivery Device Synthesized by Microwave Accelerated free Radical Synthesis, Indian Journal of Pharmaceutical Education and Research 54(2) (2020) 385-396.
37. Sabyasachi Swain, Trishna Bal, Carrageenan-guar gum microwave irradiated micro-porous interpenetrating polymer network: A system for drug delivery, Int.J Polym.Mater. 68(5) (2019) 256–265
38. S. Swain, T. Bal. Microwave irradiated Carrageenan-Guar gum micro-porous IPN: a novel material for isotropic tissue scaffolding, International Journal of Polymeric Materials and Polymeric Biomaterials 68 (13) (2019) 796–804
39. Bal, T.; Yadav, S. K.; Rai, N.; Swain, S.; Shambhavi; Garg, S.; Sen, G. In vitro evaluations of free radical assisted microwave irradiated polyacrylamide grafted cashew gum (CG) biocompatible graft copolymer (CG-g-PAM) as effective polymeric scaffold. J. Drug Deliv. Sci. Technol.2020, 56, 101572. DOI: 10.1016/j.jddst.2020.101572
40. Pramit Dey, Trishna Bal, Roop Narayan Gupta. 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,(https://doi.org/10.1016/j.polymertesting.2020.106826,91(2020)106826
41. Debjani Roy, Trishna Bal, Sabyasachi Swain.Fabrication and evaluation of pH sensitive biocompatible microwave irradiated Moringa barkgum-Carageenan (MOG-CRG-IPN) Interpenetrating isotropic polymeric network for controlled delivery of Pharmaceuticals. Sustainable Chemistry and Pharmacy, Elsevier (In Press)
42. Saha,S., Shukla, S. K., Singh, H. R., Pradhan, K. K., Jha, S. K. (2020) Production and purification of bioflocculants from newly isolated bacterial species: a comparative decolourization study of cationic and anionic textile dyes, Environmental Technology, DOI: 10.1080/09593330.2020.1737737.

4.2 Publications in Proceedings: (International/National)

1. Aditi Roy and K. Jayaram Kumar, Review of Antiparkinson's Drug Formulation, Recent Amendment in Regulatory Affairs related to Drug Industry and Hospital Pharmacy, BIT Mesra, 14th October, 2019.
2. Aditi Roy, Snigdha Baag and K. Jayaram Kumar, Water Soluble Polysaccharide (GRAS)-A Multiphase Future Excipients For Pharmaceutical Industry, Role of Intellectual Property Protection in industry and device development: A context towards quality products , PSIT, KANPUR, 8th September, 2019.
3. Ankur Singh and K. Jayaram Kumar, Polysaccharides as an excipients in Drug delivery system, 7th International Congress of Society for Ethnopharmacology , Jamia Hamdard University 15-17th Feb 2020,
4. Debanjana Mondal and K. Jayaram Kumar, Approaches for Rendering-Water soluble Polysaccharide as a tailor made excipients, Recent Amendment in Regulatory Affairs related to Drug Industry and Hospital Pharmacy, BIT Mesra, 14th October, 2019.
5. Saptarshi Samajdar and K. Jayaram Kumar, Novel Applications of Gums from Anacardiaceae

Family National Workshop on Pharmacist in Improving Therapeutic Outcome, Jadavpur University, 23rd November 2019.

6. Kumari, S., Md Ghazi, M., Shilkhar, D., Jayaprakash, V. (2020) Design and Development of Dengue NS5 Methyltransferase Inhibitors. In the Proceedings of International Conference on Drug Design (ICDD). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3534902

7. Sheikh, M., Shilkhar, D., Jayaprakash, V., Sarkar, B., Sinha, B. N. (2020) Design and Development of Dengue Protease Inhibitors. In the Proceedings of International Conference on Drug Design (ICDD). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3541408

8. Priya, S., Chatterjee, A., Deb, P. K., Sarkar, B. Influence of solvents and extraction techniques on the recovery of secondary metabolites and antioxidant properties of Ocimum tenuiflorum Linn. "7th International Congress of Society for Ethnopharmacology" Organized by Bioactive Natural Product Laboratory (BNPL), School of Pharmaceutical Education and Research, Jamia Hamdard University. Dated: February 15-17, 2020 (OP-67).

9. Deb, P. K., Sarkar, B. Novel phytopharmaceutical derived from leaves of Clerodendrum colebrookianum Walp. exhibits hepatoprotective and antidiabetic potential. "9th International Conference of Polyphenols & Health (ICPH-2019)", Organized by Polyphenol Society of Japan, held at Kobe, Japan. Dated: Nov 28-Dec01, 2019. (PE-39).

10. Dasgupta S., Sarkar, D., Deb, P. K., Sarkar, B. Influence of solvents on the recovery of polyphenols and bioactivity of Clerodendrum colebrookianum Walp. 6th Convention of Society for Ethnopharmacology, India, 2019 & National Seminar on "Translational Research of Traditionally used Indian medicinal plants with special reference to Tinospora cordifolia". Organized by: School of Natural Product Studies Jadavpur University, Kolkata, India. Dated: September 07-08, 2019 (SFE-CONV-1962).

11. Sarkar, D., Dasgupta S., Deb, P. K., Sarkar, B. Ultrasonic assisted rapid extraction of surface Anthocyanin from Ocimum tenuiflorum Linn. and screening of its biological activity. 6th Convention of Society for Ethnopharmacology, India, 2019 & National Seminar on "Translational Research of Traditionally used Indian medicinal plants with special reference to Tinospora cordifolia". Organized by: School of Natural Product Studies Jadavpur University, Kolkata, India. Dated: September 07-08, 2019 (SFE-CONV-1963).

12. N. Ghosh, P. Singh, M. Ghosh, K. K. Pradhan. Studies on Anticancer Agents from Natural Sources with Special Reference to Euphorbia hirta LINN., 6TH Convention Society for Ethnopharmacology National Seminar on "Translational Research of Traditionally used Indian Medicinal Plants with Special Reference to Tinospora cordifolia" , Jadavpur University, Kolkata, September 7-8, 2019.

13. M.Hore, A. Saran, N. K. Rangra, K. K. Pradhan. Analytical Profiling of Anti-Diabetic Component Obtained from the Seeds of Acacia auriculoformis a. Cunn ex. Benth., 6TH Convention Society for Ethnopharmacology National Seminar on " Translational Research of Traditionally used Indian Medicinal Plants with Special Reference to Tinospora cordifolia" , Jadavpur University, Kolkata, September 7-8, 2019.

14. N. Ghosh & K. K. Pradhan, Implementation of CTD and ECTD in Pharmacutial Industry-an Overview of Drug Regulatory Affairs, International Conference on " Present Scenario of Bioavailability and Bioequivalence Studies & its Regulatory Affairs", Jadavpur University, Kolkata, February 12, 2020.

15. S. Chakraborty, A. Das, K. K. Pradhan, Comparison of Molecular Docking Studies and ADMET Presdiction of Some Novel Benzimidazole Analogues as Inhibitor of EGFR Tyrosine

Kinase, National Conference on "Comparison of Molecular Docking Studies of Some Novel N-substituted Benzimidazole Analogues as Anticancer Agents, PSIT Kanpur, September 08, 2019.

4.3 Books

4.3.1 Co-authored

1. Jayaprakash, V., Castagnolo, D., Ozkay, Y. (2020) Medicinal Chemistry of Neglected and Tropical Diseases. Advances in the Design and Synthesis of Antimicrobial Agents. CRC Press, ISBN: 9781138541245

4.3.2 Chapter(s) in Edited Book

1. Gupta, A., Dev, A., Nigam, V. K., Padmanabhan, P., & Singh, S. (2020). A Review on Next-Generation Nano-Antimicrobials in Orthopedics: Prospects and Concern. In Nanostructures for Antimicrobial and Antibiofilm applications. Springer Nature, USA. (In press)
2. Gupta, A., Aparajay, P., Shree, V., Das, S. S., Singh, S., & Dev, A., Advances in Medicine and Biology, Berhardt L. V. (Eds.) Potential Treatment Strategies for the Management of Cholera: A Review, New York: Nova Science Publishers, February 2020, Vol. 159, pp. 1-66
3. Trishna Bal, Sandeep Garg, Aditya Dev Rajora, Shubha Sharma, Harshita Harsh. An Insight into Nanosomes: Potential Nanopharmaceutical Delivery System, in Nanopharmaceutical Advanced Delivery System, ed. Scrivener,Wiley,2020 (In Press)

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. R. N. Gupta	Vice Chairman , Multidisciplinary Reserach Committee	Rajendra Institute of Medical Sc., Ranchi	State	2 years
2.	Dr. R. N. Gupta	Core Expert Committee Member for prepation of 'Guidance Manual For compliance of Indian Pharmacopoiea'	Indian Pharmacopoiea Commission Govt. of India	National	2 years
3.	Dr. Venkatesan J	Expert, Drug Discovery Hackathon 2020	Innovate India, Government of India	National	1 Year

5.2 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	University College of London, Birkbeck, UK	Antimycobacterial Research	Since 2018

SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Co-ordinator (if any)	Date / Duration
1.	IPA Girls Badminton Competition	Yashaswee Raman, Anjana Sinha, Mirnal Muskan, Kausiki Mishra	Dr. R.N. Gupta Dr. M.P. Chopra	2nd Feb-8th March, 2020
2.	Pharma Cup Volleyball Tournament	Rahul Ranjan, Mani Bhushan Lal, Sparsh Ekka	Dr. R.N. Gupta Dr. M.P. Chopra	19th Jan-7th March, 2020
3.	Pharma Cup Cricket Tournament	Srijeet Dasgupta, Saurabh Kumar, Pathak Vishwajeet, Mrinal Kanti Pradhan	Dr. R.N. Gupta Dr. M.P. Chopra	15th Jan – 7th March, 2020
4.	Annual IPA Quiz	Shivjoti Mukharjee, Rohit Kumar, Satish Kumar	Dr. R.N. Gupta Dr. M.P. Chopra	8th Nov, 2019
5.	National Level Seminar On "Recent Advancement In Pharmaceutical Industry And Hospital Pharmacy"	Md. Fahaduddin, Harish Kr Singh, Gaurav Ranjan	Dr. R.N. Gupta Dr. M.P. Chopra Dr. Ashok Pattnaik	14th Oct, 2019
6.	Public Speaking Competition	Anjana Sinha, Ashwariya Karan	Dr. R.N. Gupta Dr. M.P. Chopra Dr. B.N. Sinha	30th August, 2019

6.2. List of Faculties

Sr. No.	Name (Please mention Dr. / Prof./ Mr./ Mrs. / Ms. as applicable)	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.	Mrs. Shaila G. Panpalia	Associate Professor	No
11.	Dr. Venkatesan J.	Associate Professor	No
12.	Dr. Ashok Kumar Pattnaik	Associate Professor	No
13.	Dr. Manik Ghosh	Assistant Professor	No
14.	Dr. Abhimanyu Dev	Assistant Professor	No
15.	Dr. Biswatrish Sarkar	Assistant Professor	No
16.	Dr. Trishna Bal	Assistant Professor	No
17.	Dr. Anima Pandey	Assistant Professor	No

Sr. No.	Name (Please mention Dr. / Prof./ Mr./ Mrs. / Ms. as applicable)	Designation	TEQIP Sponsored
18.	Dr. Neelima Sharma	Assistant Professor	No
19.	Dr. Sandeep Kumar Singh	Assistant Professor	No
20.	Dr. Animesh Ghosh	Assistant Professor	No
21.	Dr. Kishanta Kumar Pradhan	Assistant Professor	No
22.	Dr. Mahendra Pratap Chopra	Assistant Professor	No

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. S. Samanta (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. R. N. Gupta	Professor	Internal Member
6.	Dr. (Ms.) S. Ganguly	Professor	Internal Member
7.	Dr. (Mrs.) Papiya Mitra Mazumder	Professor	Internal Member
8.	Dr. K. Jayaram Kumar	Professor	Internal Member
9.	Dr. (Mrs.) S. M. Verma	Professor	Internal Member
10.	Dr. Ashok Kumar Pattnaik	Associate Professor	Internal Member
11.	Dr. Manik Ghosh	Assistant Professor	Internal Member
12.	Dr. G. Sarkhel	Professor	External Member
13.	Dr. Ashoke Sharon	Associate Professor	External Member
14.	Dr. Tapan Kumar Maity	Professor, Dept. of Pharmaceutical Technology, Jadavpur University, Kolkata	External Member
15.	Dr. Sushil Kumar Singh	Professor, Dept. of Pharmaceutical Enineering, IIT-BHU, Varanasi	External Member
16.	Mr. Shamkant L. Shimpi	Centaur Pharmaceutical Ltd., Pune	External Member
17.	Mr. Naveen Sharma	President, Cliantha Research Ltd., Ahmedabad	External Member

SECTION 7 OTHER INFORMATION

7.1 Achievements of Students

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
1.	Suparna Roy Sarkar	Best Oral Presentation and Medal of Honour in 5th IUPHAR World Conference on the Pharmacology of Natural Products and 51st Annual Conference of Indian Pharmacological Society-2019	Indian Pharmacological Society & ICMR-NIN, Hyderabad	Dec 5-7, 2019 ICMR-NIN, Hyderabad

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
2.	Prashanta Kumar Deb	International Travel Award by INSA/CSIR/DAE-BRNS-CCSTDS and Polyphenol Society of Japan, to attend and present research article in "The 9th International Conference on Polyphenols & Health (ICPH2019)"	Polyphenol Society of Japan	November 28-December 01, 2019 Kobe, Japan
3.	Harish Kumar Singh	1st Prize in Oral Presentation in 12th National Seminar on "Pharmaceutical Research & Innovations : Vision 2030	IMT Pharmacy College, Puri	November 2-3, 2019 Puri
4.	Srijita Sen	1st Prize in Poster Presentation in 12th National Seminar on "Pharmaceutical Research & Innovations : Vision 2030	IMT Pharmacy College, Puri	November 2-3, 2019 Puri
5.	Piyush Makkar	1st Prize (Best Poster Award) in 6th Convention of Society of Ethnopharmacology India - 2019	Society of Ethnopharmacology & Jadavpur University, Kolkata	September 07-09, 2019 Jadavpur University, Kolkata

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, Chandighar	March 06, 2020	
2.	Prof. Vd. K.S. Dhiman Director General, Central Council For Research In Ayurvedic Sciences, Ministry of AYUSH, Government of India, New Delhi - 110058	February 07, 2020	

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, Kaktiya University, Warrangal

Sr. No.	Name, Batch and Affiliation	Short Description
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-GenentechPharma 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 DEPARTMENT PROFILE

1.1 About the Department:

The Department of Physics (previously Department of Applied 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.

The M.Sc (Physics) program is also being run by the Department.

1.2 Achievements of alumni:

Availing exit option, four students have been admitted to IITs, two students have been admitted to the Master's degree program at National Taiwan University and one student has been admitted to Abbe School of Photonics (Friedrich Schiller University Jena), Germany - M.Sc. Photonics.

In addition to that, one student has been selected for the Master's program at the Technical University of Munich, Germany. One student has been selected for the Master's program in Astronomy and Astrophysics at the University of Padova, Italy. One student has been selected for PhD at Johannes Guttenberg University, Germany.



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.	Investigation on Optical Pulse and Beam Propagation in Semiconductor Quantum Well and Quantum Dot Nanostructures with Emphasis to the Development of Photonic Device	PI Prof S. Konar CI Dr K Bose	DRDO	05.01.2018	24.60 Lakhs	03 years
2.	Develop mebrational of environmental friendly perovskite materials for self-powered vibrational energy harvesting device applications	S.K. Rout (PI), Ela Sinha (CI)	SERB, DST, New Delhi	July 2017	Rs 55.80 lakhs	03 Years
3.	Development of rare earth modified barium zirconate as an efficient proton conducting material at intermediate temperature	Ela Sinha(PI)	DST SERB PROJECT	14.03.2017	Rs 29.68 Lakhs	03 Years
4.	Development of super-lubricated Nano-crystalline Diamond film on bearing materials for aerospace applications	PI: Dr. Rishi Sharma Co-PI: Dr. Sanat Kr. Mukherjee	AR&DB	18.12.19	26.115 Lakhs	03 Years
5.	Faster and brighter single photons from 2D crystals and their interfacing with plasmonic waveguides.	PI: Dr. Dilip Kumar Singh Co-PI: Laxmi Narayan Tripathy (VIT Vellore) Co-PI: Dr. Rajesh V. Nair (IIT Ropar)	CRS Scheme NPIU TEQIP MHRD CRS ID: 1-5736483014	11.07.2019	13.69 Lakhs	01 Year

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
6.	Electrical and magnetotransport studies of nano-devices of few/ mono-layer transition metal dichalcogenides.	PI: Dr. Saurabh Baruah Co-PI: Dr. Dilip Kumar Singh	CRS Scheme NPIU_ TEQIP MHRD CRS ID: 1-5743255881	11.07.2019	Rs. 19 Lakhs	01 Year
7.	Nonlinear rheology of dense colloidal suspensions	PI: Dr. Madhu Priya	DST-SERB	24/08/2018	22.45 Lakhs	03 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.	Development of bismuth based Materials for piezoelectric microsystem in robotic applications.	S.K. Rout (PI), Ela Sinha (CI)	BRNS, DAE	21-04-2016	Rs 33.72 Lakhs	31 Mar 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.	One Day Workshop on "Intellectual Property Rights"	Dr. Dilip K. Singh	NRDC, New Delhi	07.09.2019

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 Faculty Development Program on "MATLAB & Its Applications in AI & ML"	E&ICT Academy	NIT Patna	NIT-Patna	19th - 26th May 2020
2.	Dr. Nishi Srivastava	One Week Faculty Development Program on "Artificial Intelligence and Data Analytics with MATLAB"	E&ICT Academy	NIT Patna	NIT-Patna	08th to 15th June 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
3.	Dr. Dilip K. Singh	International Conference on Advances in Physical, Chemical & Mathematical Sciences. Invited talk	Nagpur Univ.	Rashtrasant Tukadoji Maharaj Nagpur Univ., Nagpur, Maharashtra 440033.	Nagpur Univ..	13-15th Feb, 2020
4.	Dr. Dilip K. Singh	17th NAMIS Workshop. Invited talk	TEQUIP-IIII & NAMIS Network	Indian Institute of Technology-Bombay (IITB) and Centre National de la Recherche Scientifique (CNRS) France,	Indian Institute of Technology-Bombay (IITB)	24-27th November, 2019
5.	Dr. Madhu Priya	DAE-SSPS 2019 (Poster)	DST-SERB	Bhabha Atomic Research Centre, Mumbai, India	Indian Institute of Technology Jodhpur, Rajasthan, India	December 18-22, 2019
6.	Dr. Madhu Priya	6th International Conference on Complex Dynamical Systems and Applications [CDSA 2020] (Invited talk)	DST-SERB	Central University of Rajasthan, India	Central University of Rajasthan, India	February 21-23, 2020
7.	Dr. Madhu Priya	One Week Faculty Development Program on "MATLAB & Its Applications in AI & ML"	E&ICT Academy	NIT Patna	NIT-Patna	19th - 26th May 2020
8.	Dr. Madhu Priya	One Week Faculty Development Program on "Artificial Intelligence and Data Analytics with MATLAB"	E&ICT Academy	NIT Patna	NIT-Patna	08th -15th June 2020
9.	Dr. Sourabh Lahiri	Invited talk	NIT Rourkela	Department of Physics, NIT Rourkela	NIT Rourkela	January 29, 2020
10.	Dr. S. K. Mukherjee	CORCON 2019	*TEQIP*	NACE	CIDCO Convention and Exhibition Centre, Mumbai	23-26th September 2019

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
11.	Dr. S. K. Mukherjee	Two-week online Faculty development Program on Delivering Online Course using Canvas LMS	*TEQIP*	BIT, Mesra	BIT Mesra	27th July to 5th August 2020
12.	Dr. S. K. Mukherjee	INDUS Synchrotrons Users' Meeting (ISUM-2)	*RRCAT and UGC-DAE CSR, Indore*	*RRCAT and UGC-DAE CSR, Indore*	*RRCAT and UGC-DAE CSR, Indore*	28th to 29th july 2020

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals : (International/National)

1. Parthasarathi Mohanty, Sunita Keshri, Octahedral distortion and oxidation reduction in corundum type Co4Ta2O9 and Co4Nb2O9 ceramics and their correlated electrical conduction, Physica Scripta 95, 2020, 045802.
2. Sonali Biswas, Sunita Keshri, Room temperature magnetoimpedance magnetoimpedance of manganites, Phase Transitions, 92, 2019, 172-183.
3. Rohit Mukherjee, S. Konar; Effect of quintic nonlinearity on self-phase modulation and modulation instability in multiple coupled quantum wells under electromagnetically induced transparency; Results in Physics 17, 103090 (2020) (Impact Factor: 3.09).
4. M Sharma, V Dixit, S Konar, K Ahmed, V Dhasarathan; Endlessly single-mode photonic crystal fiber with high birefringence for sensing applications; Modern Physics Letters B 34 (06), 2050077(2020).
5. Nitu Borgohain, S. Konar; Broadband mid-infrared supercontinuum generation in three-level multiple quantum wells using short optical pulses; Optics and Laser Technology 120, 105684 (2019). (Impact Factor: 3.319).
6. Mohit Sharma, Vigneswaran Dhasarathan, Julia S. Skibina, Murugan Senthil Mani Rajan, S. Konar, Thu Trang Hoang, and Quang Minh Ng; Giant Nonlinear AlGaAs-Doped Glass Photonic Crystal Fibers for Efficient Soliton Generation at Femto-Joule Energy; IEEE Photonics Journal 11, 7102411(2019) (Impact Factor: 2.729).
7. Deep Shikha, Md. Shahid, Sanjay K. Sinha, Improvement in adhesion of HAP deposited on alumina after Ar+ ions implantation and its physiochemical properties, Surfaces and Interfaces, Volume 19, 2020, 100485.
8. Dielectric and frequency dependent transport properties of Gadolinium doped Bismuth Ferrite, A. K. Sahu, S. K. Satpathy, S.K. Rout, and Banarji Behera, Trans. Electr. Electron. Mater. 21, 217–226 (2020).
9. Electronic Structure, Morphological Aspects, and Photocatalytic Discoloration of Three Organic Dyes with MgWO4 Powders Synthesized by the Complex Polymerization Method. A. F. Gouveia, V. E. M. Vieira, J. C. Sczancoski, P. S. Lemos, S. K. Rout, N. S. Arul, E. Longo and L. S. Cavalcante, J Inorg Organomet Polym 30 (2020)2952-2970.
10. Structural and proton conductivity study of BaZr1-xRExO3-δ (RE= Dy, Sm) for intermediate temperature solid oxide fuel cell electrolyte, Avishek Satapathy, Ela Sinha, S K Rout, Journal of Solid State Electrochemistry, 24 (2020) 1463–1473.

11. Correlation between experimental and theoretical study of scheelite and wolframite-type tungstates, P. Yadav, Praba Dev Bhuyan, S. K. Rout, Yogesh Sonvane, Sanjeev K. Gupta, and E. Sinha*, Materials Today Communication, 25 (2020) 101417.

12. Effect of Graphene Oxide loading on ferroelectric and dielectric properties of hot pressed Poly(vinylidene fluoride) matrix composite film, Sakti P. Muduli, Sabyasachi Parida, Sasmita Nayak, Sanjeeb K. Rout, Polymer Composites. 41 (2020) 2855–2865

13. Enhancement of electrical energy storage ability by controlling grain size of polycrystalline BaNb2O6 for high density capacitor application, D. K. Kushvaha, B. Tiwari, S. K. Rout Journal of Alloys and Compounds 829 (2020) 154573.

14. Density Dependent Ionic Transport in Polycrystalline SrNb2O6 Ceramic, D. K. Kushvaha, S. K. Rout, B. Tiwari, Physica B, 579 (2020) 411910-8p.

15. Conduction and relaxation phenomena in barium zirconate ceramic in wet N2 environment, Avishek Satapathy, Ela Sinha, Bibek K Sonu, S. K Rout, Journal of Alloys and Compounds, 811 (2019) 152042.

16. Frequency dependent ferro-antiferro phase transition and internal bias field influenced piezoelectric response of donor and acceptor doped bismuth sodium titanate ceramics, Rolly Verma, S K Rout, Journal of Appl. Physics, 126 (2019) 094103.

17. Effect of hot press temperature on b-phase, dielectric and ferroelectric properties of solvent casted Poly (vinyledene fluoride) films, Sakti Prasanna Muduli, S. Parida, S.K. Rout, Shailendra Rajput, Manoranjan Kar, Mater. Res. Express, 6 (2019) 095306

18. Investigation of proton conductivity in Sc and Yb co-doped barium zirconate ceramics, Avishek Satapathy, Ela Sinha, S.K. Rout, Mater. Res. Express, 6 (2019) 056305

19. Structural, piezoelectric and highdensity energy storage properties of lead-free BNKT-BCZT solid solution, D. K. Kushvaha, S. K. Rout, B. Tiwari, Journal of Alloys and Compounds, 782 (2019) 270-276.

20. Effect of Molybdenum on structural, optical and microwave dielectric properties of copper tungstate, Anterdipan Singh, Sameer Kumar Tiwari, Pritam Yadav, Bibek Kumar Sonu, Rolly Verma, Ela Sinha, S. K. Rout, Journal of Materials Science: Materials in Electronics, 30 (23), (2019) 20758–20769.

21. Structural and dielectric properties of Cu-doped α-ZnMoO 4 ceramic system for enhanced green light emission and potential microwave applications, SK Tiwari, A Singh, P Yadav, BK Sonu, R Verma, SK Rout, E Sinha, Journal of Materials Science, 1-9 (2020)

22. Structural, photophysical and microwave dielectric properties of α-ZnMoO4 phosphor, P Yadav, E Sinha Journal of Alloys and Compounds 795, 446-452 (2019)

23. A comparative proton conductivity study on Yb-doped BaZrO3 perovskite at intermediate temperatures under wet N2 environment, A Satapathy, E Sinha Journal of Alloys and Compounds 772, 675-682 (2019)

24. Structural and proton conductivity study of BaZr1-xRExO3-δ(RE = Dy, Sm) ceramics for intermediate temperature solid oxide fuel cell electrolyte, A Satapathy, E Sinha, SK Rout, Journal of Solid State Electrochemistry, 1-11 (2019)

25. Srivastava, N. Association of modeled PM2.5 with aerosol optical depth: model versus satellite. Nat Hazards 102, 689–705 (2020).

26. Abhilash Bajpai and Rishi Sharma, Atmospheric Pressure Plasma Jet: A complete tool for

surface enhanced Raman spectroscopy substrates preparation, Vacuum, Vol. 172, 109033 (2020).

27. Rajan Singh, Mukul Gupta, D. M. Phase, S. K. Mukherjee, Phase growth analysis of sputtered TiO2 thin films at low oxygen partial pressures using XANES and XRR, Material Research Express 6 (11) (2019).
28. Nalin Prashant Poddar, S. K. Mukherjee, Effect of substrates and post-deposition annealing on rf-sputtered Al-doped ZnO (AZO) thin films, Journal of Materials Science: Materials in Electronics 30, 14269–14280 (2019).
29. Ravi Kumar, Prabir Pal, S. R. Dhakate, Raj Kumar, Devesh K. Avasthi, Dilip K. Singh*
30. Creation of uniformly dispersed nitrogen-vacancy centers in Nano-diamonds by low energy ion-irradiation Material Research Express 6 115097 (2019)
31. Ravi Kumar, Dilip K. Singh, Prashant Kumar, Raj Kumar, S. R. Dhakate
32. Influence of degree of air oxidation and functionality on ensemble emission from nitrogen vacancy centers in nano-diamonds.Diamond and Related Materials 97, 107431 (2019).
33. R. Marathe and S. Lahiri, Convergence of thermodynamic quantities and work Fluctuation theorems in the presence of random protocols, Int. J. Mod. Phys. B 33, 1950220 (2019).
34. A. Kumari, P. S. Pal, A. Saha and S. Lahiri, Stochastic heat engine using an active particle, Phys. Rev. E 101, 032109 (2020).

4.2 Publications in Proceedings:

1. T. K Mishra, A Kumar, S K Sinha, Investigation of sliding wear behaviour of Ni-WC microwave cladding. Materials Today: Proceedings 26(2) Pages 1418-1422, 2020

SECTION 5 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

5.1 List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
1.	Dr. (Mrs.) S. Keshri	Professor& Head	No
2.	Dr. S. Konar	Dean (Faculty Affairs & Sponsored Research) & Professor	No
3.	Dr. S. K. Sinha	Professor	No
4.	Dr. S. K. Rout	Professor	No
5.	Dr. R. K. Paul	Associate Professor	No
6.	Dr. Rajeev Kumar	Assistant Professor	No
7.	Dr. Kingshuk Bose	Assistant Professor	No
8.	Dr. Ela Sinha	Assistant Professor	No
9.	Dr. Nishi Srivastava	Assistant Professor	No
10.	Dr. Sanat Kumar Mukherjee	Assistant Professor	No
11.	Dr. Rishi Sharma	Assistant Professor	No
12.	Dr. Sourabh Lahiri	Assistant Professor	No

Sr. No.	Name	Designation	TEQIP Sponsored
13.	Dr. Dilip Kumar Singh	Assistant Professor	No
14.	Dr. Madhu Priya	Assistant Professor	No
15.	Dr. Ravindra Kumar	Assistant Professor	Yes
16.	Dr. Sourabh Barua	Assistant Professor	Yes

5.2 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	HOD, Ex-Officio		Chairperson
2.	Dr. S. Konar	Professor, Dept. of Physics	Member
3.	Dr. (Mrs.) S. Keshri	Prof. & Head, Dept. of Physics	Member
4.	Dr. S. K. Sinha	Professor, Dept. of Physics	Member
5.	Dr. S. K. Rout	Prof, Dept. of Physics	Member
6.	Dr. R. K. Paul	Assoc. Prof. Dept. of Physics	Member
7.	Dr. Nishi Srivastava	Asst. Prof., Dept. of Physics	Member
8.	Dr. (Mrs.) Usha Jha	Professor, Dept. of Chemistry	Member
9.	Dr. S. K. Ghorai	Professor, Dept. of ECE	Member
10.	Dr. P. K. Datta	Professor, Dept of Physics Indian Institute of Technology Kharagpur – 721302	External Member
11.	Dr. Anil Kumar Nirala	Professor, Dept. of Physics Indian Institute of Technology Dhanbad	External Member
12.	Dr. B. S. Murty	Professor, Dept. of Materials and Materials Engineering, IIT Madras, Chennai-600036	External Member
13.	Dr. V. Subramanian	Professor, Dept. of Physics, IIT Madras, Chennai-600036	External Member
14.	Dr. Prasanta K. Panigrahi	Professor, Dept. of Physical Sciences, Indian Institute of Science Education Research, Kolkata, Mohanpur-741246, West Bengal, India	External Member
15.	Dr. (Mrs.) S. K. Mishra	Scientist E-II, MST Division, National Metallurgical Laboratory, Jamshedpur, India-831007	External Member

SECTION 6 OTHER INFORMATION

6.1 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Dr. Binay Kumar Crystal Lab, Department of Physics & Astrophysics, University of Delhi, Delhi-110007	12.07.2019	
2.	Dr. Arindam Chakraborty Indian Institute of Science | IISC, Bangalore	06.08.2019	
3.	Dr. Amarendra Kumar Sarma Professor, Department of Physics, IIT, Guwahati-781039, Assam, India	02.09.2019	
4.	Professor S. K. Gupta Professor & Head Environmental Science and Engineering, IIT-ISM, Dhanbad	13.09.2019	
5.	Dr. Raaj Ramsankaran Associate Professor, Dept. of Civil Engg., IIT, Bombay	25.01.2020	

DEPARTMENT OF PRODUCTION ENGINEERING

SECTION 1 DEPARTMENT PROFILE





1.1 About the Department :

Department of Production Engineering since its inception in 1964 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.	"GLOBAL CHALLENGES RESEARCH FUND 2019 (GCRF)" Social Wellbeing and Mental Health Challenges of Employees of Small and Medium Sized Enterprise (SMEs) in Emerging Economies.	Dr. Abhishek Kumar Singh - Member	EU	20/06/2019	£10,000.00	1 year
2.	Experimental investigation on the Micro-EDM characteristics of Aluminium based Composites.	Dr. Shailesh Kumar Dewangan - PI	NPIU MHRD India TEQIP -III	18.06.2019	594000.00	1 year
3.	"Additive Manufacturing of Aluminium based alloys"	Dr. S.V.S.K. Deepak Kumar (PI) Dr. S. K. Jha, Dr. Joyjeet Ghose, Dr. Animesh Mandal, Dr. Ajit Behera	NPIU, MHRD, India TEQIP-III (CRS)	18.06.2019	Rs. 12,85,000.00	1 year
4.	Studies on Metal Inert Gas Welding based Additive Manufacturing of Aluminium Alloys	PI – Sonu Rajak	CRS-TEQIP III	18 June 2019	1450000/-	1 year
5.	Modelling and analysis of Nonlinear Energy Sink with Energy Harvester	PI – Prakash Kumar	CRS-TEQIP III	18 June 2019	1345000/-	1 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.	Development of an IoT based Control system for a Five DoF Articulated Robot	A. K. Nandi (PG student)	IEI, Kolkata	Aug 2019	50,000	15 May, 2020

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.	L. N. Pattanaik	AICTE training program	AICTE	AICTE	AICTE Head office New Delhi	
2.	Dr. Bappa Acherjee	One-day workshop on "Effective and Efficient Online Teaching in the Age of Corona, A Hands on Workshop"	MHRD, New Delhi	IIT Bombay	Online	16.05.2020
3.	Dr. Bappa Acherjee	Two-week course on "Digital Transformation in Teaching Learning Process"	TEQIP – III	IIT Bombay	Online	06.04.2020 – 22.04.2020
4.	Dr. Shailesh Kumar Dewangan	"Intellectual Property rights"	National Research and development Corporation (NRDC) govt. of India	BIT Mesra	BIT Mesra	7th September 2019
5.	Dr. Shailesh Kumar Dewangan	Orientation Workshop on CRS Projects	MHRD	NPIU	AICTE New Delhi	16th July-2019

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
6.	Dr. Randhir Kumar	GIAN Course on "Isothermal Near-Net Shape Forging of Aluminium Alloy: Advances and Innovations"	BIT Mesra Ranchi	IIT Guwahati	IIT Guwahati	08/07/2019 to 12/07/2019
7.	Dr. Somak Datta	Two-week course on "Digital Transformation in Teaching Learning Process"	TEQIP – III	IIT Bombay	Online	14.02.2020 – 06.03.2020

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals : (International/National)

1. Avinash, K., Pattanaik, L. N. and Rajeev Agrawal (2019), "Optimal sequence planning for multi-model reconfigurable assembly system", The International Journal of Advanced Manufacturing Technology Vol 100: 1719-1730. Springer (doi: 10.1007/s00170-018-2826-8) SCI (Impact Factor:2.601)

2. L.N. Pattanaik and Abinash Jena (2019), "Tri-objective optimization of mixed model reconfigurable assembly system for modular products", International Journal of Computer Integrated Manufacturing, 32:1, 72-82. Taylor & Francis (doi: 10.1080/0951192X.2018.1550673) SCI (Impact Factor: 1.995)

3. Rajeev Kant, L. N. Pattanaik and Vijay Pandey, (2020) Sequential Optimization of Reconfigurable Machine Cell Feeders and Production Sequence during Lean Assembly, International Journal of Computer Integrated Manufacturing, Volume 33(1), 62-78. Taylor & Francis SCI (Impact Factor: 2.09)

4. L. N. Pattanaik, T. K. Baug and Ch. Koteswarpavan (2019) A Hybrid ELECTRE Based Prioritization of Conjoint Tools for Lean and Sustainable Manufacturing, Production Engineering (Springer) Vol 13, 665-673.

5. B. Acherjee, D. Maity, and A.S. Kuar, Ultrasonic machining process optimization by cuckoo search and chicken swarm optimization algorithms, International Journal of Applied Metaheuristic Computing, 2020, 11 (2), 1-26.

6. B. Acherjee, 3-D FE heat transfer simulation of quasi-simultaneous laser transmission welding of thermoplastics, Journal of Brazilian Society of Mechanical Science and Engineering, 2019, 41, 466 (1-13).

7. F. Jamal, S. Rath and B. Acherjee, Process modelling of flat rolling of steel, Advances in Materials and Processing Technologies, 2019, 5 (1), 104-113.

8. 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)

9. S. K. Dewangan, P. Kumar and S. K. Jha "Optimization of Quality and Productivity of Wire EDM by using L9 Orthogonal Array" Advances in Industrial and Production Engineering, Lecture Notes in Mechanical Engineering. 2019, ISBN no. 978-981-13-6411-2, 978-981-13-6412-9 (E-Book) pp.93-100, https://doi.org/10.1007/978-981-13-6412-9_9.

10. 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, https://doi.org/10.1007/978-981-15-2696-1_51.

11. Debasree Ghosh & Chandan Guha & Joyjeet Ghose, Numerical investigation of paraffin wax solidification in spherical and rectangular cavity, Heat and Mass Transfer, https://doi.org/10.1007/s00231-019-02680-4, 2019, SCI 1.551

12. Debasree Ghosh, Chandan Guha, Joyjeet Ghose, Numerical Simulation on Heat Transfer Analysis in Zinc Solidification Process Using Enthalpy Porosity Method, International Journal of Advanced Trends in Computer Applications (IJATCA), Special Issue 1 (1), July - 2019, pp. 39-43, ISSN: 2395-3519

13. Prashant Prakash, Anand. R. S, & S. K. Jha, "Effect of Weld Zone Shape on Microstructure and Tensile Properties in Friction Stir Welding Process", Materials Science Forum (ISSN: 1662-9752 (Online); 0255-5476 (Print) Publisher: Trans Tech Publications Ltd, Switzerland)

14. Prakash. P, Jha. S. K and Lal. S. P, "Numerical investigation of stirred zone shape and its effect on mechanical properties in friction stir welding process" Welding in the World, Publisher: Springer Nature, pp 1531-1546, vol 63, Issue 6, November 2019. (https://doi.org/10.1007/s40194-019-00787-0)

15. Prakash. P, Anand. R. S. & Jha. S. K, "Prediction of Weld Zone Shape with effect of Tool Pin Profile in Friction Stir Welding Process", Journal of Mechanical Science and Technology KSME, Springer, pp 279-287, vol 34, Issue 1, January 2020. (DOI 10.1007/s12206-019-1229-6; ISSN: 1738-494X (Print) 1976-3824 (Online)

4.2 Publications in Proceedings:

16. Kumar A., Pattanaik L. N., Agrawal R. (2019) Multi-objective Scheduling Model for Reconfigurable Assembly Systems. In: Chattopadhyay J., Singh R., Bhattacherjee V. (eds) Innovations in Soft Computing and Information Technology. Springer, Singapore, pp 209-217. doi.org/10.1007/978-981-13-3185-5_18

17. L. N. Pattanaik, (2020), Self-Organizing Migrating Algorithm to Minimize Module Changes at Machine-Level in Reconfigurable Manufacturing, Lecture Notes on Multidisciplinary Industrial Engineering, M. S. Shunmugam and M. Kanthababu (Eds): Advances in Simulation, Product Design and Development, 978-981-32-9486-8 (Springer Nature)

18. Pattanaik L. N., Paras Agarwal, Saloni Ranjan and Urja Narayan (2020), Bi-objective Optimization of a Reconfigurable Supply Chain Using a Self-organizing Migration Algorithm, Advances in Computational Intelligence, Advances in Intelligent Systems and Computing 988, pp. 39-53. (Springer Nature Singapore)

19. K. Nandi and L. N. Pattanaik, "Design and development of a web-based robotic simulator", Proceedings of International Conference on Recent Advances in Computational Techniques (e-IC-RACT 2020), June 26-27, 2020, Amity University, Mumbai.

20. L. N. Pattanaik, Amit Kumar, Jyoti, Pooja, "Selection of optimal capacity for reconfigurable machines during lean manufacturing", Proceedings of 3rd International Conference on Advances in Mechanical Engineering (ICAME 2020), Feb 24-29, 2020, SRM University, Chennai.

21. L. N. Pattanaik, Amit Gupta, Shifa, A. K. Singh, "Application of Clustering Algorithms for Locating Distribution Centers of Logistics System" Proceedings of 8th International Conference on Recent Trends in Computing (ICRTC-2020), July 3-4, 2020, SRM University, Delhi-NCR Campus, Ghaziabad.

22. S. Deepak Kumar, S. Dewangan, S.K. Jha and A Mandal "Tribo-Performance of Thixoformed A356-5TiB2 in-situ Composites" IOP Conf. Series: Materials Science and Engineering, Vol. 653, 2019, 012045, ISSN No: 1757-8981 https://doi:10.1088/1757-899X/653/1/012045 (Scopus, Conference Proceeding).

23. Y. Ahirwar, H. Soni, P. M. Mashinini, and S. Dewangan "Optimization of the Surface Quality in Milling Machine Using PVC Composite Plate" AIP Conf. Proc. Vol. 2204 (1), 2020, pp. 040004-1–040004-5; ISSN: 0094-243X, E-ISSN: 1551-7616. https://doi.org/10.1063/1.5141577. (Scopus, Conference Proceeding).

24. N. Kaushik, P. Kumar, J. Ghose et al., Study of mechanical properties of Al2014-B4C-Gr hybrid nano composite, Materials Today: Proceedings, https://doi.org/10.1016/j.matpr.2020.03.560, 2214-7853, 2020, Elsevier Ltd

4.3 Book: Nil

4.3.1 Chapter(s) in Edited Book

1. B. Acherjee, Laser-based fabrication of micro-channels, 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).

2. B. Acherjee, Laser transmission welding of dissimilar plastics: Analyses of parametric effects and process optimization using grey based Taguchi method, In: Modern Manufacturing Processes, Editors: K. Kumar and J.P. Davim, Woodhead Publishing (Elsevier), 2020, 131-144, ISBN: 978-0-12-822774-9 (eBook), 978-0-12-819496-6 (print).

3. B. Acherjee, Process overview, experimental study and Taguchi quality loss function analysis of laser transmission welding of thermoplastics, In: Polymers and Composites Manufacturing, Editors: K. Kumar and J.P. Davim, De Gruyter (Walter de Gruyter GmbH), 2020, 153-166, ISBN: 978-3-11-065504-9 (eBook), 978-3-11-065193-5 (Print).

4. B. Acherjee, D. Maity, D. Karia and A.S. Kuar, Selection of laser micro-drilling process parameters using novel bat algorithm and bird swarm algorithm, In: Optimization using Evolutionary Algorithms and Metaheuristics: Applications in Engineering, Editors: K. Kumar and J.P. Davim, CRC Press (Taylor & Francis), 2020, 83-100. ISBN: 9780429293030 (eBook), 978-0-367-26044-6 (Print).

5. Book Chapter, Chapter 10, Optimization and Simulation of Additive Manufacturing Processes: Challenges and Opportunities– A Review, Additive Manufacturing Applications for Metals and Composites, Eds: K.R. Balasubramanian (National Institute of Technology, Tiruchirappalli, India) and V. Senthil kumar (National Institute of Technology, Trichy, India), Release Date: June, 2020, |Pages: 348, ISBN13: 9781799840541, ISBN10: 1799840549, EISBN13: 9781799840558, DOI: 10.4018/978-1-7998-4054-1. IGI Global.

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.	Joyjeet Ghose, Vinay Sharma, Surendra Kumar	Aluminium Metal Foam and a process for Preparation there of Aluminium Metal Foam and a process for Preparation thereof	Indian Patent vide no. 338236	Patent grant date 09.06.2020.

SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 List of Faculties

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

6.2 List of Adjunct Faculties

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

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. S.K. Jha	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

Sr. No.	Name of the Member	Designation	Role
6.	Dr. R. P. Sharma	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
10.	One PG Student Representative		Internal Member
11.	Dr. Govind Sharan Dangayach Professor & Head	Department of Mechanical Engineering, Malaviya National Institute of Technology, J l 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 7 OTHER INFORMATION

7.1 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Rohith Vinayaka DHIO Research and Engineering Pvt. Ltd.	12.09.19- 13.09.19	

7.2 Any other relevant information

INFRASTRUCTURE DEVELOPED: 3 Equipments has been procured viz. CNC Lathe, CNC Grinding and CNC Plasma Cutting machine.

DEPARTMENT OF REMOTE SENSING





Unmanned Aerial Vehicle (UAV) and its softwares

SECTION 1 DEPARTMENT PROFILE

About the Department : this Department has embarked upon imparting specialised education in the field of geo-spatial technology at the Post-graduate and Ph. D. levels. For this purpose, the Department has equipped itself with latest hardware and software technologies and well-trained faculty members who have 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 Govt. of India, and through those programs we have served the nation and contributed in building national capabilities in this advancing field of geoinformatics. Today we have state-of-the-art capabilities and facilities in research and our experience is shared with students and end-users. Apart from being a leading remote sensing Department in the country, our Department also has global 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, Colombo, Sri Lanka), and collaborative research with University of Southampton (UK), University of Lancaster (UK), University of California Santa Barbara (UCSB, USA). Strength of our educational quality and outreach can be seen through placement of our students in reputed national organisations and for higher educations as our students are getting selected for Ph.D. research in IITs and in universities abroad such as James Cook University (Australia), Western University, Canada etc. Hence, our Departmental vision and mission related activities are coherently in phase with our Institutional vision and mission.

Vision and Mission has been communicated to the stake holders by placing it at all walls of the Department, as well as through Institute website, admission brochure, and through internet groups and e-mails to various universities and colleges.

SECTION 2 **RESEARCH PROJECTS**

2.1 Sponsored Projects (Research and Consultancy)

a) Ongoing Projects

Sr. No.	Project Title	PI / Co PI / Collaborator	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	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. Jeganathan	Indian Space Research Organization (ISRO)	24.10.19	Rs. 29.49 Lakhs	3 years.
2.	National Wetland Inventory and Assessment (NWIA) Phase-II	PI-Dr. C. Jeganathan. Co-PI-Dr. A P Krishna, Dr. V. S. Rathore, Mr. Nitish Kumar	Space Application Center(SAC) Deptt. of Space,, ISRO, Ahmedabad	22.07.19	Rs. 20.50 Lakhs	2 years
3.	Skymap Global (SMG)-BIT Agriculture Research Project (Industry-Academia Collaborative Project)	PI-Dr. C. Jeganathan Co-PI-Dr. A P Krishna	SKY MAP Global Pvt. Ltd. (Jaipur, Hq: Singapore)	08.05.19	Rs. 7.50 Lakhs	1 year
4.	Use of Geoinformatics in Rural Road Projects under PMGSY	PI-Dr. A P Krishna Co-PI- Dr. C. Jeganathan Co-PI- Dr.V. S. Rathore Co-PI- Mr. Nitish Kumar	NRSC-ISRO	31.07.19	Rs. 54.30 Lakhs	1 year
5.	Remote sensing based hydrologic budget of the Subarnarekha river basin.	PI- Dr. A.P.Krishna, Co PI- Dr. C. Jeganathan, Dr. V.S. Rathore	DST-SERB (CRG)	07 January, 2020	Rs. 27.39 Lakhs	3 years

Sr. No.	Project Title	PI / Co PI / Collaborator	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
6.	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 Co-PI-Dr. Gulab Singh (IITB)	Space Application Center(SAC) Deptt. of Space, ISRO, Ahmedabad	14.05.18	Rs. 18.44 Lakhs	3 years
7.	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 Co PI-Dr. C. Jeganathan	Space Application Center(SAC) Deptt. of Space,, ISRO, Ahmedabad	18.08.2016	Rs17.43 Lakhs	
8.	Refinement of existing algorithms for FeO and TiO2 mapping using HySI data and a comparative assessment of the HySI generated maps with that of Clementine and Moon Mineralogy Mapper derived FeO and TiO2 products.	PI-Dr. Mili Ghosh Co-PI-Dr. A.P. Krishna	Space Application Center,SAC Deptt. of Space, ISRO, Ahmedabad	17.08.16	Rs17.20 Lakhs	years (extended due to late arrival of fund)

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.	Introduction to Web-GIS and Geoportal Development using Open Source Tools	Dr. C. Jeganathan Mr. Nilay Nishant (NESAC-DOS) (online Webinar)	Free Webinar	16.05.20 and 17.05.20.

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
2.	National Brainstorming Workshop on Modelling Fault Zone Induced Surface Mass Transport in Himalayan Orogenic Terrains for the Study of Fault Related Hazards in Himalayan Towns	Dr. A.P.Krishna (Coordinator)	Ministry of Earth Sciences, Government of India	16-17th March,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. C. Jeganathan (Resource Person)	Geospatial Relationship Between Corona Virus Incidences and Demographic Data.	Funding not applicable (NA)	Organised by Amity Institute of Geoinformatics and Remote Sensing	International Webinar (Online)	11.06.20-25.06.20
2.	Dr. C. Jeganathan & Dr. A.P. Krishna	One day training Programme for the Experts	AICTE	AICTE	AICTE HQ, New Delhi	27.02.20
3.	Dr. Nilanchal Patel	National Seminar on Eastern Himalayas and its ecological trends	Institute of social and cultural studies	Institute of social and cultural studies	Darjeeling	23.01.20
4.	Dr. V. S. Rathore	Digital Transformation in teaching Learning Process (2 weeks FDP course)	TEQIP III	IIT Bombay.	On line	06.04.20 to 22.04.20
5.	Dr. Mili Ghosh Nee Lala	Chandrayaan-2 data analysis workshop	ISRO	ISSDC, ISRO	ISRO Bangalore	06.07.20 and 07.01.20
6.	Dr. Richa N. K. Sharma	Digital Transformation in teaching Learning Process (2 weeks FDP course)	TEQIP III	IIT Bombay.	On line	06.04.20 to 22.04.20

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
7.	Dr. Richa N. K. Sharma	Standard Precautions:- Hand hygiene	NA	WHO	Online (MOOC)	Certified on 22.06.20
8.	Dr. Richa N. K. Sharma (Resource Person)	Geospatial Technologies	Bihar Agri. Univ. Bhagalpur	Bihar Agri. Univ. Bhagalpur	Bihar Agri. Univ. Bhagalpur	3rd to 23rd July 2019
9.	Dr. Richa N. K. Sharma	Journal Citation Reports	NA	Web of Science (Clarivate) (Webinar)	Online	12.05.20 to 15.05.20h
10.	Dr. Mili Ghosh Nee Lala (As Resource person)	5 Days Online Skill Development Programme on Basics of RS/ GIS/GPS	UNDER UGC-CPE SCHEME	Nirmala College, Ranchi	Online	22-26 July, 2020
11.	Dr. Mili Ghosh Nee Lala & Dr. A.P. Krishna	3rd Lunar Science Meet,	ISRO	ISRO	New Delhi	22.10.19

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals : (International/National)

1. Harshit Rajan and Jeganathan, C. (2019). Understanding Spatio-temporal Pattern of Grassland Phenology in the western Indian Himalayan State. Journal of Indian Soceity of Remote Sensing, Springer, 47(7). 1137-1151. DOI:10.1007/s12524-019-00976-w. (Jul, 2019).

2. Suman Sinha, Shiv Mohan, A.K. Das, L.K. Sharma, C. Jeganathan, A. Santra, S. Santra Mitra and M.S. Nathawat (2019). Multi-sensor approach integrating optical and multi-frequency synthetic aperture radar for carbon stock estimation over a tropical deciduous forest in India. Carbon Management, DOI: 10.1080/17583004.2019.1686931.

3. Niraj Priyadarshia, Soumya Bandyopadhyaya, V.M. Chowdaryb, K. Chandrasekarc, Jeganathan C., Uday Raj, and Chandra Shekhar Jha (2020). Segmentation-based approach for trend analysis and structural breaks in rainfall time series (1851–2006) over India, Journal of Hydrological Sciences, 65(9), 1583-1595. (Taylor & Francis) https://doi.org/10.1080/02626667.2020.1761022.

4. Shawky Mansour and Jeganathan, C. (2020). Diagnostically counting Palm Date Trees in Al-Ahhssa Governorate of Saudi Arabia: An integrated GIS and remote sensing processing of IKONOS imagery. Spatial Information Research, (Springer), DOI: 10.1007/s41324-00-00318-w.

5. Paul, K, Chattopadhyay, S., Dutta, A., Krishna, A P, Ray, S., 2020. Developing and optimising an urban Integrated Solid Waste Management model: effect of transfer stations, Journal of Urban and Environmental Engineering, v.14:1, pp.119-131, doi: 10.4090/juee.2020.v14n1.119131

6. Kumar, Praveen and Krishna, A P, 2020. In SAR-Based Tree Height Estimation of Hilly Forest

Using Multitemporal Radarsat-1 and Sentinel-1 SAR Data, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, DOI: 10.1109/JSTARS.2019.2963443

7. Kumar, A, Krishna, A P, 2019. Groundwater vulnerability and contamination risk assessment using GIS-based modified DRASTIC-LU model in hard rock aquifer system in India, Geocarto International, DOI: 10.1080/10106049.2018.1557259; SCIE, IF 2.36
8. Kathwas, A.K. and Patel, N., (2019) Effects of landuse and landcover dynamics on the migration and demographic pattern of tribal population using geospatial techniques, Theoretical and Empirical Researches in Urban Management, Theoretical and Empirical Research in Urban Management 14 (3), 77-97
9. Lontai-szilágyi, Z., Bertalan-balázs, B., Zsiros, B.,Vasvári, M., Singh S. K., Patel, N., K. Martonné Erdős and Szabó, S., (2019), A novel approach of mapping landscape aesthetic value and its validation with rural tourism data, Hungarian Geographical Bulletin, 68 (3), 283–301
10. Khorrami, B., Gunduz,o., Patel, N., Ghouzlane, S. and Najar, M., (2019). Land surface temperature anomalies in response to changes in forest cover, International Journal of Engineering and Geosciences (IJEG), 4 (3), 149-156.
11. Shaheen, Farzana; Krishna, AP; Rathore, V.S., (2020), Delineation of Mine Fire Pockets in Jharia Coalfield, India, using Thermal Remote Sensing, Advances in Computational Intelligence, 988, 215-227 .
12. Rangarajan V G, Ghosh M., (2020), Seasonal thermal inertia variations at Gale crater: Role of active surface deposition phenomena, Icarus, Volume 337, 113499.
13. Mushtaq F, Ahmad P and Lala M G N. (2020), Variabblility of lake surface water temperature: a case study during El Nino and La Nina events over the Himalayan lake region, Physical Geography, DOI: 10.1080/02723646.2020.1751386.
14. Banerjee A, Ghosh M. (2019). Seasonal Variation of AOD over North Indian States:A Geospatial Approach. ESRI User Conference held at Kolkata.
15. Dutta A, Ghosh M and Krishna A.P. (2019), Estimation of Tropospheric and Stratospheric Ozone over Jharkhand using Geospatial Techniques. ESRI User Conference held at Kolkata
16. Bose S, Suman S, Ghosh M and Krishna A.P. (2020), A study of surface temperature variations observed by LRO Diviner Radiometer. The Indian Planetary Science Conference, 19-21 February 2020 at Physical Research Laboratory, Ahmedabad.
17. Singh, Gulab; Malik, Rashmi; Mohanty, Shradha; Rathore, Virendra Singh; Kanta Yamada; Maito Umemura and Yoshio Yamaguchi, (2019), Seven-Component Scattering Power Decomposition of POLSAR Coherency Matrix, IEEE Transactions on Geoscience and Remote Sensing, Vol. 57, No. 11.

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. Jeganathan, C.	Samaj-Bandhu Award	M/s Prantik Care the Earth	National	2019
		Special Invitee	North-Eastern Space Application Center (NESAC, Shillong), ISRO.	National (As an Expert for the Scientific Selection Committee)	

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
		External Examiner MTECH Thesis	IIRS, ISRO, Dehradun	National	
		Executive Council Member	Indian Society of Agriculture Information Technology	National	
		Associate Editor	Journal of Indian Society of Remote Sensing,	International	2018-till date
		Member	Expert cum Course design Committee, IGNOU	National	2019
2.	Dr. Nilanchal Patel	Member	Editorial Board, Journal of Mountain Science (Springer), SCIE, Scopus	International	
		Member	Editorial Board, Arabian Journal of Geosciences (Springer), SCIE, Scopus.	International	
		Member	Editorial Board, International Journal of Sustainable Development and World Ecology (Taylor & Francis), Scopus	International	
		Associate Editor	Editorial Board Journal of Forestry Research (Springer), SCIE, Scopus.	International	
		Member	Editorial Board, 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
		Member	Journal of Environmental Geology, Pulsus Journals	International	
		Examiner Examiner PhD Thesis	University Putra Malayasia	International	
3.	Dr. A.P. Krishna	Coordinator	Ministry of Earth Sciences, Government of India	National Workshop (Sponsored by Ministry o Earth Sciences, Govt.of India.)	16-17 March 2020
		Resource Person	UGC-Human Resource Development Centre, Ranchi University, Ranchi	State Level (Sponsored by UGC at Ranchi University)	21 September 2019
		Reviewer	Project under the Scheme for Transformational and Advanced Research in Sciences (STARS)	National Department of Higher Education, MHRD, GoI and IISC, Bangalore	2019





Dr C Jeganathan being bestowed upon the Samaj - Bandhu award







National Brainstorming Workshop on Modelling Fault Zone Induced Surface Mass Transport in Himalayan Orogenic Terrains

SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator	Date / Duration
1.	National Science Day organised by TEQIP III	Ms Aadya: Kuer :((M Sc 1st year student)1st Prize on National Science Day for the topic entitled "Express your visionary views on Science in 2050"	08.03.2020
2.	National Science Day organised by TEQIP III	Ms Sumedha Sharma : (M Tech 1st year student): 1st Prize on National Science Day on the Topic "Express your views on Women in Science" in March 2020	08.03.2020
3.	BITOTSAV	Ms Sumedha Sharma (M Tech 2k19 Batch): was chosen as "Miss BITOTSAV 2020" in Feb 2020 Ms Sumedha Sharma : (M Tech 2k19 Batch): 3rd Prize in Cyclothon 2020 organized by NSS, in the current year, in Feb 2020 Ms Sumedha Sharma : (M Tech 2k19 Batch): 3rd prize in 100 x4m Relay Race, " in Feb. 2020.	13.02.2020 to 16.02.2020

6.2. List of Faculties

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

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. C. Jeganathan	Professor and Head (Ex-Officio) Member	Chairman
2.	Dr. A. P. Krishna	Professor	Internal
3.	Dr. N. Patel	Professor	Internal
4.	Dr. V. S. Rathore	Asst. Professor	Internal
5.	Dr. Mili Ghosh	Asst. Professor	Internal
6.	Dr. A. K. Sinha	Professor	Internal
7.	Dr. Manjari Chakravarti	Professor	Internal
8.	Dr. Richa N K Sharma	Asst. Professor	Internal
9.	Dr. Bindhu Lal	Professor	Internal
10.	Dr. Satyaki Sarkar	Asso. Professor	Internal
11.	Dr. Dheeraj Kumar	Professor (IIT, ISM)	External
12.	Dr. Y. S. Rao	Professor (IIT, Bombay)	External
13.	Dr. Rajneesh Kumar	Head, (Geomatics Division) CMPDI, Ranchi	External
14.	Dr. Milap Punia	JNU, Delhi(School of Social Sciences)	External
15.	Dr. Mukund Behera	Asst. Professor (IIT, KGP)	External

SECTION 7 OTHER INFORMATION

7.1 Publication by students

1. Rangarajan V G, Ghosh M. (2020), Seasonal thermal inertia variations at Gale crater: Role of active surface deposition phenomena, Icarus, Volume 337, 113499.
2. Mushtaq F, Ahmad P and Lala M G N. (2020), Variabblility of lake surface water temperature: a case study during El Nino and La Nina events over the Himalayan lake region, Physical Geography, DOI: 10.1080/02723646.2020.1751386.
3. Banerjee A, Ghosh M. (2019). Seasonal Variation of AOD over North Indian States:A Geospatial Approach. ESRI User Conference held at Kolkata.
4. Dutta A, Ghosh M and Krishna A.P. (2019), Estimation of Tropospheric and Stratospheric Ozone over Jharkhand using Geospatial Techniques. ESRI User Conference held at Kolkata
5. Bose S, Suman S, Ghosh M and Krishna A.P. (2020), A study of surface temperature variations observed by LRO Diviner Radiometer. The Indian Planetary Science Conference, 19-21 February 2020 at Physical Research Laboratory, Ahmedabad.

6. Harshit Rajan and Jeganathan, C. (2019). Understanding Spatio-temporal Pattern of Grassland Phenology in the western Indian Himalayan State. Journal of Indian Soceity of Remote Sensing, Springer, 47(7). 1137-1151. DOI:10.1007/s12524-019-00976-w. (Jul, 2019).

7. Suman Sinha, Shiv Mohan, A.K. Das, L.K. Sharma, C. Jeganathan, A. Santra, S. Santra Mitra and M.S. Nathawat (2019). Multi-sensor approach integrating optical and multi-frequency synthetic aperture radar for carbon stock estimation over a tropical deciduous forest in India. Carbon Management, DOI: 10.1080/17583004.2019.1686931. (Nov, 2019).

8 A.K. Kathwas and N. Patel, (2019) Effects of landuse and landcover dynamics on the migration and demographic pattern of tribal population using geospatial techniques, Theoretical and Empirical Researches in Urban Management, Theoretical and Empirical Research in Urban Management 14 (3), 77-97

9 Shaheen, Farzana; Krishna, AP; Rathore, VS; (2020), Delineation of Mine Fire Pockets in Jharia Coalfield, India, using Thermal Remote Sensing, Advances in Computational Intelligence, 988, 215-227 .

10 Kumar, Praveen and Krishna, A P, 2020. InSAR-Based Tree Height Estimation of Hilly Forest Using Multitemporal Radarsat-1 and Sentinel-1 SAR Data, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, DOI: 10.1109/JSTARS.2019.2963443

11 Kumar, A, Krishna, A P, 2019. Groundwater vulnerability and contamination risk assessment using GIS-based modified DRASTIC-LU model in hard rock aquifer system in India, Geocarto International, DOI: 10.1080/10106049.2018.1557259; SCIE, IF 2.365

12. Dutta, Atm Deep, Ghosh, M n Lala, Krishna, A P, 2019. Estimation of Tropospheric and Stratospheric Ozone over Jharkhand using Geospatial Techniques, Proc. ESRI User Conference 2019, Kolkata, India

13. Farzana Shaheen, Nayama Valsa Scariah,Mili Ghosh Nee Lala, Krishna, A P, Jeganathan, C (2019). Estimation of Atmospheric Optical Depth at Nili Patera region of Martian surface using Mars Color Camera image, National Space Science Symposium, Organised by Savitribai Phule Pune University (formerly university of pune) along with Inter-University Center for Astronomy and Astrophysics (IUCAA) and National Centre for Radio Astrophysics (NCRA) during 29-31 January, 2019 (Poster Presentation)

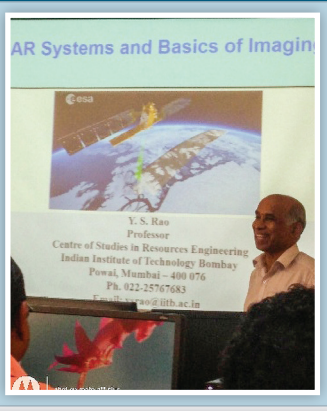
14. Singh, Gulab; Malik, Rashmi; Mohanty, Shradha; Rathore, Virendra Singh; Kanta Yamada; Maito Umemura and Yoshio Yamaguchi, (2019), Seven-Component Scattering Power Decomposition of POLSAR Coherency Matrix, IEEE Transactions on Geoscience and Remote Sensing, Vol. 57, No. 11.

7.2 Achievements of Students

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
1.	Ms Pranata Hazra (Ph.D Scholar)	First Prize for paper presentation in the 1st Research Scholars Colloquium"	sponsored by TEQIP-III and organized by BIT Mesra	01.09.2019 and 02.09.2019 BIT Mesra
2.	Mr. Beependra Singh (Ph.D Scholar)	Third Prize for Poster paper presentation in the 1st Research Scholars Colloquium"	organized by BIT Mesra,	01.09.2019 and 02.09.2019 BIT Mesra

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
3.	Ms. Swadhina Koley (Ph D Scholar) Received Best Paper presentation award in"3rd World Clean Environment Summit 2019" conference organised by St. Xavier's College, Ranchi, Jharkhand (2019).	Received Best Paper presentation award in "3rd World Clean Environment Summit 2019" conference organised by St. Xavier's College, Ranchi, Jharkhand	St. Xavier's College, Ranchi, Jharkhand (2019).	2019 St. Xavirr's College, Ranchi
4.	Mr. Atma Deep Dutta (M Sc in Geoinformatics)	Received ESRI India Young Scholar Contest award on his project entitled, "Satellite remote sensing based assessment of total and tropospheric ozone"	ESRI	May 2020 New Delhi

7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Prof. Y. S. Rao	17.10.2019 and 18.10.2019	
2.	Prof. Malay Mukul Professor in Dept. of Earth Sciences in IIT-Bombay.	16.3.2020 and 17.3.2020	
3.	Dr. Purba Joshi Associate Professor at Industrial Design Centre (IDC), IIT Bombay.	16.3.2020 and 17.3.2020	

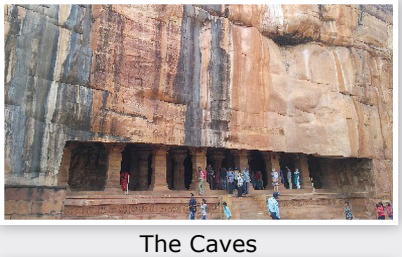
Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
4.	Prof. Manas Mukul Associate Professor and Dean, International Students at Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar	16.3.2020 and 17.3.2020	
5.	Dr. Guru Balamurugan Associate Professor and Chairperson Centre for Geoinformatics, Jamsetji Tata School of Disaster Management Tata Institute of Social Sciences (TISS)	16.3.2020 and 17.3.2020	
6.	Sridevi Jade Chief Scientist, CSIR-4PI & Professor, AcSIR, NAL Belur Campus, Wind Tunnel Road, Bangalore-560037	16.3.2020 and 17.3.2020	
7.	Dr. Vimal Singh Department of Geology, University of Delhi	16.3.2020 and 17.3.2020	
8.	Dr. Vinnie Srivastava Assistant professor at IISER Bhopal.	16.3.2020 and 17.3.2020	
9.	Dr. Abdul Matin, Retired Professor of Geology at the University of Calcutta	16.3.2020 and 17.3.2020	
10.	Prof. G. Bala Centre for Atmospheric studies (CAOS), IISc Banglore	28.01.2020	
11.	Dr. Debashish Mitra Head & Scientist SG,IIRS, ISRO, Dehradun	19.10.2019	
12.	Dr. Shefali Agrawal Group Director & Scientist SG, IIRS, ISRO, Dehradun	19.10.2019	

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
13.	Dr. N. Rama Rao Associate Professor Dept. of Earth & Space Sciences, IIST, ISRO, Trivendrum	25.10.2019	
14.	Krishna Kumar Marketing Manager IGiS GiS - GIS & IP Enterprise Suite	July 2019	
15.	Debashish Charakborty Scientist RRSC	February 2020	
16.	Mr Prabir Kumar Das Scientist RRSC		

7.4 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	Dr. N. Ramarao, 2000-2002, Associate Professor	Dept. of Earth & Space Sciences, IIST, ISRO, Trivendrum
2.	Dr. Poonam Negi, 2000-2002, Manager	Manager,Business Development at RMSI Pvt. Ltd., New Delhi
3.	Mr. Nilay Nishant, 2012-2014, Scientist- SC	NESAC, ISRO, Meghalaya
4.	Dr. ASHUTOSH BHARDWAJ,1998-2000, Scientist/ Engineer-SF	RESPOND Coordinator, IIRS, Dehradun
5.	Ms. ADRIJA ROY,2012-2014 Geospatial Head	Mckinsey, BOSTON, USA

7.5 Student Industrial Visit/ Field Trip

Place	Date from	Date to	Vignettes
K.J. Somaiya Institute of Applied Agricultural Research, (KIAAR) Sameerwadi, Karnatak G	2.2.2020	2.2. 2020	 Genetic Laboratory
Godavari Biorefinaries Ltd. Sameerwadi	3.2.2020	3.2.2020	 Outside the sugar mill
Lal Bahadur Shastri Dam (Almatti Dam)	2.2.2020	2.2.2020	 Almatti Dam
Badami Caves	2.2.2020	2.2.2020	 The Caves  For the Geologists to identify the rock formation

Place	Date from	Date to	Vignettes
National Institute of Oceanography, Dona Poula, Goa	6.2.2020	6.2.2020	 Team keenly watching the presentations by experts
Botanical gardens Banglore	8.2.2020	8.2.2020	 The glass house



The Department with its distinguished guests







Dr. C. Jeganathan at IGNOU, Delhi & RRSSC, Kolkata; Dr. N. Patel as Chairperson of a National Seminar held at Darjeeling



Dr. Mili Ghosh Nee Lala at Chandrayaan-2 Data analysis workshop (Jan., 2020)



Dr. Mili Ghosh Nee Lala at ISSDC near Antenna for capturing MOM data



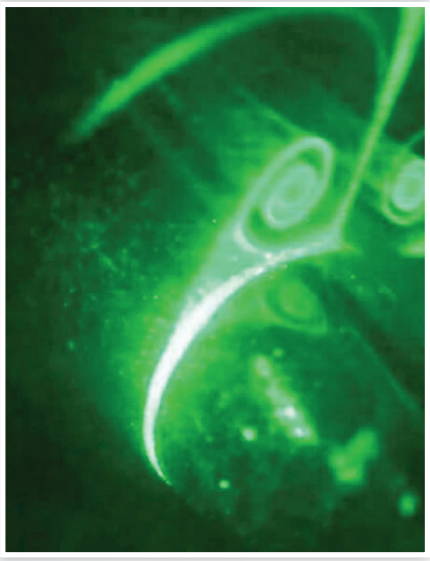
Dr. A. P. Krishna and Dr. Mili Ghosh Nee Lala at 3rd Lunar Science Meet, New Delhi (22.10.2019)

DEPARTMENT OF SPACE ENGINEERING AND ROCKETRY

SECTION 1 DEPARTMENT PROFILE



Department Building



Vortex Flow Vizualization

1.1 About the Department :

The Department of Space Engineering and Rocketry was established in 1964 at Mesra 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, and a new supersonic free jet 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 hardware. Computing needs are fulfilled by a dedicated computational fluid dynamics laboratory housing ten terminals. It includes research grade software including ANSYS suite and MatLab.



Wax-Oxygen Hybrid Rocket Test

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.	Effect of protrusion on regression rate and combustion instability at varying L/D of hybrid rocket motor	PI- Dr. Rajiv Kumar	SERB, DST, Govt. of India	23.8. 2016	31.20 Lakhs	3 Years
2.	Steady & Unsteady Investigation on Slender Body at High Angles of Attack	PI- Dr. Priyank Kumar Co- PI- Dr. Sudip Das	AR&DB	29.06.2018	26.68 Lakhs	3 Years
3.	Aerodynamic Characterization of Reusable Launch Vehicle at low speeds	PI- Dr. Priyank Kumar Co- PI- Dr. Sudip Das	ISRO	03.12.2019	22.39 Lakhs	3 Years
4.	Supersonic Flow Studies over spiked Blunt bodies with different nose bluntness ratios	PI- Dr. Sudip Das Co-PI- Dr. Priyank Kumar	AR&DB	17.6.2020	22.30 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.	Open cavity studies at supersonic speed	PI- Dr. Sudip Das Co-PI- Dr. priyank Kumar	ISRO -RESPOND	15-02-2016	24.46 Lakhs	Nov. 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	Ongoing

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. Priyank Kumar	46th National Conference on Fluid Mechanics and Fluid Power		FMFP Society	PSG College, Coimbatore	9.12.2019 - 11.12. 2019
2.	Dr. Rajiv Kumar	Workshop on Excellence in Pedagogy and Quantitative Research	TEQIP III	Dept. of Management and Dept. of Computer Science	BIT Mesra	26.8.2019 -30.8..2019
3.	Dr. Rajiv Kumar	National Workshop on "Fire Research in Propulsion Systems	TEQIP III	Propulsion Panel of AR&DB	IIT Madras	23.01.2020
4.	Dr. Rajiv Kumar	InCites(Web of Science) Training Program	TEQIP III	Central Library	BIT Mesra	20.01.2020
5.	Dr. Rajiv Kumar	98th Orientation Programme	TEQIP III	UGC-HRDC, Ranchi University, Ranchi	HRDC, Ranchi University, Ranchi	04.12.2019 - 24.12.2019
6.	Dr. Rajiv Kumar	Refresher Course "Women Studies & Gender Sensitization"	TEQIP III	UGC-HRDC, Ranchi University, Ranchi	HRDC, Ranchi University, Ranchi	02.072019 -15.07. 2019
7.	Dr. Partha Mondal	21st Annual AeSI CFD Symposium, Bangalore, India	TEQIP-III	NAL, Bangalore	NAL, Bangalore	08.08.2019 -09.08.2019
8.	Dr. Partha Mondal	Faculty Development Program for Student Induction	TEQIP-III	AICTE	BIT Mesra	13.12.2019 - 15.12.2019
9.	Dr. Partha Mondal	Digital Transformation Teaching Learning Process	TEQIP-III	IIT Bombay	BIT Mesra	06.04.2019 -22.04.2020

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals : (International/National)

1. Yadav N., Srivastava P. K. and Varma M, (2020). "Recent Advances in Catalytic Combustion of AP-Based Composite Solid Propellants", Defence Technology, (Elsevier), doi.org/10.1016/j.dt.2020.06.007.

2. Sahoo D., Karthick, S. K., Das S., and Cohen J., (2020). "Parametric Experimental Studies on Supersonic Flow Unsteadiness over a Hemispherical Spiked Body", AIAA Journal, Vol. 58, No. 8, pp. 3446-3463, DOI: doi/abs/10.2514/1.J059369. Article in Advance.

3. Kumar P., Roy D., and Das S., (2019). "Effect of Anhedral / Dihedral angles on a 76/40° Double Delta Wing at Low Speeds", Journal of Aerospace Engineering, Vol. 32, No. 6, DOI: 10.1061/(ASCE)AS.1943-5525.0001079.

4. Kumar P., Gaurav S., and Das S., (2020) "Effect of Circular Ring on the Side Force of a Cone-Cylinder Body", J. Aerosp. Technol. Manag., São José dos Campos, Vol. 12, e0620.

5. Kumar, P., (2020). "Investigation of Rolling Moment of Slender Body at High Incidence for Air to Air Missile/ Rocket Applications", Defense Science Journal, Vol. 70, No. 1, pp. 18-22, DOI:10.14429/dsj.70.13612.

6. Mondal, P., (2019). "Euler Simulation Using a 3D Unstructured Compressible Solver", Annual Technical Volume of Aerospace Engg. Division Board, The Institute of Engineers (India), Volume-III, pp. 27-31.

7. Dinesh M. and Kumar R., (2019). "Utilities of Multi-Protrusion as the Performance Enhancer in Hybrid Rocket Motor" Journal of Propulsion and Power, Vol. 35, No. 5, pp. 1005-1017.

8. Vignesh B and Kumar R., (2020). "Effect of multi-location swirl injection on the performance of hybrid rocket motor" Acta Astronautica, Vol. 176, pp. 111–123.

9. Pragya B. and Biswas S., (2020). "Experimental Investigation on Combustion Characteristics of Hybrid Rocket Fuels with Multi-Angle Diverging Injector", International Journal of Turbomachinery Propulsion and Propulsion, Vol-5, No. 2.; Paper No. 12, doi:10.3390/ijtpp5020012.

10. Uma V., Joshi P. C. and Biswas S., (2019). Regression rate and combustion characteristics of shellac based hybrid fuel, Annual Technical Volume of Aerospace Engineering Division Board, Vol –III, 72-74.

4.2 Publications in Proceedings:

1. Behal S. and Varma M., (2019), "Spray Characteristics of Pure and Metallized Green Gel Propellants", Proc. 12th International High Energy Materials Conference & Exhibits, Dec. 16-18, 2019, IIT Madras.

2. Sahoo D., Karthick S. K., Das S. and Cohen J., (2019). "Supersonic Flow Unsteadiness in Spiked Body Configurations", 8th International Symposium on Bifurcations and Instabilities in Fluid Dynamics, 16-19 July, 2019, University of Limerick, Ireland.

3. Sahoo D., Karthick S. K., Das S. and Cohen J., (2019). "Reducing Shock Related Unsteadiness of supersonic flow over Spiked Bodies", 72nd American Physical Society meeting (Division of Fluid Dynamics 19), Nov 23 – 26, 2019, Seattle, WA.

4. Sahoo D., Karthick S. K. Das S. and Cohen J., (2020). "Numerical Investigation on the variation of the Thermal Properties over Spike Mounted Blunt Bodies", 6th National Symposium on Shock Waves, IIT-Madras, Feb 23 – 26, 2020, Chennai.

5. Karn P. K., Kumar P. and Das S., (2019) "Mechanism of Vortex Asymmetry over Slender Body at High Angle of Attack", 21st Annual CFD Symposium, Aug 8-9, 2019, Bangalore.

6. Karn P. K., Kumar P. and Das S., (2019). "Study of Unsteady Flow Behaviour over Slender Body at High Angle of Attack", Proceedings of the 46th National Conference on Fluid Mechanics and Fluid Power, Dec. 9-11, 2019, PSG College, Coimbatore.

7. Midhun M. V., Mondal, P., Karn P. K. and Kumar P., (2019) "Numerical and Experimental Investigation of Blended Wing Body Configuration", 21st Annual AeSI CFD Symposium, Bangalore, India, August 8-9, 2019.

8. Vignesh B. D. and Kumar R., (2019). "Study on the Performance of Swirling Oxidizer Injection on the Post Combustion Chamber of Hybrid Rocket Motor", 12th International High Energy Materials Conference & Exhibits, HEMCE-2019, Dec.16 – 18, 2019, IIT Madras, Chennai, INDIA.

9. Vignesh B. D. and Kumar R., (2019). "Effect of Multi-Location Swirl Injection on the Performance of Hybrid Rocket Motor", 12th International High Energy Materials Conference & Exhibits, HEMCE-2019, Dec.16 – 18, 2019, IIT Madras, Chennai, INDIA.

10. Pooja V. V. and Kumar R. (2019). "Characterization Studies of Different L/D Non-Circular Orifice Showerhead Injectors", 12th International High Energy Materials Conference & Exhibits, HEMCE-2019, Dec.16 – 18, 2019, IIT Madras, Chennai, INDIA.

11. Pooja V. V. and Kumar R. (2019). "Studies of Liquid Jet Atomization Through Non-Circular Orifices", 12th International High Energy Materials Conference & Exhibits, HEMCE-2019, Dec.16 – 18, 2019, IIT Madras, Chennai, INDIA.

12. Dinesh M. and Kumar R. (2019). "Studies of Wax-Ammonium Perchlorate Based Fuels for Hybrid Rocket Applications", 12th International High Energy Materials Conference & Exhibits, HEMCE-2019, Dec.16 – 18, 2019, IIT Madras, Chennai, INDIA.

13. Pragya B. and Biswas S. (2019). "Study the Effect of Axi-swirl Injector on the Regression Rate of the Hybrid Rocket", 33rd National Convention of Aerospace Engineers and National Conference on "Emerging Technologies in Aerospace Structures, Materials and Propulsion Systems", IEI, Pune Local Centre, Pune. 16th to 17th November, 2019.

14. Uma V. and Biswas S. (2019). "Reduction of HCL Concentration in Combustion Products of AP based Solid Propellant using Metal Additives", 12th International High Energy Materials Conference & Exhibit, HEMCE-2019, IIT Madras, Chennai, 16th December to 18th December, 2019.

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.	Rajiv Kumar	Honorary Rosalind Member of London Journals Press (Membership ID#DQ47644)	London Journal of Engineering Research (LJER)	International Level	4 Month
2.	Rajiv Kumar	Reviewer of innovative ideas/innovations under INSPIRE Award-MANAK Scheme	National Innovation Foundation, India	National Level	2019-2020
3.	Rajiv Kumar	Jury Memebr for INSPIRE Award-MANAK Scheme, District and State lavel	District Education Office, Ranchi	State lavel	17-18 January, 2020

5.2 Patents

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	17714026.6 EP 3411598 B1	21.08.2019

SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Co-ordinator (if any)	Date / Duration
1.	A wrkshop on Arduino - A practical approach to problem solving	Mr. Avik Arora (MT/ SER/10003/18)	-	04.03.2020 - 06.03.2020

6.2. List of Faculties

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

6.3 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

6.4 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

Sr. No.	Name of the Member	Designation	Role
Any two of the following			
8.	Dr. M. K. Laha	Associate 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	Dy. GM, R&D Centre of Steel Authority of India Ltd. Shyamli Colony, Doranda, Ranchi	External Member

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.	Ms. Surya S. (MT/SER/10002/18)	Self	Descrete Adjoint Optimization of Scarfed Nozzle Shape using SO2	Summer Internship at IIST, Thiruvantapuram From 20/05/2019 to 12/07/2019

7.2 Publication by students, if any

Publications in Journals :

1. Dinesh M. and Kumar R., (2019). "Utilities of Multi-Protrusion as the Performance Enhancer in Hybrid Rocket Motor" Journal of Propulsion and Power, Vol. 35, No. 5, pp. 1005-1017.
2. Vignesh B. and Kumar R, (2020). "Effect of multi-location swirl injection on the performance of hybrid rocket motor" Acta Astronautica, Vol. 176, pp. 111–123.
3. Pragya B. and Biswas S., (2020). "Experimental Investigation on Combustion Characteristics of Hybrid Rocket Fuels with Multi-Angle Diverging Injector", International Journal of Turbomachinery Propulsion and Propulsion, Vol-5, No. 2.; Paper No. 12, doi:10.3390/ijtpp5020012.
4. Uma V., Joshi P. C. and Biswas S., (2019). Regression rate and combustion characteristics of shellac based hybrid fuel, Annual Technical Volume of Aerospace Engineering Division Board, Vol –III, pp 72-74.

Publications in Proceedings:

1. Behal S. and Varma M.,(2019). "Spray Characteristics of Pure and Metallized Green Gel Propellants", Proc. 12th International High Energy Materials Conference & Exhibits, Dec. 16-18, 2019, IIT Madras.

2. Karn P. K., Kumar P. and Das S., (2019) "Mechanism of vortex asymmetry over Slender Body at High Angle of Attack", 21st Annual CFD Symposium, Aug 8-9, 2019, Bangalore.

3. Karn P. K., Kumar P. and Das S., (2019). "Study of Unsteady Flow Behaviour over Slender Body at High Angle of Attack", Proceedings of the 46th National Conference on Fluid Mechanics and Fluid Power, Dec. 9-11, 2019, PSG College, Coimbatore.

4. Midhun M. V., Mondal, P., Karn P. K. and Kumar P., (2019) "Numerical and Experimental Investigation of Blended Wing Body Configuration", 21st Annual AeSI CFD Symposium, Bangalore, India, August 8-9, 2019.

5. Vignesh B. D. and Kumar R., (2019). "Study on the Performance of Swirling Oxidizer Injection on the Post Combustion Chamber of Hybrid Rocket Motor", 12th International High Energy Materials Conference & Exhibits, HEMCE-2019, Dec.16 – 18, 2019, IIT Madras, Chennai, INDIA.

6. Vignesh B.D. and Kumar R., (2019). "Effect of Multi-Location Swirl Injection on the Performance of Hybrid Rocket Motor", 12th International High Energy Materials Conference & Exhibits, HEMCE-2019, Dec.16 – 18, 2019, IIT Madras, Chennai, INDIA.

7. Pooja V. V. and Kumar R. (2019). "Characterization Studies of Different L/D Non-Circular Orifice Showerhead Injectors", 12th International High Energy Materials Conference & Exhibits, HEMCE-2019, Dec.16 – 18, 2019, IIT Madras, Chennai, INDIA.

8. Pooja V. V. and Kumar R. (2019). "Studies of Liquid Jet Atomization Through Non-Circular Orifices", 12th International High Energy Materials Conference & Exhibits, HEMCE-2019, Dec.16 – 18, 2019, IIT Madras, Chennai, INDIA.

9. Dinesh M. and Kumar R. (2019). "Studies of Wax-Ammonium Perchlorate Based Fuels for Hybrid Rocket Applications", 12th International High Energy Materials Conference & Exhibits, HEMCE-2019, Dec.16 – 18, 2019, IIT Madras, Chennai, INDIA.

10. Pragya B. and Biswas S. (2019). "Study the Effect of Axi-swirl Injector on the Regression Rate of the Hybrid Rocket", 33rd National Convention of Aerospace Engineers and National Conference on "Emerging Technologies in Aerospace Structures, Materials and Propulsion Systems", IEI, Pune Local Centre, Pune. 16th to 17th November, 2019.

11. Uma V. and Biswas S. (2019). "Reduction of HCL Concentration in Combustion Products of AP based Solid Propellant using Metal Additives", 12th International High Energy Materials Conference & Exhibit, HEMCE-2019, IIT Madras, Chennai, 16th December to 18th December, 2019.

7.3 Achievements of Students :

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
1.	Md. Gulam Sarwar (PHD/SER/10053/16)	First prize in First Research Scholars' Colloquium	TEQIP -III, BIT Mesra	01.09.2019 02.09.2019
2.	Pawan Kumar Karn (PHD/SER/10051/16)	Third prize in First Research Scholars' Colloquium	TEQIP -III, BIT Mesra	01.09.2019 02.09.2019

7.4 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No.	Name of Visitor with Affiliation	Date of Visit	
1.	Padmashri Madhavan Chandradathan Scientific Advisor to CM of Kerala State, Former Director, SDSC,VSSC ISRO	11.11.2019	
2.	Bijay K. Sultanian Founder & Managing Member of Takaniki Communications, LLC, USA	02.03.2020	
3.	Sathya Narayana Principal Scientist Experimental Aerodynamics Division, NAL, Bangalore	20.09.2019	

7.5 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	Shri Rajeev Sharma Batch : 1989-1991	Chief Solutions Officer Ness Digital Engineering N Y, USA (2017) Dy. Project Director 'AGNI', DRDL
2.	Prof. Ujjwal K. Saha Batch : 1989-1991	Professor Department of Mechanical Engineering Indian Institute of Technology Guwahati
3.	Dr. B. T. N. Sridhar Batch : 1988-1990	Professor & Head Department of Aerospace Engg. Madras Institute of Technology Anna University, Chennai
4.	Dr. R. D. Swami Batch : 1989-1991	Scientist 'F' Defence Research and Development Laboratory (DRDL)
5.	Shri S. L. N. Desikan Batch : 2000-2002	Scientist 'F' EAD, Aero Vikram Sarabhai Space Centre (VSSC)

OFF-CAMPUS : DEOGHAR

SECTION 1 CAMPUS PROFILE



1.1 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 Santhal pargana, Jharkhand. The campus is well equipped with modern instruments and software facilities for the undergraduate engineering courses in CSE, ECE, EEE, Mechanical and Production Engineering with a total intake capacity of 300. From the year 2020, the lateral entry to the engineering branches has 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. 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.

The campus celebrates several events including Independence Day, Republic Day, Saraswati puja, Viswakarma puja, Karma, Dandia night, International Yoga day, annual techno-cultural fest Utthaan, annual literary fest Aurora, annual sports meet, etc. 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, IVP, Samsung, Extramarks, Oneplus, Times Internet etc. For the last two years the Institute has witnessed student-placement over 80% with an average annual CTC of Rs. 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.

Most of the Faculty Members are engaged in R&D Activities; Organising Conferences, Workshops & Seminars and are Publishing Quality Research Articles.

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.	Prof. (Dr.) Vinay Sharma	4-days Online Course on Examination Reforms	AICTE		Online	29/04/2020- to 02/05/2020
2.	Dr. Anil Kumar Sharma	One-week FDP on Artificial Intelligence-Devices to Systems,	BIT & Electronics & ICT Academy, IIT Roorkee	ICT Academy, IIT Roorkee	IIT Roorkee	28/08/2019 to 01/09/2019
3.	Dr. Manoj Kumar Dutta	2nd International Conference on Computing Analytics and Networking , ICCAN-2019. PaperTitle: Design and Performance Analysis of Wavelength Converter using SOA for Optical WDM network	BIT Mesra	School of Computer Engineering, KIIT University	KIIT University	14th-15th December 2019,
4.	Dr. Manoj Kumar Dutta	2nd International Conference on Computing Analytics and Networking, ICCAN-2019. Paper Title: Comparative Study between Star and Mesh Topology for the Application in All Optical WDM Network	BIT Mesra	School of Computer Engineering, KIIT University	KIIT University	14th-15th December 2019,
5.	Dr. S.S. Majhi	International Webinar on Recent Advanced in Science and technology	BIT Mesra		BIT Mesra	18- 20 July 2020
6.	Dr. A.C. Singh	Isothermal near – net shape forging of Aluminum Alloys: Andvances and inventions	BIT Mesra	IIT Guwahati	IIT Guwahati	8-12 July, 2019
7.	Dr. Kamta Nath Mishra	Faculty Development Program for Student Induction	BIT Mesra	AICTE	B.I.T. Mesra	13 – 15 December 2019

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
8.	Dr. Kamta Nath Mishra	IEEE Int. Conf. on Emerging Trends in IT and Engg.	B.I.T. Mesra	V.I.T. Vellore	V.I.T. Vellore	25-26 Feb. 2020
9.	Dr. Sanjay Kumar	International workshop on 5G during the International Symposium on 5G and beyond for rural upliftment	NA	Indian Institute of Technology (ISM) Dhanbad,	Indian Institute of Technology (ISM) Dhanbad,	08 Feb, 2020.
10.	Dr. Sanjay Kumar	AICTE sponsored 7 days residential FDP for Students' Induction Program	BIT Mesra	DCRUST, Murthal Haryana	DCRUST, Murthal Haryana	25 June to 01 July 2019.
11.	Dr. Babu Lal Shahu	TEQIP-III Sponsored online FDP on Artificial Intellegence and Machine Learning in Healthcare	BIT Mesra (TEQIP-III)	BIT Mesra	On Line	27-31 July, 2020.
12.	Dr. Babu Lal Shahu	Two week FDP on Wireless Communication Technologies for IoT	BIT Mesra	Electronics and ICT academies	On line	27th July-7th Aug, 2020
13.	Mr. Sridhar Chintala	International workshop on 5G during the International Symposium on 5G and beyond for rural upliftment	NA	Indian Institute of Technology (ISM) Dhanbad,	Indian Institute of Technology (ISM) Dhanbad	08 Feb, 2020.
14.	Mr. Sridhar chintala	IEEE India Council International Conference (INDICON 2019)	BIT Mesra	IEEE	Marwadi University, Gujarat	(13-15 December 2019)
15.	Mr. Sridhar chintala	Twenty Sixth National Conference on Communications	BIT Mesra	IIT Kharagpur	IIT Kharagpur	21-23 February 2020
16.	Mr. Vikash Sharma	TEQIP-III Sponsored online FDP on Artificial Intellegence and Machine Learning in Healthcare	BIT Mesra (TEQIP-III)	BIT Mesra	On Line	27-31 July, 2020.
17.	Mr. Vikash Sharma	FDP on Deep Learning and Its Applications	Electronics and ICT Academy NIT, Patna	NIT, Patna	On Line	17th – 22nd June 2020
18.	Mr. Vikash Sharma	Workshop on Examination Reforms	AICTE, India	AICTE, India	On Line	29th April – 2nd May 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
19.	Mr. Vikash Sharma	FDP on MATLAB Project Course on Massive MIMO, Cooperative Communication and Cognitive Radio for 5G	IIT Kanpur	Andhra University College of Engineering, Visakapattnam	Visakapattnam	6th January to 11th January 2020
20.	Mr. Akash Kumar Gupta	IEEE SPS Winter School on Biomedical Signal and Image Processing, from	BIT Mesra	RIT, Bangalore	RIT, Bangalore	12 to 14 Nov 2019
21.	Mr. Akash Kumar Gupta	National Conference on Communications (NCC)	BIT Mesra	IIT Kharagpur	IIT Kharagpur	21 Feb to 23 Feb 2020
22.	Mr. Sutapa Mondal	National Webinar on IoT based solar power supply for rural India	NA	Department of Applied Science & Humanities, CIT(R)	online	31 May, 2020.
23.	Mr. D. S. Acharya	AICTE Online course on Examination Reforms	AICTE	AICTE	Online (Microsoft Teams)	29th April – 2nd May, 2020
		International Conference on Emerging Trends for Smart Grid Automation and Industry 4.0	TEQIP	Dept of EEE, BIT Mesra	BIT Mesra	4-6, December, 2019
24.	Mr. N. K. Rajalwal	International Conference on Emerging Trends for Smart Grid Automation and Industry 4.0	TEQIP	Dept of EEE, BIT Mesra	BIT Mesra	4-6, December, 2019
25.	Mr. P. K. Ranjan	International Conference on Emerging Trends for Smart Grid Automation and Industry 4.0	TEQIP	Dept of EEE, BIT Mesra	BIT Mesra	4-6, December, 2019
26.	Mr. Ashutosh Kumar	Regional Orientation Session on IIC 2.0 and ARIIA 2020	AICTE	AICTE and MHRD Govt. of India	Gurunanak Institute of Technology Kolkata, West Bengal, India	13-08-2019
27.	Mr. Ashutosh Kumar	Entrepreneurship in Mechanical and Manufacturing Sector	MHRD Govt of India	AICTE and MHRD	College of Engineering Pune, Maharashtra, India	25-6-19 to 02-07-19

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
28.	Gopisetti Srinivasarao	Condition Monitoring and Failure Analysis of Machines	….	IIT(ISM) Dhanbad	IIT(ISM) Dhanbad	March 21 – 24, 2018
29.	Dr. S. Karmakar	Webinar on 'Engineering tomorrow: New fields, Newer prospects'	ABP Education	ABP Education	Online	13th June 2020
		Webinar on "Design Education: The New Future"	ABP Education	ABP Education	Online	27th June 2020
30.	Amit Kumar	Online Course on Examination Reforms	ABP Education	AICTE	Online	29th April-2nd May 2020
		Post Covid-19: Resurgence of Indian Industry and R&D	ABP Education	SRM University AP	Online	15th May 2020

SECTION 3 RESEARCH PUBLICATIONS

3.1 Publications in Journals: (International/National)

1. Verma N. & Sharma V. (2019). A Literature Review on Energy Value Stream Mapping (EVSM). International Journal of Advanced Science and Technology, Vol. 27, p. 01-08.
2. Oraon M. & Sharma V. (2020). Measurement of electromagnetic radiation in the single point incremental forming of AA3003-O. International Journal of Lightweight Materials and Manufacture, Vol. 3, p. 113-119
3. Sharma A. K. & Sharma A. (2020). Value recognition for adaptability of circular economy in India. International Journal of Management and Social Science Research Review, Vol. 7, p. 64-75
4. Sharma A. K. & Sharma A. (2020). Sustainability of Ground Mounted Solar Photo-Voltaic based Mega Power Plant in India. International Research Journal of Modernization in Engineering Technology and Science, Vol. 2, p.141-146
5. Srivastava R., Chattopadhyay J., Patel R., Agrawal S., Nouseen S, Kumar S, & Karmakar S. (2020). Highly efficient ternary hierarchical NiV_2S_4 nanosphere as hydrogen evolving electrocatalyst. International Journal of Hydrogen Energy. 45, (41). 21308-21318.
6. Kamta Nath Mishra, Ankur Raj, Arun Yugraj, Shivam Goel, (2020). Integration of DNA databank with AADHAR database for tracing the parents of orphange children and unclaimed Dead bodies, International Journal od Cloud Computing, Inderscience, pp. 1-24, 2020.
7. Kamta Nath Mishra, (2020). A novel inntegration of smart vehicles and secure clouds for supervising vehicle accidents on roads/ highways, Sadhana Journal in Engineering Sciences, Springer, Vol. 45, pp. 1-21, 2020.
8. Kamta Nath Mishra and Navin Kumar, (2020). Multi-Server Multi-CS Based Deadlock Prevention in Distributed Systems Using Voting and Priority Based Approaches, National Academy Science Letters, Springer, Vol. 43, pp. 1-6. 2020.

9. Soumya Ray, Kamta Nath Mishra, and Sandip Dutta, (2019) Big Data Security Issues from the Perspective of IoT and Cloud Computing: A Review", Recent Advances in Computer Science and Communications, Benthem Science Journal, Vol. 12, No. 1, pp. 1-25.

10. Singh, S. P., Singh, S., Guo, W., Mishra, S., & Kumar, S. (2020). Radiation Absorption Noise for Molecular Information Transfer. IEEE Access, 8, 6379-6387.

11. Singh, S. P., Kumar, A., Mishra, S., & Kumar, S. (2020). A novel analytical model for interference estimation in CR enabled femtocells. International Journal of Communication Systems, 33(4), e4221.

12. Vishal Kumar & R. K. Lal, "Study of Polarization- induced parameters on AlGaN/GaN QW Devices and thermal effect causing current reduction", International Journal of Advanced Science and Technology, Vol. 29, No. 8S, pp. 4107-4113, 2020;

13. Sarkar, Indranil; Mukhopadhyay, Mainak; Maity, Tanmoy, A New Blind DOA Estimation Using Two Uniform Linear Array for Low Side Lobe Adaptive Array, JSIR Vol.79(04), April 2020, page 312-314, DOI: http://nopr.niscair.res.in/handle/123456789/54371

14. Brijesh Kumar Singh, MainakMukhopadhyay, Unified performance analysis over Mckay–Meijer G shadowed fading channel, International Journal of Electronics, March 04, 2020, page 1486-1505, DOI: https://doi.org/10.1080/00207217.2020.1727024

15. Saurav Ganguly, Jayanta Ghosh, Kankanala Srinivas, Puli Kishore Kumar, Mainak Mukhopadhyay, Compressive Sensing Based Two-Dimensional DOA Estimation Using L-Shaped Array in a Hostile Environment, Traitement du Signal (TS), Volume 36, Number 6, December 29, 2019, DOI: https://doi.org/10.18280/ts.360608

16. Maharatha S., Mukhopadhyay M., A New Digital Modulation Technique: Two Messages in One Carrier, JSIR Vol 78, Spetember 2019, DOI: http://nopr.niscair.res.in/handle/123456789/50489

17. A. K. Gupta, C. Chakraborty, B. Gupta; Monitoring of Epileptical Patients Using Cloud-Enabled Health-IoT System, Traitement du Signal, IIETA, 36(5), 425-431 (2019).

18. Yogesh S., Chinmay C., Augmented Reality and Virtual Reality Transforming Spinal Imaging Landscape: A Feasibility Study, IEEE Computer Graphics and Applications, 1-18, 2020. 10.1109/MCG.2020.3000359

19. Sravanth K.R., Kodali M., Bharat G., Anudeep P., Kalyana K.S., Chinmay C., A Survey on Recent Trends in Brain Computer Interface Classification and Applications, Journal of Critical Reviews, 7(11), 650-658, 2020. ISBN: 2394-5125, http://dx.doi.org/10.31838/jcr.07.11.119

20. Chinmay C., Joel JPC Rodrigues, A Comprehensive Review on Device-to-Device Communication Paradigm: Trends, Challenges and Applications, Springer: Int. Journal of Wireless Personal Communications, 2020. DOI: 10.1007/s11277-020-07358-3,

21. Chinmay C., Computational Approach for Chronic Wound Tissue Characterization, Elsevier: Informatics in Medicine Unlocked, 17, 1-10, 2019, https://doi.org/10.1016/j.imu.2019.100162

22. Chinmay C., Performance Analysis of Compression Techniques for Chronic Wound Image Transmission under Smartphone-Enabled Tele-wound Network, Int. Journal of E-Health and Medical Communications (IJEHMC), 10(2), 1-15, 2019, 10.4018/IJEHMC.2019040101

23. Rajalwal, Nilesh Kumar and Ghosh, Debomita, "Recent trends in integrity protection of power system: A literature review", International Transactions on Electrical Energy System, Wiley, July 2020, DOI: 10.1002/2050-7038.12523.

24. Gude, Srihari, and Jana, Kartick Chandra, "Parameter extraction of photovoltaic cell using an improved cuckoo search optimization." Solar Energy, vol. 204, pp: 280-293, 2020. DOI: 10.1016/j.solener.2020.04.036.

25. Acharya, D.S.; Swain, S.K.; and Mishra, S.K., "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. 45, Issue. 8, pp: 6311-6329, 2020. DOI: 10.1007/s13369-020-04425-6.

26. Acharya, Deep Shekhar, and Mishra, Sudhansu Kumar, "A multi-agent based symbiotic organisms search algorithm for tuning fractional order PID controller." Measurement, Vol. 155, 107559, 2020. DOI: 10.1016/j.measurement.2020.107559.

27. Srinivasarao G., Samantaray A.K., Ghoshal S.K. Bond graph modeling and multi-body dynamics of a twin rotor system. Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering. 2020 Feb

3.2 Publications in Proceedings

1. Manish Oraon, Vinay Sharma, Soumen Mandal, "Statistical analysis of Single Point Incremental Forming for the Optimization of Force and Surface Roughness", 1st International Conference on Advances in Materials and Manufacturing Engineering's, ICAMME-2019 Organized by Department of Metallurgy and Materials Engineering., NIT Rourkela, 15-17 March. 2019

2. M.K. Dutta, "Design and Performance Analysis of Wavelength Converter using SOA for Optical WDM network", Proceedings of ICCAN2019 ,Progress in Computing, Analytics and Networking. Advances in Intelligent Systems and Computing, vol 1119. Springer, Singapore. https://doi.org/10.1007/978-981-15-2414-1_25. Print ISBN : 978-981-15-2413-4, Online ISBN : 978-981-15-2414-1.

3. M.K. Dutta, "Comparative Study between Star and Mesh Topology for the Application in All Optical WDM Network", Proceedings of ICCAN2019 , Progress in Computing, Analytics and Networking. Advances in Intelligent Systems and Computing, vol 1119. Springer, Singapore. https://doi.org/10.1007/978-981-15-2414-1_26. Print ISBN : 978-981-15-2413-4 , Online ISBN : 978-981-15-2414-1.

4. Kamta Nath Mishra, (2020). Tracing the Parents of Orphanage Children in Cloud and IoT Based Environment Using DNA-FIR-Aadhaar Databases, IEEE International Conference on Emerging Trends in Information Technology and Engineering (ic-etite2020), pp. 1-6.

5. Kamta Nath Mishra, (2019). An Efficient Palatal patterns Based Methodology for Identity Verification of Identical twins, sProc. of the EighthIntl. Conf. on Advances in Bio-Informatics, Bio-Technology and Environmental Engineering -ABBE 2019, pp. 38-42.

6. Acharya, D. S., Gude, Srihari, Kumar, Shudit, Kumar, Shubham (2020), "An Integral Sliding Mode Controller for Vertical Take-Off and Landing System", In proceedings of IEEE International Conference on Power Electronics & IoT Applications in Renewable Energy and It's Control (PARC-2020), ISBN 978-1-7281-6575-2.

7. Rajalwal, N. K. and Ghosh, Debomita (2020). Adaptive Zone-III Relay Characteristic using System Integrity Protection Scheme", IEEE International Conference on Intelligent Systems and Green Technology. In proceedings of 2019 IEEE International Conference on Intelligent Systems and Green Technology (ICISGT), ISBN 978-1-7281-1423-1.

8. Acharya, D. S. and Mishra, S. K. (2020). Parameter Optimization of a modified PID Controller using Symbiotic Organisms Search for Magnetic Levitation Plant. In proceedings

of International Conference on Intelligent Computing and Smart Communication 2019, Algorithms for Intelligent Systems, Springer, pp. 937-948, ISBN 978-981-15-0633-8.

9. Acharya, D. S., Mishra, S. K., Sarkar, B. and Bharti, D. (2020). Fractional Order Particle Swarm Optimization to optimize a Fractional Order PID Controller for a Vertical Take-Off and Landing System. In proceedings of International Conference on Emerging Trends for Smart Grid Automation and Indutry 4.0. Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering. Springer. ISBN 978-981-15-7675-1.

10. Acharya, D. S., Mishra, S. K., Kumar, Shudit and Kumar Shubham (2020) . Design of 2-Degree of Freedom Fractional Order PID Controller for Magnetic Levitation Plant with Time Delay. In proceedings of International Conference on Emerging Trends for Smart Grid Automation and Indutry 4.0. Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering. Springer. ISBN 978-981-15-7675-1.

11. Acharya, D. S. and Gude, Srihari (2020). A Multi-Objective Sliding Mode Controller for Magnetic Levitation Plant. In proceedings of International Conference on Emerging Trends for Smart Grid Automation and Indutry 4.0. Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering. Springer. ISBN 978-981-15-7675-1.

12. Ranjan, Prabhat Kumar, Ojha, Piyush Kumar, Thakura, Parashuram and Singh , Aditya Kumar (2020). Analysis of Solar fed Grid connected Single-Stage Single Phase Boost Inverter. In proceedings of International Conference on Emerging Trends for Smart Grid Automation and Indutry 4.0. Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering. Springer. ISBN 978-981-15-7675-1.

13. Rajalwal, Nilesh Kumar and Ghosh, Debomita (2020). Petri net Modeling for Reliability Assessment of Integrity Protection Scheme. In proceedings of International Conference on Emerging Trends for Smart Grid Automation and Indutry 4.0. Advances in Smart Grid Automation and Industry 4.0. Lecture Notes in Electrical Engineering. Springer. ISBN 978-981-15-7675-1.

3.3 Book:

3.3.1 Co-Authored

1. Chinmay C., Advanced Classification Techniques for Healthcare Analysis, IGI Global Book Series - Advances in Medical Technologies and Clinical Practice (AMTCP). 1-405. doi:10.4018/978-1-5225-7796-6, 2019.

2. Chinmay C., Smart Medical Data Sensing and IoT Systems Design in Healthcare, IGI Global Book Series - Advances in Healthcare Information Systems and Administration (AHISA), 1-288. 10.4018/978-1-7998-0261-7, 2019. DOI: 10.4018/978-1-7998-0261-7

3. Chinmay C., Amit B., Mahesh H.K., Lalit G., Basabi C., Internet of Things for Healthcare Technologies, Springer – Studies in Big Data, 73, 2020. ISBN 978-981-15-4111-7.

4. Tarik R., Chinmay C., Kym F., Advances in Telemedicine for Health Monitoring: Technologies, design and applications, IET, 2020. ISBN 978-1-78561-986-1.s

5. Mishra Kamta Nath and Pandey Subhash Chandra, (2020) Cloud Based M-Health Systems for Veins Image Enhancement and Feature Extraction: Emerging Research and Opportunities", IGI Global (USA) ISBN: 9781799845379.

6. Brijesh Kumar Singh and Mainak Mukhopadhyay, "Channel Capacity Under CIFR Transmission Protocol for Asymmetric Relaying". In Advances in Machine Learning and Computational Intelligence (pp. 545-553). Springer, Singapore, July 26, 2019. (Indexed in Book Chapter, Springer) DOI: https://link.springer.com/book/10.1007%2F978-981-15-5243-4_50

7. Akash G., Chinmay C., Bharat G., Sensing and Monitoring of Epileptical Seizure under IoT Platform, IGI: Smart Medical Data Sensing and IoT Systems Design in Healthcare, 201-223, 2019. 10.4018/978-1-7998-0261-7.ch009.

8. Akash G., Chinmay C., Bharat G., Advanced telemedicine system for remote healthcare monitoring, IET: Advances in telemedicine for Health Monitoring, Healthcare Technologies Series 23, Ch. 9, 1-24, 2020, ISBN – 978-1-78561-986-1.

9. Debashis D., Chinmay C., Sourav B., A framework development on a big data analytics for terahertz healthcare, Elsevier: Terahertz Biomedical and Healthcare Technologies, Ch. 7, 1-25, 2020, https://doi.org/10.1016/B978-0-12-818556-8.00007-0.

10. Banerjee B., Chinmay C., Das D., An approach towards GIS application in smart city urban planning, CRC – Internet of Things and Secure Smart Environments Successes and Pitfalls, Ch. 2, 1-33, 2020. ISBN – 9780367266394.

11. Amit B., Chinmay C., Megha R., Medical imaging, artificial intelligence, Internet of things, wearable devices in terahertz healthcare technologies, Elsevier: Terahertz Biomedical and Healthcare Technologies, Ch. 8, 1-38, 2020. ISBN – 9780128185568.

12. Sucharitha M., Chakraborty C., Srinivasa Rao S., Reddy V.S.K., Early Detection of Dementia Disease Using Data Mining Techniques. Springer: Internet of Things for Healthcare Technologies. Studies in Big Data, vol 73. 177-194, 2021, https://doi.org/10.1007/978-981-15-4112-4_9

13. Mandal R, Mondal M.K., Banerjee S., Chinmay C., Biswas U, A Survey and critical Analysis on Energy Generation from Datacenter, Elsevier: Data De-duplication Approaches-Concepts, Stretegies and Challenges, Ch. 11, 2020. ISBN: 978-0-12-823395-5

14. Sanjukta B., Chinmay C., Machine Learning for Biomedical and Health Informatics, CRC: Big Data, IoT, and Machine Learning Tools and Applications, Ch. 4, 353-373, 2020, ISBN 9780429322990, https://doi.org/10.1201/9780429322990

3.3.2 Chapter(s) in Edited Book

1. Manish Oraon Vinay Sharma. (2020) Performance Measurement in Incremental Deformation of Brass Cu67Zn33 Through Soft Computing Tool. In: Li L., Pratihar D., Chakrabarty S., Mishra P. (eds) Advances in Materials and Manufacturing Engineering. Lecture Notes in Mechanical Engineering. Springer, Singapore, ISBN 978-981-15-1306-0

2. Bappa Acherjee, Debanjan Maity, Arunanshu S. Kuar and Manoj K. Dutta, "Application of Flower Pollination Algorithm for Optimization of ECM Process Parameters", Chapter 2. Optimization for Engineering Problems , Wiley, ISBN : 9781786304742, July 2019

3. Mishra Kamta Nath, (2020). An Efficient Palm-Dorsa-Based Approach for Vein Image Enhancement and Feature Extraction in Cloud Computing Environment, Springer Book on Unmanned Aerial Vehicles in Smart Cities, Unmanned System Technologies, pp. 85-106.

4. Mishra Kamta Nath, (2020). An Efficient Approach towards Enhancing the Performance of m-Health Using Sensor Networks and Cloud Technologies, Springer Book on Internet of Things- Concepts and Applications, pp. 491-513.

5. Mishra Kamta Nath, (2020) Supervising Data Transmission Services Using Secure Cloud Based Validation and Admittance Control Mechanism, Springer Book on Internet of Things – Concepts and Applications, pp. 129-149.

6. Mishra Kamta Nath, and Chakraborty C., (2019). A Novel Approach Towards Using Big Data

and IoT for Improving the Efficiency of m-Health Systems, A Springer Book on Advanced Computational Intelligence Techniques for Virtual Reality in Healthcare, pp. 123-139.

7. Mishra Kamta Nath and Chakraborty C., (2019) "A Novel Approach Towards Enhancing the Quality of Life in Smart Cities using Clouds and IoT Based Technologies", A Book on Digital Twins Technologies and Smart Cities, Springer, pp. 19-35.

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. Sanjay Kumar	Editorial Board Member	Wireless Personal Communications	International	2017 onwards
2.	Dr. Sanjay Kumar	Chief Guest During FDP on Universal Human Values	Central University Jharkhand (CUJ), Brambe, Ranchi	National	Jan 22, 2020.
3.	Dr. Sanjay Kumar	Main resource person on National Education Day,	BIT Mesra, Ranchi	National	Nov 11, 2019
4.	Dr. Sanjay Kumar	Advisory Committee Member	JSPM's Rajarshi Shahu College of Engineering (RSCOE), Pune	International	To be held on July 6-8, 2021

4.2 Patents

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	Vinay Sharma	Aluminium metal foam and a process for preparation thereof,	Number 338236	2020

4.3 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	Internshala	Training and placement, Internships	21st June 2019-20th June 2020
2.	Itenic Technologies Pvt. Ltd.	Training and placement, Internships	20th June 2019-19th June 2020
3.	Smart Brains Engineers and Technologies Pvt. Ltd.	Training and placement, Internships	20th June 2019-19th June 2020
4.	Morling Global Pvt. Ltd.	Training and placement, Internships	20th June 2019-19th June 2020
5.	Pieinfocomm Pvt. Ltd.	Training and placement, Internships	20th June 2019-19th June 2020

SECTION 5 **ACTIVITIES/ FACULTY MEMBERS / BOS /DAS**

5.1 List of Faculties

Sr. No.	Name	Designation
1.	Prof. R. C. Jha	Professor & Director BIT Off-Campus Deoghar
2.	Dr. Pankaj Mishra	Assistant Professor & Incharge
3.	Mr. P. K. Ojha	Assistant Professor
4.	Mr. D. S. Acharya	Assistant Professor
5.	Mr. Srihari Gude	Assistant Professor
6.	Mr. P. K. Ranjan	Assistant Professor
7.	Mr. N. K. Rajalwal	Assistant Professor
8.	Mr. S. K. Mahto	Associate Lecturer
9.	Prof. Vinay Sharma	Professor & Incharge
10.	Mr. Prafulla Kumar Manoharan	Assistant Professor
11.	Mr. Vijay Kumar Mandal	Associate Lecturer
12.	Dr. Anil Kumar Sharma	Assistant Professor
13.	Dr. Sanjiv Tiwari	Assistant Professor
14.	Dr. Ram Krishna Sarkar	Assistant Professor & Incharge
15.	Dr. Soumen Karmakar	Assistant Professor
16.	Dr. Manoj Kumar Dutta	Assistant Professor
17.	Dr. Shyam Sundar Majhi	Assistant Professor & Incharge
18.	Dr. Ashish Chandra Singh	Assistant Professor
19.	Dr. Ranjan Chattaraj	Assistant Professor & Incharge
20.	Dr. Amit Kumar	Assistant Professor
21.	Dr. Bishnu Kumar	Assistant Professor
22.	Dr. Kamta Nath Mishra	Assistant Professor & Incharge
23.	Mrs. Anita Kushwaha	Assistant Professor
24.	Dr. Sounak Paul	Assistant Professor
25.	Mr. Rayees Ahamad	Assistant Professor
26.	Mr. Arbind Kr. Choudhary	Assistant Professor
27.	Mr. Balaram Mandal	Assistant Professor
28.	Mr. Raja Ram Dutta	Assistant Professor
29.	Mr. Soumya Ray	Assistant Professor
30.	Mr. Swapan Kr. Borat	Associate Lecturer
31.	Mr. Saswata Mukherjee	Associate Lecturer
32.	Dr. Nishi Kant Kumar	Associate Lecturer
33.	Mrs. Neena Jha	Associate Lecturer
34.	Dr. Sanjay Kumar	Associate Professor & Incharge
35.	Dr. Rajesh Kumar Lal	Associate Professor
36.	Dr. Mainak Mukhopadhyay	Assistant Professor
37.	Dr. Chinmoy Chakraborty	Assistant Professor
38.	Dr. Babulal Shahu	Assistant Professor

Sr. No.	Name	Designation
39.	Mr. Vikash Sharma	Assistant Professor
40.	Mr. Akhilesh Roy	Assistant Professor
41.	Mr. Shridhar Chintala	Assistant Professor
42.	Mr. Aakash Gupta	Assistant Professor
43.	Mrs. Supata Mondal	Assistant Professor
44.	Mrs. Payal Bharadwaj	Assistant Professor
45.	Mr. Mahendra Das	Associate Lecturer
46.	Prof. Arbind Kumar	Professor & Incharge
47.	Dr. Ashish Kumar Chakraborty	Associate Professor
48.	Mr. Bibhanshu Sekhar Choudhary	Assistant Professor
49.	Dr. Ritesh Kumar Upadhyay	Assistant Professor
50.	Mr. Gopisetti Srinivasarao	Assistant Professor
51.	Mr. Ashutosh Kumar	Assistant Professor
52.	Dr. Sandip Ghosh Hazra	Assistant Professor & Incharge

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.	Rishikesh Kumar	Self	Hubrootsolutions Pvt Ltd	Software Development Company
2.	Pragya Gyani	Atal Bihari Vajpayee Innovation Lab Jharkhand Ranchi	The Dump Pvt Ltd	Waste Management

6.2 Publication by students, if any

8. Kamta Nath Mishra, Ankur Raj, Arun Yugraj, and Shivam Goel, (2020). Integration of DNA databank with AADHAR database for tracing the parents of orphanage children and unclaimed Dead bodies, International Journal of Cloud Computing, Inderscience, pp. 1-24, 2020 (Unpaid Scopus).
9. Rampravesh Kumar, Sanjay Kumar, "Sum rate performance for full-duplex user in Co-operative NOMA systems over Weibull Fading Channel" International Symposium on 5G and beyond for rural upliftment, jointly organized by BIT Sindri, IIT(ISM) Dhanbad, the IEEE 5G Summit and 35th GISFI standardization meeting, at BIT Sindri, 09 Feb, 2020.
10. Saurabh Srivastava, P P Dash, Sanjay Kumar, "Analysis of NOMA in capacity domain" International Symposium on 5G and beyond for rural upliftment, jointly organized by BIT Sindri, IIT(ISM) Dhanbad, the IEEE 5G Summit and 35th GISFI standardization meeting, at BIT Sindri, 09 Feb, 2020.
11. D. S. Acharya, S. K. Mishra, Shudit Kumar, Shubham Kumar, "Design of 2-Degree of Freedom Fractional Order PID Controller for Magnetic Levitation Plant with Time Delay", International Conference on Emerging Trends for Smart Grid Automation and Indutry 4.0, BIT Mesra, Ranchi organized by the Dept. of EEE, TEQIP and Springer at BIT Mesra, Ranchi 04-06, December, 2019.

6.3 Achievements of Students

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1.	Mr. Shudit Kumar	Best paper of the session.	Dept of EEE, BIT Mesra and TEQIP	4-6, December, 2019 BIT Mesra
2.	Mr. Shubham Kumar	Best paper of the session.	Dept of EEE, BIT Mesra and TEQIP	4-6, December, 2019 BIT Mesra

6.4 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	Ms. Taanya Ambasht, 2016 (CSE)	Qualified Indian Civil Service Examination of UPSC in the year 2020 with All India Rank (AIR) 237.
2.	Mr. Abhishek Sharma, 2011 (EEE)	Presently he is Additional Civil Judge, Mathura, UP
3.	Mr. Ujjawal Sharma, 2012 (EEE)	He completed 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.
4.	Ms. Apurva Pathak, 2012 (EEE)	She completed her MS form RWTH Aachen University, Germany. Presently she is telecom Professional working on CDMA technologies at QUALCOMM.

6.5 Any other relevant information

i. ED Cell Activities

Sr. No.	Seminar / Particulars	Topic	Date	No of Participants	Remarks
1.	IDEATHON 2019	Start Up Idea Presentation and Poster Competition	15-10-2019	85	
2.	Guest Mentor and Judge - Invited	Entrepreneurship Awareness Drive Ranchi 20199 organised by ABVIL Ranchi in association with IIT Kharagpur	19-10-2019	1	I/C ED Cell BIT Deoghar was Invited as an Expert mentor for judging state level start up pitching
3.	Entrepreneurship Summit 2019 - Start Up Cell and IIC of BIT Sindri	Entrepreneurship	15-11-2019 to 17-11-2019	5	Held at BIT Sindri - Acted as Judge in Idea Piching session
4.	Seminar on Finance start up	Fintech - The Next Frontier	28-11-2019	250	
5.	Workshop on Google Cloud	Google Cloud Community Open Source Code	15-01-2020	78	

Sr. No.	Seminar / Particulars	Topic	Date	No of Participants	Remarks
6.	Guest Lecture	Start up and entrepreneurship - Motivational Speech	25-01-2020	200	I/C ED Cell BIT Deoghar was invited as motivational speaker to Jharkhnd Tool Room, Ranchi - Dumka Centre
7.	MHRD - IIC2 Workshop	Regional Orientation Session on IIC 2.0 and ARIIA 2020	13-08-2019		Gurunanak Institute of Technology Kolkata WB in association with AICTE and MHRD Govt. of India

ii. SWAYAM- NPTEL Courses completed by faculties of Production Engineering.

1. Dr. Anil Sharma, Assistant professor, Department of production Engineering has completed course on, "Selection of Nanomaterials for Energy Harvesting and storage Application" Score 75%, Conducted by IIT-Roorkee, Duration: July-August-2019, Award: Silver Medal.
2. Dr. Anil Sharma, Assistant professor, Department of production Engineering has completed course on, "Neural Network for Signal Processing-I" Score 65%, Conducted by IISc-Bangalore, Duration: July-October-2019.
3. Dr. Anil Sharma, Assistant professor, Department of production Engineering has completed course on, "Rocket Propulsion" Score 89 %, Conducted by IIT, Madras, Duration Jan-Apr-2020.
4. Dr. Anil Sharma, Assistant professor, Department of production Engineering has completed course on, "Demystifying the Brain" Score 77 %, Conducted by IIT, Madras, Duration Jan-Feb-2020.
5. Dr. Anil Sharma, Assistant professor, Department of production Engineering has completed course on, "Computational Fluid Dynamics" Score 56 %. Conducted by IIT, Madras, Duration Jan-Apr-2020.

iii. The following facilities were added to the Department of Production Engineering



TIG & MIG Welding Machine



Establishment of Foundry Lab

iv. Cultural/Technical Clubs/Societies

New Student chapter - January 2020 - Setup IEEE Student Branch Code – STB10208 with School Code – 60098808

Functions/Events organized by the Institute:













Sr. No.	Function/Festival/ Event name	Description	Date
1.	AGHAAZ'19	A one-day festival comprising of technical and cultural events/contests during the day followed by music and dance performances in the evening.	19th October, 2019
2.	Independence Day	Celebration of the Independence of the country.	15th August, 2019
3.	Republic Day	Celebration of the Republic Day of the country.	26th January, 2020

Functions/Events organized by the Clubs/Societies of the Institute:

Sr. No.	Club/Society name	Event	Description	Date
1.	Photographic Society	Pareidolia	Contest for best photograph, based on votes of public.	19th January, 2020
		Shutter Up	Group wise photography contest, at a remote scenic location.	20th August, 2019
2.	Dance Club	Dandiya Night	Dance performance and celebration for Navratri.	29th August, 2019
		Lohri	Celebration of the harvest festival.	13th January, 2020
3.	Music Club	Music Night'19	An evening of music performance by the student members of the club.	01st September, 2019
4.	Dramatic Society	Antaragni'19	The annual flagship festival of the society comprising of contests/ events based on acting, script-writing, poems, etc.	31st August, 2019 – 01st September, 2019
5.	Literary Society	Aurora'19	The annual flagship event of the society comprising of events to display the vocational and written skills of the participants.	1st – 2nd February, 2020
		International mother Language Day	As per the instructions from the AICTE.	21st Feb. 2020
		JAM	An event that allowed the participants to talk on given random topics just for a minute.	19th Oct. 2019

Sr. No.	Club/Society name	Event	Description	Date
6.	Fine Arts	Poster making Competition	Students design posters using paint colors.	6th September, 2019
		Wall Art Competition	Students paint on a blank space provided on a wall in the Institute.	1st – 30th November, 2019
7.	Coding Society	Hacktoberfest Bootcamp	A programming contest, organized by DigitalOcean and DEV in collaboration with GitHub, making students familiar with open source projects.	19th October, 2019
8.	IEEE Student's Chapter	Umbrella Workshop on LabVIEW	A two-day workshop by the student chapter, to acquaint the students with the basics of LabVIEW.	14th – 15th February, 2020
		One day workshop	"Drone and Machine Intelligence	12th February 2020
		workshop	"An Introduction to LabVIEW	15th and 16th February 2020.
9.	Sports and Adventure	Annual Sports Meet-2020	The flagship athletic event of the Institute.	9th – 10th February, 2020.
		Monthly sports tournament	Football, Volleyball, Cricket, Chess, etc.	As per Sports calendar
10.	NSS		Unnat Bharat Abhiyan	

OFF CAMPUS: JAIPUR

SECTION 1 CAMPUS PROFILE





1.1 About the 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.

1.2 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.

1.3 Academic Programmes:

Undergraduate:	**Postgraduate:**
B.Tech in following branches of Engineering : i) Computer Science & Engineering (CSE) ii) Electronics and Communication Engineering (ECE) iii) Electrical & Electronics Engineering (EEE) BBA, BCA & B.Sc. (Animation & Multimedia)	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)

1.4 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.

1.4 Software/Simulation Tools :

For Electronics & Electrical Labs : CADENCE VLSI simulation tool, ANSYS- HFSS RF Design Software, MATLAB, Xilinx ISE Foundation Tool, ComSim, MultiSim, Code Composer Studio, PCB Design Util Board, System View, Open IT Guru, SUSE-V10, Ethernal 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 (Rs.)	Duration of the Project
1.	Development of Distributed Deep Learning based Dynamic Causality Analysis Model for Predicting Epilepsy and Simulation of Epileptic Brain	PI - Dr. V. Pathak Asst. Prof.,CSE Co-PI Dr. Vivek Gaur Asst. Prof.,CSE	DST , Govt. of India under CSRI scheme	12.03.2020	16,88,040	2 years (March 2020- March 2022)
2.	Prediction of ground-level particulate matter concentrations from Multi-Satellite AOD over the Indian Subcontinent	Co-PI Dr. Swagata Payra, Asst. Prof. in Centre for Excellence in Climatology	Space Application Centre (SAC), ISRO, Govt of India	10.10.2019 No. ISRO/ RES/3/806/19-20	22. 08 Lacs	September, 2022

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs.)	Duration of the Project
3.	Lightning Impact on ozone precursors over Indian region and its implication on tropospheric ozone	PI- Dr. Swagata Payra)	MoES, Govt. of India	09.10.2017	34.64 Lacs	31.10.2020
4.	Studies of High Z impurity behavior using VUV spectral emissions from the tokamaks in IPR	PI- Dr. Anand Kumar Srivastava, Asst. Prof. Physics	BRNS, DAE, Govt. of India	23.01.2017	21 Lacs	3 Years (April 2017-March 2020) (Final review and submission is under process)
5.	AERONET campaign for dust aerosol	PI- Dr. Swagata Payra	GSFC, NASA, USA	09.11.2009 (Initially collaboration was till 2019, later extended till 2029)	A collaborative project in which test equipment is provided by the NASA	October, 2029

SECTION 3 SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses/ Webinar Conducted

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	A Webinar Presentation on Creativity in Animation by Mr. Praveen Chrispugg, Eminent Animation Artist, Chennai	Dr. Vibhuti Pandya	-	05.06.2020
2.	Webinar on Innovation for Competitive Advantage by Dr. Abhishek Mishra , Associate Professor, IIM Indore	Ms. Purvi Mathur	-	01.06.2020
3.	Short Term Training Programme (STTP) on Introduction to MATLAB & SIMULINK: A Hands-On Training Programme	Dr. Deepak Verma, Dr. P.S. Rathore , Dr. Aparajita Pandey	-	24.05.2020 - 28.05. 2020
4.	A Webinar Presentation on Script Writing for Documentary Films by Mr. Chandra Shekher, Eminent Documentary Film Maker, Education & Media Consultant, New Delhi.	Dr. Vibhuti Pandya	BIT Jaipur Campus	23.05 2020

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
5.	Webinar on review based or software based project preparation	Dr. Deepak Verma Dr. P.S. Rathore Dr. Aparajita Pandey	-	05.05. 2020
6.	Emerging Trends In A.I by Mr. Sanjay Sinha - Director - XVidia Technologies	Dr. Alok Pandey	-	18 .04.2020
7.	Entrepreneurship Awareness Camp	Dr. Abinash Pankaj	Dept. of Science & Technology, Govt of India	05.02.2020 to 07.02.2020
8.	Animation Film Making Workshop taken by invited Eminent Veteran Animation Film Designer- Mr. Dhimant Vyas, enlightened the animation case study	Dr. Vibhuti Pandya & Mr. Gaurav Chaudhary	Jaipur International Film Festival, India	
9.	Art Exhibition on Animation Designs conducted by Animation & Multimedia Dept. during Jaipur International Film Festival-20.	Dr. Vibhuti Pandya	Jaipur International Film Festival, India	17.01.2020 - 21.01.2020
10.	Entrepreneurship Awareness Camp	Dr. Abinash Pankaj	Dept. of Science & Technology, Govt of India	15.01.2020 to 17.01.2020
11.	Art Exhibition on Animation & Multimedia Designs conducted by Animation & Multimedia Dept. during Kala Mela-20 organized by Lalit Kala Academy at Jawahar Kala Kendra, Jaipur	Mr. Gaurav Chaudhary & Mr. Gautam Goswami	BIT Jaipur Campus	03.01.2020 - 07.01. 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. Priyanshu Sharma	Outcome Based Education and Online Learning Teaching	NA	Birla Institute of Technology, Mesra	Online	29.6.2020 - 03.7.2020
2.	Dr. Aparajita Pandey	Blockchain and Machine Learning	IBM & AICTE	Gurukul Kangri Vishwavidyalaya	Online	29.06.2020 - 03.07.2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
3.	Mrs. Jyoti Sharma	Online course on Introduction to Programming with MATLAB	Coursera, Vanderbilt University	Coursera, Vanderbilt University	Online	23.06.2020 - 03.07.2020
4.	Mrs. Jyoti Sharma, Mr. Gaurav Jain	One week FDP on Tools and Techniques for Research in Engineering & Management	VGU, Jaipur	VGU, Jaipur	Online	23.06.2020 - 27.06.2020
5.	Dr. Alok Pandey	IoT Wireless & Cloud Computing Emerging Technologies	Yonsei University	Coursera	Online	19.06.2020
6.	Dr. Vivek Gaur	One week Faculty Development Programme on Deep Learning and its Applications	Ministry of Electronics and Information Technology (MeitY), Govt. of India)	Electronics & ICT Academies, NIT Patna	NIT Patna Online Mode	17.06.2020 - 22.06.2020
7.	Dr. R. K. Gothwal	Pandemic v/s Academic	-	Samnvya: The Information Management System and Right Solution Consultancy, Jaipur	Online	17.06.2020
8.	Dr. Priyanshu Sharma	Data Analysis for Research in Social Science	-	Ministry of HRD-PMMMNM on Teachers and Training and Ramanujan College, University of Delhi	Online	17.06.2020 - 30. 6.2020
9.	Dr. Kusum Lata Mishra	Rebooting the economy through industry: (From BC before corona to AC after corona) Challenges and opportunities	-	ICFAI University Jaipur	Online	16.06.2020
10.	Mrs. Jyoti Sharma	Effective Research Manuscript Writing	Manipal University, Jaipur	Manipal University, Jaipur	Online	16.06.2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
11.	Dr. Alok Pandey	FDP on Internet Of Things and Its Applications In Industry	DY Patil University	RAIT Mumbai	Online	08.06.2020 - 12.06.2020
12.	Dr. Dheeraj Bhardwaj & Ms Jyoti Sharma	Webinar on the Art and Challenges of Writing Papers for IEEE Transactions	IEEE Bangalore	IEEE Bangalore	Online	08.06.2020
13.	Mrs. Jyoti Sharma	Endofullerenes: Nano-scale test tubes for single molecules and atoms	MHRD	The National Academy of Sciences, India (NASI) – Delhi Chapter & MHRD-Institution Innovation Council (IIC) Deen Dayal Upadhyaya College Chapter	Online	08.06.2020
14.	Mrs. Jyoti Sharma	Recend Trends & Challenges in VLSI Design Techniques	Poornima College of Engineering, Jaipur	Poornima College of Engineering, Jaipur	Online	08.06.2020
15.	Dr. Aparajita Pandey	IoT and its application in Industry	B &R Automation (Member of ABB)	DY Patil University, Pune	Online	08.06.2020 - 12.06.2020
16.	Dr. Alok Pandey	Introduction to Internet of Things and Embedded Systems	University of California - Irvin	Coursera	Online	06.06.2020
17.	Mrs. Jyoti Sharma	Education for Gen Z	Manipal University, Jaipur	Manipal University, Jaipur	Online	06.06.2020
18.	Dr. Kusum Lata Mishra	Use of digital technology in finance	-	BIT Noida Campus	Online	06.06.2020
19.	Dr. Jyoti Kumar Chandel	International Webinar entitled"Context-Based Pedagogy and Assessment in Higher Education"	-	Central University of Haryana, Mahendergarh, India	Online	03.06.2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
20.	Mrs. Jyoti Sharma	FOSS TCAD/EDA tools for Compact/ SPICE Modelling	IEEE Electron Device Society (EDS)	Department of Electronic Science, University of Delhi South Campus, New Delhi, India	Online	03.06.2020
21.	Dr. R. K. Gothwal	Innovation for Competitive Advantage	BIT, Mesra	-	Online	01.06.2020
22.	Dr. Deepak Verma	Faculty Development Programme on 'Arduino'	-	J.D College of Engineering and Management, Nagpur in collaboration with 'Spoken Tutorial, IIT Bombay	Online	01.06.2020 - 06.06.2020
23.	Dr. Dheeraj Bhardwaj	Webinar on the The New Normal in Education	Swami Keshvanand Institute of Technology jaipur	Swami Keshvanand Institute of Technology Jaipur	Online	30.05.2020
24.	Dr. R. K. Gothwal	Science Communication' and Analysis of Scientific Publications for enhanced visibility	-	Mizoram University, Aizawal under UGC-STRIDE Program	Online	29.05.2020
25.	Dr. Dheeraj Bhardwaj	Webinar on the Antenna Design through Simulation Using Tara NG 19.1	Department of Electrical and Electronics	BITS Pilani, Rajasthanin	Online	29.05.2020
26.	Dr. R. K. Gothwal	Disrupting the Solid Tumor Environment using CART T Therapies	Sartorius	Cell Press (Elsevier)	Online	28.05.2020
27.	Dr. Alok Pandey	Bits and Bytes of Computer Networking – Industry Certification	Google	Coursera	Online	27.05.2020
28.	Dr. Deepak Verma	FDP on Internet of Things (IoT)	AICTE Training And Learning (ATAL) Academy	MANIT Bhopal	Online	25.05.2020 - 29.05.2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
29.	Dr. G. P. Mishra	Coping with COVID19 on Higher Education in Global Scenario	-	Indira Gandhi National Tribal University, Amarkantak, in collaboration with Business Standard	Online	25.05.2020
30.	Dr. Aparajita Pandey	Completed certificate course on courseera Cybersecurity and the Internet of Things	BIT, Mesra	Courser.org	Online	24.05.2020 - 08.06.2020
31.	Dr. Deepak Verma	'Effective and Efficient Online Teaching in the Age of Corona, A Hands On Workshop'	Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching MHRD, Govt. of India	Teaching Learning Centre (ICT) at IIT Bombay	Virtual	23.05.2020
32.	Dr. KusumLata Mishra	Segment reporting and analysis	NA	BIT Noida Campus	Online	22.5.2020
33.	Dr. Dheeraj Bhardwaj	Webinar on the Back to Basics: Health, Happiness and Peace	Swami Keshvanand Institute of Technology Jaipur	Swami Keshvanand Institute of Technology Jaipur	Online	20.05.2020
34.	Dr. Dheeraj Bhardwaj	Webinar on the Power of Collaboration: Research, Technology and Business	Swami Keshvanand Institute of Technology Jaipur	Swami Keshvanand Institute of Technology Jaipur	Online	19.05.2020
35.	Dr. Priyanshu Sharma	Covid -19 Challenges and opportunities: Paradigm shift in various Domains of Indian Education	-	Lingya's Lalita Devi Institute of Management and Science	Online	18.05.2020 - 22.05.2020
36.	Mr. Snehanshu Shekhar	Effective and Efficient Online Teaching in the Age of Corona: A Hands-On Workshop	NMEICT	IIT, Bombay	Online	16.05.2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
37.	Dr. Jyoti Kumar Chandel	Two-Day International Webinar on "COVID-19 and Emotional Wellness"	-	Central University of Jammu	Online	15.05.2020 - 16.05.2020
38.	Dr. Deepak Verma	Motors and Motor Control Circuits (University of Colorado Boulder)	-	Courser.org (University of Colorado Boulder)	Online	13.05.2020 - 05.06.2020
39.	Dr. R. K. Gothwal	Cell & Gene Therapy	BioRad	ddPCR Pacific Virtual Symposium	Online	13.05.2020
40.	Dr. Jyoti Kumar Chandel, Dr. Kusum Lata Mishra & Dr. Priyanshu Sharma	Faculty Development Programme on R Programming	-	Organized by BIT Noida Campus in association with Spoken Tutorial Project, IIT Bombay	Online	11.5. 2020 - 15.5. 2020
41.	Dr. Jyoti Kumar Chandel	Two-Day International Webinar on "Education and Leadership During A Crisis"	NA	Central University of Jammu	Online	07.05. 2020 - 08.05. 2020
42.	Dr. R. K. Gothwal	Science Behind Pure Water	Milli-Q® Lab Water Solutions	Milli-Q® Lab Water Solutions	Webinar	07.05.2020
43.	Dr. Deepak Verma	Two-week on-line Faculty Development Program on Research Opportunities in Electrical Engineering	Technical Education Quality Improvement Program (TEQIP-III)	Department of Electrical Engineering Government College of Engineering Karad,	Online	07.05. 2020 - 16.05. 2020
44.	Dr. Roopali Sharma	Development of Executable Lesson Plan Introduction to Learning Management System by Dr. Priyank Kumar , BIT Mesra	-	BIT Mesra	Online	02.05. 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
45.	Dr. Aparajita Pandey	certificate course on courseeraElectric Power Systems from SUNY Buffalo	BIT, Mesra	BIT Mesra	Online	02.04.2020 - 19.04.2020
46.	Dr. Aparajita Pandey	Certificate course on courseera Transacting on the Blockchain from Instead Business School	BIT, Mesra	BIT Mesra	Online	15.04.2020 - 23.05.2020
47.	Dr. R. K. Gothwal	Workshop on GM Technology	DST, Rajasthan	BISR, Jaipur	BISR, Jaipur	26.02.2020
48.	Mrs. Purvi Mathur	Workshop: Data Analysis Using SPSS & EViews	-	Centre for Research Innovation and Training (CRIT)	IIS (Deemed to be University), Jaipur (Raj)	24.02.2020 - 29.02.2020
49.	Dr. Anand Kumar Srivastava	National Symposium for Commemorating 30-years of Aditya Tokamak	BRNS, DAE	IPR, Gandhinagar	IPR, Gandhinagar	27.01.2020
50.	Dr. Ritu Pareek	India, Asia and Australia: Oceanic Encounters and Exchanges	BIT, Jaipur Campus	Department of English, Banaras Hindu University, Varanasi.	Banaras Hindu University, Varanasi.	27.01.2020 - 29.01. 2020
51	Dr. Alok Pandey	Computer Networks and Internet Protocol FDP	Swayam	Swayam	Online	27.01.2020 - 17.04.2020
52.	Dr. Ritu Pareek	Hermeneutics Today: Negotiating Traditional Approaches across Cultures, Literatures and Languages	Self	Department of English, SKIT, Jaipur	SKIT, Jaipur	24.01.2020 - 25. 01.2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
53.	Dr. Vibhuti Pandya, Mr. Gautam Goswami, Mr. Gaurav Chaudhary, Mr. Manish Kumar, Dr. Rishika Sharma	Jaipur International Film Festival-20	JIFF India	JIFF India	Hotel Clarks Amer, Jaipur	17.01.2020 – 21.01.2020
54.	Dr. Ritu Pareek	Through a (new) Looking Glass: Challenges for Women in 21st Century	BIT, Jaipur Campus	WDC College, Delhi University	WDC College, Delhi University	09.01. 2020 - 10.01.2020
55.	Dr. Vibhuti Pandya, Mr. Gautam Goswami, Mr. Gaurav Chaudhary, Mr. Manish Kumar, Dr. Rishika Sharma	Kala Mela	Lalit Kala Academy	Lalit Kala Academy	Jawahar Kala Kendra, Jaipur	03.01.2020 - 07.01. 2020
56.	Dr. Anand Kumar Srivastava	107th Indian Science Congress	BRNS, DAE	ISCA & University of Agricultural Sciences, Bangalore	University of Agricultural Sciences, Bangalore	03.01.2020
57.	Aparajita Pandey	Internet of Things	BIT Mesra	Swayam/ NPTEL	Online	27.01.20 - 17.04.20
58.	Dr. Anand Kumar Srivastava, Dr. Ravindra Kumar	International Conference on Energy & Environment: Challenges and Opportunities for Industries	BIT Mesra	MNIT Jaipur	MNIT Jaipur	28.12.2019 - 29.12.2019
59.	G. P. Mishra	4th HR Summit	BIT Jaipur Campus	(FICCI), Rajasthan State Council	Hotel Holiday Inn	15.11.2019
60.	Dr. Anand Kumar Srivastava	12th International Conference on Plasma Science and Applications. (ICPSA 2019)	University of Lucknow	University of Lucknow	University of Lucknow	11.11.2019

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
61.	P.S Solanki	Advanced (L2) Winter School in Geospatial Technologies (Water Resources)	DST-NRDMS	Remote Sending Division, BISR Jaipur	Birla Institute of Scientific Reseach, Jaipur	4.11.2019 - 25.11.2019
62.	Dr. Vibhuti Pandya	National Contemporary Painting Camp & Art Talk 2019	Lalit Kala Academy	Lalit Kala Academy	Lalit Kala Academy, Jaipur	04.11.2019 - 07.11. 2019
63.	Dr. Ranjana Agrawal	Recent trends in environment and sustainable Development	Indian physics teachers association	Vivekanand global university And material research society of India	Vivekanand global university	17.10.1019 - 19.10. 2019
64.	Dr. Ritu Pareek	Gandhian Discourses in Humanities and Social Sciences	BIT, Jaipur Campus	Department of Humanities, MNIT Jaipur	MNIT Jaipur	02.10. 2019 - 03.10. 2019

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals :(International/National)

1. Kashinath Chandelkar and Piyush Gupta (2020). India towards Global Ranking standards: A move towards data Curation. International Journal of Innovative Technology and Exploring Engineering (IJITEE), Vol. 9 (3), pp. 504-509

2. Sarkar A., Dutta D., Chakraborty P, Dutta S. K., Majumdar S, Payra S, &Bhatla R (2020). Influence of cumulus convection and cloud microphysics parameterizations on the prediction of Western Disturbances. Meteorol Atmos Phys 132, 413–426. Indexing:-SCIe, Scopus , IF:-2.204 https://doi.org/10.1007/s00703-019-00697-2 23rd September, 2019

3. Monisha Singhal M., Chaturvedi P., Gothwal R. K., Mohan M. K. &Solanki P. S. (2020). Comparative study of synonymous codon usage in bacteria growing at extreme temperatures. International Journal of Bioinformatics Research and Applications, (In Press). DOI: 10.1504/IJBRA.2021.10022014.

4. 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. (Article in Press).

5. Kumar R., Sharma Y. C., Sagar V. V. Bhardwaj D. (2020). Characterization of Low Temperature Plasma Ion Nitriding (PIN) of Inconel 600 and 601 Alloys. Iranian Journal of Materials Science & Engineering, 17, (2). P.20-29.

6. Mishra, G. P. & Mishra, K. L. (2020). Exploration and testing of a new small business preference suggesting its futuristic venture in the Middle East region, Indian Journal of Commerce & Management Studies (ISSN: 2249-0310, EISSN: 2229-5674, Impact Factor (GIF): 0.875 DOI: 10.18843), Volume XI, Issue – 1, p. 20-31.

7. Rinkey, Piyush Gupta, Archana Bhatnagar (2019). Architecture of Modern E-learning

Education System using Cloud Computing. International Journal of Engineering and Advanced Technology, Vol. 8 (6), pp:5132-5137

8. Batra Mona, Bhatnagar Archana (2019). An Automated Tool for Inspection of Requirements Engineering Techniques, International Journal of Recent Technology and Engineering (IJRTE), Volume-8 (2S11),pp 800-807

9. Pradhan S, Gothwal R. K., Mohan M. K. & Ghosh P (2019). Evaluating bacterial cell immobilization of Brevibacillusformosus BISR-1 and Paenibacillus sp. BISR-047 with different matrices. International Journal of Engineering Research and Technology, 8(6), 1358-1363.

10. Patel S., Srivastava A. K., Chowdhuri M. B., Manchanda R., Ghosh J., Bhattacharya A., J. Raval J., Nagora U., Atrey P. K. & Tanna R. L. (2019). Study of Iron impurity behavior in the Aditya Tokamak. Nuclear Fusion (IOP Publishing),59. 086019.

11. Srivastava A. K. (2019). Selection of Dielectric Material for Producing Diffuse Dielectric Barrier Discharge Plasma at Atmospheric Pressure. Materials Today, Elsevier.18.1033-1038.

12. Dheeraj Bhardwaj, Komal Sharma, Satyarth Sharma and Anubhav Jain (2019). Dual Frequency Dual Band OM Shape Microstrip Patch Antenna for Wi-Max Applications. Ciencia e TecnicaVitivinicola journal, Vol.(34), Issue (9), p.186-194 ISSN:2416-3953

13. Dheeraj Bhardwaj, Komal Sharma and Satyarth Sharma (2019). Bandwidth Enhancement of Circular Microstrip Patch With Phi Shape Gap Coupling Slot By Varying Air Gap, Ciencia e TecnicaVitivinicola journal, Vol.(34), Issue (9). p.217-224. ISSN:2416-3953

14. Gupta P., Verma S., Bhatla R., Chandel A. S., Singh J. and Payra S. (2019). Validation of surface temperature derived from MERRA2 Reanalysis against IMD gridded data set over India. Earth Space Sci, 7(1), p.e2019EA000910. Indexing:- SCIe, Scopus, IF:- 2.15 https://doi.org/10.1029/2019EA000910 12th December, 2019

15. Yadava P. K., Soni M., Verma S., Kumar H., Sharma A. & Payra S. (2019). The major lightning regions and associated casualties over India. Nat Hazards101, 217–229. Indexing:- SCIe, Scopus , IF :- 2.427https://doi.org/10.1007/s11069-020-03870-81-1312th February, 2020.

16. Ankit Kumar, Madhavi Sinha (2019), Design and analysis of an improved AODV protocol for black hole and flooding attack in vehicular ad-hoc network (VANET).Journal of Discrete Mathematical Sciences and Cryptography, Vol. 22(4),pp453-463

17. Chaturvedi,P. Raina,V. Solanki, P.S., Saxena,V.L., (2019). In silico Prediction of Anti-plasmodial Activity of Spices: Targeting Malarial Proteases, Vol. 13(8), KC01-KC06.

18. Monisha Singhal, Pragya Chaturvedi, R.K. Gothwal, M.K. Mohan, P.S. Solanki, Comparative study of synonymous codon usage in bacteria growing at extreme temperatures, Int. J. of Bioinformatics Research and Applications, ISSN print: 1744-5485 (Accepted, In Press). DOI: 10.1504/IJBRA.2021.10022014.

19. Kumawat Dharmendra & Sharma Roopali, (2019). An Empirical Study for Sustainable Policy Intervention in Urban Drinking Water Supply Management using Performance Indicators, International Journal of Business Continuity and Risk Management, Vol.9 (No. 4), p. 362-384. Scopus Indexed.

20. Kumar S., Chaudhuri, S. & Sharma, P. (2019). Income Diversification and its Impact on Profitability of Banks, International Journal of Recent Technology and Engineering (IJRTE), Vol-12(4), p. 11575 -11585. ISSN: 2277-3878. Scopus Indexed.

4.2 Publications in Proceedings:

1. Anushree Mathur, Mrinalini Kumawat, Jyoti Sharma and Avireni Srinivasulu, (2020) A Schmitt Trigger by means of a Voltage Differencing Transconductance Amplifier, Lecture Notes in Electrincal Engineering (LNEE) Book Series Springer, VOl. 693, (SCOPUS Indexed), ISBN 978-981-15-7675-1

2. Jyoti Sharma, Ritambra Parashar and Avireni Srinivasulu, (2020) A.Novel CNFET Based CCCDTA and Its Application as a Schmitt Trigger", Lecture Notes in Electrical Engineering (LNEE) Book Series Springer, (SCOPUS Indexed),ISBN 978-981-15-7675-1

3. Kumar, R. Sharma, Y. C. Sagar, V. V. and Bhardwaj, D. (2019). Wear Behavior of Plasma Nitride Inconel 690 Alloy. AIP Conference proceeding, 2115, 030282, p (1-4). 20531591

4.3 Chapter(s) in Edited Book

1. 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 oil crops. (Ed.) J White, A Kumar and S Droby. In: Microbiome stimulants for crops: Mechanisms and Applications, Elsevier (In Press).

2. 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 pulses. (Ed.) S Droby and A. Kumar. In: Food security and plant disease management, First-Edition, Elsevier (In Press).

3. 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 Vol. 1, Elsevier (In Press).

4. Trivedi P C, Gothwal R K and Nehra S (2020). Biodiversity in human welfare. (Ed.) A. Kateja and R Jain. In: Urban growth and environmental issues in India, Springer Nature (In Press).

5. Nehra S., Gothwal R. K., Varshney A. K., Meena P., Ghosh P. and Trivedi P. C. (2020). Capparis decidua (Forssk.) Edgew (Syn.: Capparis aphyllaRoth) (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. Mishra, G.P. & Mishra, K.L.(2020). Sustainable Entrepreneurship in India. Dr. K.C. Biswal (Ed.), Understanding an entrepreneurial option and a preferred choice of micro-entrepreneurs as a start-up- An exploratory study, (pp- 207-222). Publisher Research Forum, ISBN No-978-81-937493-8-8

7. Chandel, J. K., & Sharma, P. (2020). Cultural Heritage and Tourism Development : A Case Study of Rajasthan. In A. dos S. Queirós (Ed.), Examining a New Paradigm of Heritage With Philosophy, Economy, and Education (pp. 194–204). IGI Global. https://doi.org/10.4018/978-1-7998-3636-0.ch.14

8. Gupta, A., Dhyani, P., Rishi, O.P., and Pathak, V.,(2019) A Framework for e-Governance Using Federation of Cloud, in Proceedings of Smart Systems and IoT: Innovations in Computing, Springer Nature Singapore Pte Ltd.

9. Upadhyayula R.S., Solanki P.S., Suravajhala P., Medicherla K.M. (2019) Bioinformatics Tools for Microbial Diversity Analysis. In: Satyanarayana T., Johri B., Das S. (eds) Microbial Diversity in Ecosystem Sustainability and Biotechnological Applications. Springer Nature, Singapore ISBN 978-981-13-8314-4 , pp 23-47, DOI https://doi.org/10.1007/978-981-13-8315-1_2

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. Abhinav Dinesh	Nominated as Project reviewer in Regional Academic Centre for Space (RAC-S)	A joint initiative of ISRO, Bangalore & Malaviya National Institute of Technology, Jaipur	National Level	October 2019

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.	Webinar on Plagiarism and Reference Management	-	Dr. J.K. Chandel	29.05.2020
2.	Cultural Fest (Vibrations)	1. Aditya Sharma, BE-ECE VIII Sem 2. Archie Gupta, BE-ECE VIII Sem 3. Megha Singh, BE-CSE VIII Sem 4. Manthan Sharma, BE-EEE VIII Sem 5. Utkarsh Mishra, BE-ECE VIII Sem		12.02.2020-14 .02.2020
3.	Invited talk & Interactive Session by Mr Lakshay Gupta on Career Prospects in Electrical Engg. Domain, Prominent alumni of BIT Jaipur Campus EEE 2016 batch (secured all India rank of 105 in GATE 2017)	-	Dr. Aparajita Pandey	07.02.2020
4.	IETE Student Day	Priya Lalwani BE, VI Sem	Mr. Snehanshu Shekhar	04.02.2020
5.	Smart India Hackthon (SIH-2020) by Ministry of HRD, Govt. of India.	Pravar Jain, BE, VI Sem	Mr. Gaurav Jain	03.02.2020
6.	Industrial tour to Barefoot Technical Institution, Tilonia, for pre final year students of B.Tech - EEE	-	Dr. P S Rathore Dr. Deepak Verma Dr. Aparajita Pandey	31.01.2020

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
7.	Sports Fest (Cavorts)	1. Arun Brijwasi , MCA II Sem 2. Gaurav Kumar , MCA II Sem 3. Anand Kumar Jha B.E. ECE VII Sem 4. Vidya Singh B.E- ECE VII Sem 5. Keshav Mimani , B.E EEE VII Sem 6. Lokesh Naga, BCA VI Sem	Mr. Vikas Sangwan	22.01.2020-24.01. 2020
8.	Invited Talk & Interactive session on the theme of Art of Mind Control : A way to be focused, happy and Competitive. The session was taken by Mr. Narhari Das of Akshay Patra Foundation		Dr. Ritu Pareek	13.01.2020
9.	Educational Trip to Visit Art & Heritage Monuments in Jaisalmer District For Animation & Multimedia Students	Miss Ashi Jain, B.Sc. Animation & Multimedia	Mr. Gautam Goswami	15.11.2019 - 17.11.2019
10.	Blood Donation Camp at Institute in collaboration of HDFC Bank, Lions Club, SDM Hospital and Pathology Society of Rajasthan	1. Arun Brijwasi, MCA III Sem 2. Pranjal Gupta, BE-EEE , V Sem 3. Priya Lalwani, BE-ECE , V Sem 4. Mehul Gupta, BE-CSE , V Sem 5. Mohak Laddha BCA V Sem	Dr. Gurminder Singh	11.11. 2019
12.	Interactive Session with Management students by Mr. Puneet Maheshwari Founding Partner & Chief Facilator, Business Learning on learning through management games	-	Dr. Roopali Sharma	07.11.2019

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
13.	TechVibes'19 (Annual Techno-management Fest)	1. Raghav Pareek , BE ECE VII Sem 2. Daksha Govil, BE ECE VII Sem 3. Abhijeet Mohapatra, BE CSE VII Sem 4. Sahil Bhatia, BE- ECE VII Sem 5. Harshit Khandelwal BCA V Sem 6. Shreyansh Jain BCA V Sem 7. Bhagyashree Sharma BAM III Sem 8. Prateek Rohera BBA V Sem	Dr. V. Pathak	05.11.2019 to - 06.11.2019
14.	Invited Talk & Interactive session on the topic of Secrets of Financial Awareness by Ms. Neha Shrimali , Director Parth Excellence , under the initiative taken by SEBI.		Dr. Shripal Vijayvargiya	30.08.2019
15.	Interactive Session by Ms. Golda Malhotra , representative of France embassy in India on topic of Prospects of higher Studies in France		Dr. Anand Shrivastava	05.08.2019
16.	Yoga Sessions by expert Yoga Scholar Ms. Sangeeta Jangid under student Induction programme	-	Dr. Dheeraj Bhardwaj	30.07.2019 to 28.08.2019
17.	Student Induction Programme-2019	-	Dr. Dheeraj Bhardwaj & Mr. Puneet Sharma	29.07.2019 - 28.08.2019
18.	Invited talk & Interactive session on topic of Importance of Performing Arts in Personality & Career Development by Dr. Shiva Vyas , Eminent Sitar Artist & Associate Professor in Music at Rajasthan Sangeet Sansthan, Jaipur	-	Dr. Anand Shrivastava	24.07.2019

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
19.	Invited talk & Interactive session on topic of Concerned & Effective Communication by Dr. Anju Dave , Creative Director, Try for Good , Jaipur	-	Dr. Anand Shrivastava	18.07.2019

6.2. List of Faculties

Sr. No.	Name	Designation
1.	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. Archana Bhatnagar	Assistant Professor	No
10.	Mr. Subhash Gupta	Assistant Professor	No
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
16.	Mr. Khalid Ashraf	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

Sr. No.	Name	Designation	TEQIP Sponsored
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.	Dr. Sandip Kumar Sengupta	Assistant Professor	No
6.	Mrs. Pankaj Sharma	Assistant Professor	No
7.	Dr. J.K Chandel	Assistant Professor	No
8.	Dr. Priyanshu Sharma	Associate Lecturer	No
9.	Mrs. Purvi Mathur	Associate Lecturer	No
10.	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
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

Sr. No.	Name	Designation	TEQIP Sponsored
3.	Dr. R. K. Gothwal	Asst. Professor (Presently Deputed to BISR, Jaipur)	
Department of Environmental Science			
1.	Mrs. Nidhi Singh	Associate Lecturer	

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Vibhuti Pandya	Internal Member, BOS for Department of Animation & Multimedia for B.Sc. & M.Sc. Animation Design Programme	Internal
2.	Mr. Gautam Goswami	Internal Member, BOS for Department of Animation & Multimedia for B.Sc. & M.Sc. Animation Design Programme	Internal
3.	Mr. Ankur Agarwal	Internal Member of BOS from Department of Electronics and Communication for B.E. and B.Tech. Programme	Internal

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.	Anmol Deep, (M.Sc. Animation Design Programme- 2018-2020)	Self	Unfold Craft	This start-up deals with animation content, Infographics, short films, documentary, biography, short videos etc. For more information log on www.unfoldcraft.com

7.2 Publication by students, if any

1. **Anushree Mathur, Mrinalini Kumawat,** Jyoti Sharma and Avireni Srinivasulu, A Schmitt Trigger by means of a Voltage Differencing Transconductance Amplifier", Lecture Notes in Electrical Engineering (LNEE) Book Series Springer, VOl. 693, 2020 (SCOPUS Indexed), ISBN 978-981-15-7675-1.

2. **S Haritashya,** M Soni, D Prakash, S Verma and Swagata Payra, Oral presentation, Inferring Aerosol types from AERONET Sunphotometer measurement over Northwestern India, National conference on Pollution Control Technologies and Sustainable Development, 3rd to 4th October, 2019, MNIT Jaipur, Rajasthan, India

3. **Keshav Gupta, Monika Sharma** and Deepak Verma (2020), "Design and Fabrication of Two Stage 2 KVA Inverter using Push-Pull Topology," International Conference on Communication and Signal Processing (ICCSP), Chennai, India, 2020, pp. 1027-1031, ISBN: 978-1-7281-4988-2, doi: 10.1109/ICCSP48568.2020.9182234.

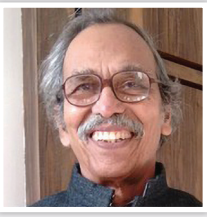
7.3 Achievements of Students

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1.	Mr. Nirmt Parnami Mr. Harsh Khatod Mr. Aditya Roshan (BE students team)	Won the NEI Idea Factory Contest 2019-20 and got a cash prize amount of Rs 1.5 lakh.	National Engineering Industries Ltd., a C. K. Birla Group Company	12.03.2020, NBC, Khatipura Jaipur
2.	Ms. Elvira Mishra (B.Sc Animation Student)	Ist Prize in Creative Writing Competition "PENTASTIC" during National Youth Festival-MOOD INDIGO-19	IIT Bombay	26.12.2019 - 29.12.19
3.	Mr. Sudhir Sharma (BE Student)	2nd position in software and hardware models/papers presentation in the 5th International Conference on Microelectronics Computing & Communication System (MCCS-2019)	Indian Society for VLSI Education (ISVE) & IETE Ranchi Centre	9.11.2019-10.11.2019 Indian Society for VLSI Education (ISVE) & IETE Ranchi Centre
4.	Mr. Navneet and Ms. Shivangi (BE Students)	Awarded the 1st prize for presentation in IETE Foundation Day Presentation	IETE, IETE Bhawan, Jaipur.	02.11.2019 in IETE Bhawan, Jaipur.
5.	Mr. A Gowtham Kumar (B. Tech student)	Won 3rd position in India Innovation Series hackathon	Incubate Ind and Arya College of Engineering and IT, Jaipur	28.09.2019-29.09.2019 Arya College of Engineering and IT, Jaipur,
6.	Mr. Chandan Singh (B.Sc Animation Student)	Runner up in SSFF (Student short film festival 2020) Organized by IDC, IIT BOMBAY. Out of 95 films only two films were nominated in the live action film category.	IIT Bombay	06.01. 2019 IIT BOMBAY

7.4 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No.	Name of Visitor with Affiliation	Date of Visit & Purpose	Picture
1.	**Ms. Kiran Soni Gupta**, IAS, Director General, Jawahar Kala Kendra (Govt. of Rajasthan Performing & Fine Arts Centre). A multitalented persona, an Alumnus of Harvard University, USA, a prolific Artist, writer, curator & photographer	Chief Guest in the inaugural function of the Cultural Fest –Vibrations 2020 February 12, 2020	

Sr. No.	Name of Visitor with Affiliation	Date of Visit & Purpose	Picture
2.	**Mr. Suresh Chouhan** An Eminent Technocrat & Director–Technical Rajasthan Electricity Board	Chief Guest in the inaugural function of the Techno-Management Fest – TechVibes 2019 November 05, 2019	
3.	**Mr. J. K. Baid** Distinguished Entrepreneur & Chairman–Baid Group of Industries, Jaipur	Guest of Honour in the inaugural function of the Techno-Management Fest – Techvibes 2019 November 05, 2019	
4.	**Prof. Sudesh Batra** Eminent Scholar of Hindi Literature. Formerly, Head – Hindi Department , University of Rajasthan, Jaipur	Invited Speaker in Induction Programme for new students August 2, 2019	
5.	**Dr. Sandeep Nijhawan** Renowned Medical Science Expert & Researcher, Alumnus of AIIMS, Delhi Senior Professor, S.M.S. Medical College Jaipur	Invited Speaker in Induction Programme for new students (Engineering Courses) August 01, 2019	
6.	**Dr. Shiv Gautam** An Internationally renowned expert in the area of Human Psychology and Behavioral Science Formerly, Additional Principal, Sr. Professor, Deptt. of Psychiatry, S. M. S. Medical College, Jaipur	Invited Speaker in Induction Programme for new students (Engineering Courses) July 29, 2019	
7.	**Mr. Gunjan Saxena, ITS** An Eminent Technocrat & Principal General Manager, BSNL	Invited Speaker in Induction Programme for new students (Engineering Courses) July 29, 2019	
8.	**Ms. Manisha Gulyani** An internationally acclaimed Kathak classical dance Artist. Empanelled in ICCR to represent Kathak in India & abroad. Recipient of Natya Sri & Woman Achiever award from Govt of India	Invited session in Induction Programme for new students (Engineering Courses) July 29, 2019	

Sr. No.	Name of Visitor with Affiliation	Date of Visit & Purpose	Picture
9.	**Dr. Deepak Saxena** Director, Student Advisory Bureau, University of Rajasthan	Invited session in Induction Programme for new students July 19, 2019	
10.	**Mr. Akhilesh Sharma** A Distinguished Technocrat & CEO & President A3Logics Pvt. Ttd. Jaipur	Invited Speaker in Induction Programme for new students (Non Engineering Courses) July 16, 2019	
11.	**Mr. Ramesh Chandra Maheshwari** A distinguished HR Professional, an Alumnus of Tata Institute of Social Sciences Formerly, he was Chief People Officer Aditya Birla Group	Invited Speaker in Induction Programme for new students July 16, 2019	
12.	**Prof. Bhawani Shanker Sharma** A distinguished artist in fine arts and painting with worldwide fame to his credit. Formerly, Dean Faculty of Fine Arts, Banasthali Vidyapeeth	Invited Speaker in Induction Programme for new students (Non Engineering Courses) July 16, 2019	

7.5 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	**Dr. Gaurangi Gupta** BE-ECE, 2008-2012, Ranked among top 10 students in the batch in BIT Mesra Working as Senior Research Associate at IIT Kanpur	Secured 99.8 percentile in GATE 2012 M.Tech from IIT Kanpur (2014)- 2nd Rank in the Specialization, Received Dr Shankar Dayal Sharma award for overall best performance in whole M.Tech/Ph D 2014 batch Ph.D from IIT Kanpur (2020) – Published 16 papers in reputed International Journal & Conferences Awarded Indo-US Fellowship in STEMM overseas women internship programme 2018 Awarded Franco Bandille Best Student Paper award at 2017 IEEE international conference on Antenna Innovations & Modern Technologies
2.	**Mr. Shivam Agrawal** BE-EEE, 2010-2014 Working as Manager in Hindustan Unilever Ltd	Secured All India GATE Rank 175, Selected in reputed PSU Indian Oil Corp Ltd. Later did MBA from reputed NITIE Mumbai and got selected in HUL

Sr. No.	Name, Batch and Affiliation	Short Description
3.	**Ms. Shreyata Sharma** BE-ECE, 2010-2014, Ranked among top 10 students in the batch in BIT Mesra Working as Staff Engineer at R&D Centre of Sandisk (Western Digital, USA) at Bangalore	M.Tech from IIIT Delhi (2016), Ranked among top 10 students in the Batch. Published 6 research papers in reputed International Journals & Conference, including a paper presented in prestigious IEEE- 27th Asia Pacific Microwave Conference (APMC), held at Nanjing, China in 2015. At Sandisk R&D Centre, working on advance technologies related to ASIC Development Engineering (VLSI domain). In short tenure of 4 years , emerged as an outstanding performer with awarded one platinum, two gold, two silver and one bronze awards for effective completion of unconventional tasks and improving Sign-off quality.
4.	**Ms. Namrata Jain** BE-CSE, 2014-2018, Ranked among top 10 students in the batch in BIT Mesra) Working as Software Engineer in Microsoft R&D Centre in India	Secured All India GATE Rank 94 (Computer Science stream), Selected in IIT Delhi for M.Tech Programme Did M.Tech from IIT Delhi (2020) with 9.36 CGPA Selected by Microsoft for their R&D Centre in India in high salary package bracket for key R&D profile
5.	**Ms. Sonam Shekhawat** B.Sc. Animation & Multimedia, 2007-2010 Batch Presently working as an independent animation film Developer	Sonam Shekhawat is now a well known Animation Film Writer & Producer. She is specialized in Animation story writing & editing; Animated TV Content Development, Cartoon making, Brand Backstory, Character Development & Lyrics writing. In her outstanding art career, she worked for Dreamworks TV Production, USA and animated television series like Little Singham, Chhota Bheem, Mighty Raju, All Hail King Julien, Luv-Kushh, Shaktimaan Animated, Arjun, Bandbudh & Budbak, LifeHacks for kids, Edo, etc

7.6 Any other relevant information

1. Dr. Abhinav Dinesh, Invited talk and interview session on All India Radio (Akashwani) on 16th April 2020 on the topic of Technical , Academic & Social aspects of online classes during Covid 19 Pandemic related conditions
2. Dr. Dheeraj Bhardwaj, Department of Physics,Chaired a Session in the International Conferenc "Advancements in Nano-electronics and Communication Technologies" (ICANCT-2020) on 17.01.2020 at SKIT Jagatpura.
3. Dr. Dheeraj Bhardwaj, Department of Physics, reviewed research paper submitted in DRDO Journal (SCI Indexed) in January 2020
4. Dr. Anand Kumar Srivastava, Department of Physics delivered an invited talk entitled "Atmospheric Pressure Cold Plasma Sources for Biomedical Applications" at 12th International Conference on Plasma Science and Applications (ICPSA-2019), University of Lucknow, 11-14 November 2019.
5. Dr. R. K. Gothwal Chaired a Session in the Conference on Biodiversity Conservation for a sustainable Future IIS University, Jaipur, National Conference, October 11-12, 2019
6. Mr. Prashant Singh Rathore, Assistant Professor EEE was awarded Ph D. degree in June 2020
7. Mr. Gaurav Jain, Assistant Professor ECE selected in Ph.D. Program at MNIT, Jaipur under Visvesvaraya PhD Scheme by Ministry of Electronics and Information Technology, Government of India.

OFF-CAMPUS : LALPUR

SECTION 1 CAMPUS PROFILE





1.1 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.	Abhaya Ranjan Srivastava	FDP on "Outcome Based Education & Online Learning Teaching"	BIT Mesra	BIT Mesra	Online	June 29 - July 3, 2020
2.	Abhaya Ranjan Srivastava	FDP organized by on "Mentoring & Facilitation Skills for Institutional Members"	MGNCRE	NSS	Online	May 27-31, 2020
3.	Dr. Sandeep Nath Sahdeo	FDP on Mentoring and facilitation skill for institutional mentors.	Pandit Madan Mohan Malaviya National Mission on teachers and training.	Faculty Development Centre, Mahatma Gandhi National council of rural education	On-line	27-5-2020 to 31-5-2020 (5 days)

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
4.	Dr. Sandeep Nath Sahdeo	Impct of covid-19 on HR Strategies and Industrial Relation Practices.	Amity university	Amity university	On-line	11/6/2020
5.	Dr. Mili Dutta	Managing Online classes and co-creating MOOC:2.0	MHRD Pandit Madan Mohan Malviya National Mission on Teachers and Teaching	Teaching Learning Centre, Ramanujan College, University of Delhi	On-line	18th May-June03, 2020
6.	Dr. Mili Dutta	Open Source Tools for Research	MHRD Pandit Madan Mohan Malviya National Mission on Teachers and Teaching	Teaching Learning Centre, Ramanujan College, University of Delhi	On-line	08-june14, 2020
7.	Dr. Mili Dutta	Community University Engagement: Moving Towards engaged Teaching, Research and service	PRIA International Academy	Association of Indian Universities	Community University Engagement: Moving Towards engaged Teaching, Research and service	18-25 May, 2020
8.	Dr. Satrajeet Choudhury	Psychometric and scale development in social sciences	Self Funded	Sharda University, Greater Noida, U.P in collaboration with Indian Institute of Management, Ahmedabad, Gujrat	Online	29/6/2020 – 3/7/2020
9.	Dr. Sanjay Kumar	Faculty Development Program forStudent Induction (FDP-SI)	AICTE	AICTE	Birla Institue of Technology, Mesra, Ranchi.	13.12.2019 to 15.12.2019

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
10.	Dr. Sanjay Kumar	WEBINAR on – Development of Executable Lession Plan and Introduction to Learning Management System.	Birla Institue of Technology, Mesra, Ranchi.	Birla Institue of Technology, Mesra, Ranchi.	Birla Institue of Technology, Mesra, Ranchi.	02.05.2020
11.	Dr. Sanjay Kumar	WEBINAR on- IMPACT OF COVID-19 ON MENTAL HEALTH AND WELL BEING	Birla Institue of Technology, Mesra, Ranchi.	Birla Institue of Technology, Mesra, Ranchi.	Birla Institue of Technology, Mesra, Ranchi.	08.08.2020
12.	Dr. Sanjay Kumar	Digital Symposium on AI for India.			Jio Institute	26.08.2020 to 28.08.2020

SECTION 3 RESEARCH PUBLICATIONS

3.1 Publications in Journals : (International/National)

1. Sinha, S., Ghosh, P., & Mishra, A. (2019). Employability of fresh engineering graduates in India. Education+ Training ,Vol.62 No.1,pp.47-63
2. http://doi.org/10.1108/ET-12-2018-0265
3. Sinha.K, Sahdeo. S.N(2020), "Advertising as a tool to create Awareness for curbing HIV/AIDS outbreak among inland migrating Indian labourers", Test engineering and management, ISSN-01934120, Vol-83, March-April2020, Page No-6629-6645.
4. Sinha K., Sahdeo. S.N (2020) "GPS technology for finding suitable place for water harvesting" ,International journal of innovative technology and exploring engineering ISSN No-22783075, Vol-9,issue-2 December 2019 ,Page No-4481-4486.
5. K., & Mandal, R. K. (2020). A Theme of Smart Cities Based on IOT, Fuzzy Logic and Quantum-Deep Learning Technique. International Journal of Intelligent Systems and Applications in Engineering, 8(1), 21-27.
6. Kumar, S.B., & Dwivedi ,R.K.(2020). Secured Cloud system using Deep Learning in Computational Intelligence in pattern Recognition(pp.503-510). Springer ,Singapore.
7. Goswami, S., & Mukherjee, K. (2020). High Performance Fault Tolerant Resource Scheduling in Computational Grid Environment. International Journal of Web-Based Learning and Teaching Technologies (IJWLTT), 15(1), 73-87.
8. Bhattacharya, A., Goswami, R. T., & Mukherjee, K. (2019). A feature selection technique based on rough set and improvised PSO algorithm (PSORS-FS) for permission based detection of Android malwares. International Journal of Machine Learning and Cybernetics, 10(7), 1893-1907.
9. Kumar R., Bishnu, P S (2019), " Identification of k-Most Promising Features to Set Blue Ocean Strategy in Decision Making", Data Sci. Eng. 4(4): 367-384

10. Shukla A., and Kanungo S. (2020), An Efficient Clustering Based Segmentation Approach for Biometric Image. Recent Advances in Computer Science and Communications, Vol(13), 10. 2174/2666255813666200219153105

11. Shukla A., and Kanungo S. (2020), A Novel Hybrid Metaheuristic Approach to Perceive the Gender Based Identification System. Recent Advances in Computer Science and Communications, Vol(13), https://doi.org/10.2174/0929866527666200224112331

3.2 Publications in Proceedings: (International/National) with ISBN numbers only

1. Kumari P., Dutta M.," Employer Branding and its Role in Effective Recruitment", Seventeenth AIMS International Conference organized at IIM Kozhikode, ISBN: 978-1-943295-14-2 http://www.aims-international.org/aims17/17ACD/PDF/A350-Final.pdf

SECTION 4 ACTIVITIES/ FACULTY MEMBERS / BOS /DAS

4.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
1.	Tressure Hunt (CULRAV)	• Yogesh Rajak • Yogita Choudhury	Dr. Ashutosh Mishra Dr. S A Haider	16.09.2019
2.	Code Hunt	Aman Raj	Dr. S A Haider	28.09.2019
3.	Newsroom	Rajshekhar Haldar	Dr. S A Haider	28.09.2019
4.	Artistique	Kaustav Banerjee	Dr. S A Haider	28.09.2019
5.	Talk fest	Aditi, sumedha	Dr. Soumitro Chakraborty	19 oct 2019
6.	Rangoli competition		Dr. Soumitro Chakraborty	19 oct 2019
7.	Dearself (Shayari/poetry competition)			10/10/2019-14/10/ 2019
8.	1.Bet or Debt 2.PUBG 3.Talent Hunt 4.Filler Games	• Yogesh Rajak • Yogita Chaudhary	Dr. Ashutosh Mishra, Dr. S A Haider	16.11.2019
9.	ONLINE EVENTS – 1.Hometown Pride 2.Thrash The dark	• Yogesh Rajak • Yogita Chaudhary	Dr. Ashutosh Mishra, Dr. S A Haider	16.11.2019
10.	Debate- Vaad Vivaad	Diksha Chawla (President)	Dr. Mili Dutta	16.11.2019/90 mins
11.	Doodling and calligraphy-Harkaara	Diksha Chawla (President)	Dr. Mili Dutta	16.11.2019/90 mins
12.	DebWood- Treasure Hunt(in 3 rounds)	Diksha Chawla (President)	Dr. Mili Dutta	16.11.2019/120 mins
13.	Swachchhata Pakhwaada (Clean institution mission) by NSS Volunteers	Utsav, Nidhi, Namita		08.2019
14.	Independence Day Celebrations (Nukkad Natak, Speech & Patriotic Song) by NSS Volunteers	Abhishek, Utsav, Nidhi		15.08.2019

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
15.	Teacher's Day Celebrations by NSS Volunteers	Utsav, Namita, Abhishek, Aditya	Dr. Abhaya Ranjan Srivastava Dr. S N Sahdeo	05.09.2019
16.	NSS Foundation Day (Plantation at BIT Lalpur)	Abhishek, Utsav, Nidhi, Namita and Aditya	Dr.A R Srivastava Dr. S N Sahdeo Dr. P Munda Prof. Anupama Sahai	24.09.2019
17.	Visit to orphanage (Aanchal Shishu Ashram) by NSS Volunteers	Abhishek, Utsav, Nidhi, Namita,Aditya, Manisha and Anushka	Dr. Abhaya Ranjan Srivastava	28.09.2019
18.	Speech competition on "The relevance of thoughts of Mahatma Gandhi in present scenario"by NSS Volunteers	Abhishek, Utsav, Namita,Aditya	Dr. A R Srivastava Dr. S N Sahdeo Dr. P Munda	01.10.2019
19.	Cloth Distribution at Johar Dhaba in Chutu village of Chutu Panchayat, Ranchi by NSS Volunteers	Abhishek, Utsav, Nidhi,Aditya	Dr. A R Srivastava Dr. P Munda	26.10.2019
20.	Satarkta Jagrukta Week by NSS Volunteers at CCL Ranchi	Utsav, Shreya, Swati	Dr. S N Sahdeo	28.10.2019 to 02.11.2019
21.	Cloth Distribution by NSS Volunteers at Ranchi Railway Station	Utsav, Aditya, Namita		18.01.2020
22.	Republic Day Celebrations by NSS Volunteers (Nukkad Natak, Speech & Patriotic Song)	Shivam, Priyam, Utsav, Tanya, Aparna	Dr. A R Srivastava Dr. S N Sahdeo	26.01.2020

4.2. List of Faculties

Sr. No.	Name	Designation
1.	Dr. A.N. Jha	Professor
2.	Dr. (Mrs.) Amrita Priyam	Associate Professor
3.	Dr. (Mrs.) Srabani Mukhopadhyaya	Associate Professor
4.	Mrs. Onima Tigga	Assistant Professor
5.	Dr. Pranab Kumar	Associate Professor
6.	Dr. Arun Kumar Singh	Assistant Professor
7.	Dr. Abhay Ranjan Srivastava	Assistant Professor
8.	Dr. N.K. Singh	Assistant Professor
9.	Mr. Amar Kumar	Assistant Professor
10.	Dr. Sanjay Kumar	Assistant Professor
11.	Mr. N.P. Tiwary	Assistant Professor
12.	Dr. Kuntal Mukherjee	Assistant Professor
13.	Dr. Sandeep Nath Sahdeo	Assistant Professor
14.	Ms. Anupama Sahai	Assistant Professor
15.	Dr. Parth Sarathi Bishnu	Assistant Professor

Sr. No.	Name	Designation
16.	Dr. Somnath Mukherjee	Assistant Professor
17.	Dr. Binod Kumar Sharma	Assistant Professor
18.	Dr. (Ms.) Jaya Pal	Assistant Professor
19.	Dr. Ashutosh Mishra	Assistant Professor
20.	Dr. Syed Anis Haider	Assistant Professor
21.	Dr. (Mrs.) Mili Dutta	Assistant Professor
22.	Mr. Amitabh Chandan	Assistant Professor
23.	Dr. Jaleswar Bhagat	Assistant Professor
24.	Dr. Umesh Prasad	Associate Lecturer
25.	Mr. D.K. Mishra	Associate Lecturer
26.	Dr. Soumitro Chakravorty	Assistant Professor
27.	Dr. (Mrs.) Swati Priyadarshini	Associate Lecturer
28.	Dr. Avinash Sinha	Assistant Professor
29.	Mr. Satrajeet Choudhary	Assistant Professor
30.	Dr. Pradeep Munda	Assistant Professor
31.	Dr. B.N. Sanyal	Assistant Professor
32.	Ms. Siba Mitra	Assistant Professor
33.	Dr. Tanmoy Kumar Banerjee	Assistant Professor

SECTION 5 OTHER INFORMATION

5.1 Achievements of Students

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
1.	Varsha Kumari	1st in HARKARA (Painting competition)	Debsoc	16 /11/ 2019 BIT Lalpur
2.	Anikesh	1st prize (ALEXA SMART SPEAKERS + RS.1200 CASH)	Bizwit Society	16.11.19 (BIT LALPUR)
3.	Kaustav	2nd prize (MI BAND + RS. 1000 CASH)	Bizwit Society	16.11.19 (BIT LALPUR)
4.	Priyaranjan	3rd prize (BOAT HEADPHONES + RS. 800 CASH)	Bizwit Society	16.11.19 (BIT LALPUR)
5.	Kustav Banerjee	WINNER in the event "BET OR DEBT"	Bizwit Society	16.11.2019
6.	Nishita Khalkho	Winner in the event "THRASH THE DARK"	Bizwit Society	30.01.2020
7.	Shikhar Sahai	Winner in the event "ONLINE POSTER MAKING"	NAPS	08/02/20
8.	Tulika Gupta	Winner in the event "ONLINE POSTER MAKING"	NAPS	08/02/20
9.	Kautav Banerjee	1st Runner up in the event "TALENT HUNT"	Bizwit Society	16.11.2019
10.	Priya Paul	2nd Runner up in the event "MUN"	NAPS	14.09.2019

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
11.	Akshat Ved(Debate)	1st/Cash prize & coupons	Debating Society	16.11.2019 College premises
12.	Nikhil (Debate)	2nd /Cash prize & coupons	Debating Society	16.11.2019 College premises
13.	Varsha Kumari(Doodling and calligraphy)	1st/Cash prize & coupons	Debating Society	16.11.2019 College premises
14.	Aman Akshat (Doodling and calligraphy)	2nd /Cash prize & coupons	Debating Society	16.11.2019 College premises
15.	Ankit Biswas (Treasure Hunt)	1st/Cash prize & coupons	Debating Society	16.11.2019 College premises
16.	Anusthha	2nd /Cash prize & coupons	Debating Society	16.11.2019 College premises
17.	Pratyush	3rd /Cash prize & coupons	Debating Society	16.11.2019 College premises

5.2 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Mr. Roshan Kumar HDFC Asset Management company limited	16.10.2019	
2.	Mr. Ajay Tailor, Vice President of Usha Martin Limited.	25.02.2020	

OFF CAMPUS : NOIDA

SECTION 1 CAMPUS PROFILE





1.1 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 both the hearts and 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:

1. Bachelor in Business Administration (BBA) – 3 years
2. Bachelor in Computer Applications (BCA) – 3 years

3. B.Sc. in Animation & Multimedia (BAM) - 3 years

Post Graduate Courses

1. Masters in Business Administration – 2 years
2. Masters in Computer Applications – 3 years
3. M.Tech in Computer Science – 2 years

Ph.D.

1. Management, Computer Science & Mathematics (Full Time & Part Time)

Department of Animation & Multimedia

BIT Mesra Noida campus is the pioneer and premiere Institute in offering B.Sc. Animation and Multimedia degree course and is recognised as the best Institute for Animation and Multimedia studies as per a survey by Hindustan Times. This job - oriented creative course was started in 2004 with UGC's grant for innovative course and has excellent placement record. It opens career opportunities in the fields like Visual Communication, Graphics Design, UI-UX Design, Films and Television production, 2d-3d Animation, 3d Modeling and Games Design etc. Mentoring by experienced and talented faculty about latest tools and techniques make students perform exceptionally at prestigious national and international platforms such as film-festivals, hackathons, and many competitions and exhibitions. Noida campus provide state of the art facilities like a 3D computer lab with 40 workstations loaded with latest industry standard multimedia software and tools, a 2D lab for drawing with light boxes, mannequins, skeleton, toys and line testing machine, a studio with green screen, cameras, lighting facilities and editing suites, and a production house lab for students practise sessions. Our pass-out students are heartedly welcomed at foreign universities for higher education, are holding reputed positions at reputed organisations like Microsoft, Protiviti, KPMG, Hotstar, Paytm, Zomatos, AIIMS to name a few. This year during pandemic Department organised webinars on Game Design by Sh, Rajat Ojha – CEO, Gamitronics, Unity for Game Development for students of Animation and Multimedia. Department. We also organised a Pan-India poster and essay competition on the theme of Covid-19 for school students of class X to XII and got overwhelming response. This Department is about digital art and technology and those who are passionate for digital art, it offers lots of opportunities to learn and explore through its well-structured course curriculum and pedagogy.

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 running various reputed PG & UG programmes such as 2 years M.Tech (CS), 3 years Full Time 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 have 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 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.

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	02 December, 2019	Rs 16,00,000	Two 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.	Webinar on Experiential Learning through Simulations: SIMVENTURE	Dr. Arun Mittal	NA	04.06.2020
2.	Webinar on Unity For Game Development	Dr. Niket Mehta	Zero Expanses, BIT Noida	26.05.2020
3.	Poster and Essay Competition on the theme of Covid-19	Dr. Niket Mehta, Mr. Lalit Mohan Bhatt	BIT Noida	25.05.2020
4.	Webinar on Use of Digital Technology in Finance	Dr. Abhishek Singh	NA	24.05.2020
5.	Webinar on Segment reporting and Analysis	Dr. Abhishek Singh	NA	22.05.2020
6.	Webinar on Challenges and opportunities for online education in India-Now and after covid 19	Dr. Abhishek Singh	NA	15.05.2020
7.	Faculty Development Program-A Remote Training on R Programming	Dr. Piyush Tiwari & Mr. Sanjay Kumar	NA	11.05.2020 -15.05.2020
8.	Webinar on Game Design	Dr. Niket Mehta	Zero Expanses, BIT Noida	09.05.2020

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

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Organizers	Venue	Date
1.	Sadhu Mallika, Mrinalini Mehta & Preety Bajaj	Certificate course on digital teaching Technique	ICT Academy	Online	29.06.2020-04.07.2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Organizers	Venue	Date
2.	Sanjay Kumar	Research Challenges in Computer Science & Technology	Mahatma Gandhi Central University, Motihari, Bihar	Online	18.06.2020 - 23.06.2020
3.	Preety Bajaj & Ritu Gandhi	FDP on Process Management In Problem Solving	ICT Academy	Online	03.6.2020 - 08.6.2020
4.	Dr. B. B. Sagar	FDP on IoT	JNU New Delhi	Online	31.05.2020 – 04.06.2020
5.	Dr. B. B. Sagar	FDP on Cyber Security	Dr. Hari Singh Agur University, Sagar(MP)	Online	18.05.2020 – 22.05.2020
6.	Priti Sharma, Pramila Joshi, Mrinalini Mehta, Lipika Jha, Anurag Joshi, Sheetal Sehgal, Sadhu Mallika, Muntaha Ahmad, Dr. B.B. Sagar, Dr. Meenakshi Sharma	FDP on R	BIT Noida in collaboration with IIT Mumbai	Online	11.05.2020 - 15.05.2020
7.	Sheetal Sehgal	Introduction to Python Programming	ICT Academy	Online	06.05.2020 -12.05.2020
8.	Dr. Arun Mittal	FDP on Digital Marketing	ICT Academy	Online	06.05.2020 -12.05.2020
9.	Dr. Pankaj Gupta	FDP on Moodle LMS	Sinhgad Institute of Technology, Lonavala, Pune	Online	01.05.2020 – 06.05.2020
10.	Seema Sharma	Introduction to Cloud Computing	ICT Academy	Online	30.04.2020-05.05.2020
11.	Dr. Pankaj Gupta	FDP on BOSS Linux Operating System	D. Y. Patil College of Engineering, Akurdi, Pune	Online	25.04.2020-01.05.2020
12.	Seema Sharma	Data Science with Python	ICT Academy	Online	23.04.2020-29.04.2020
13.	Dr. Pankaj Gupta	FDP on Digital Transformation in Teaching Learning Process	BIT, Mesra	Online	06.04.2020 -22.04.2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Organizers	Venue	Date
14.	Dr. Pankaj Gupta	FDP on Data Science for Web and Social Media	IIIT-Delhi	Delhi	29.02.2020 – 02.03.2020
15.	Charu Wahi	Safer Internet	FICCI Federation House, Delhi	Delhi	10.02.20
16.	Dr. Vibha Kaw & Sanjay Kumar	Faculty Development Program on Introduction to Python Programming	ICT Academy	DAV Centenary College, Faridabad, Haryana	03.02.2020 -05.02.2020
17.	Dr. Niket Mehta & Lalit Mohan Bhatt	Interactive session with HE high commissioner of Rwanda in India	PHDCCI	PHDCCI House New Delhi	11.12.2019
18.	Aroop Kerketta & Dr. Niket Mehta	ICT Academy Bridge 2019 - The Largest Industry Institute Interaction Event of ASIA	AICTE	AICTE Auditorium, New Delhi	11.12.2019
19.	Seema Sharma & Charu Wahi	Invest Digicom 2019	FICCI	India Habitat Centre, Delhi	24.09.2019
20.	Pankaj Gupta	Workshop on eSim, a First Course in the IoT Series for Teachers	Dronacharya College of Engineering, Greater Noida	Gr. Noida	21.09.2019
21.	Dr. Suparna Dutta & Dr. Niket Mehta	National Summit on Bridging Skill Gaps in Industry 4.0 at PHD Chamber of Commerce	PHDCCI	PHDCCI House, New Delhi	13.9.2019
22.	Dr. Niket Mehta	National seminar cum workshop on e-content, MOOCs (SWAYAM)	AICTE	Khalsa College, New Delhi	31.8.2019

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals

- Chakraborty N, Sharma V & Ranjan J (April 2020). A Perceptual study on Factors of Medical Data security in Indian Organisations, International Journal of Business Information Systems (IJBIS), Vol. 33, No.2, Inderscience Publishers, Geneva, Switzerland, U.K. [Scopus (Elsevier) Indexed]
- Dhir R & Sharma V (Jan 2020). Exploring dimensions of Psychological Capital through Grounded Theory Invetigations, International Journal of Indian Culture and Business Management, Vol. 20, Issue 1, pp. 109-132, Inderscience Publishers, Geneva, Switzerland, U.K. [Scopus (Elsevier) Indexed]

- Kaur S. & Sagar B. B. (2019). Brahmi character recognition based on SVM (support vector machine) classifier using image gradient features. Journal of Discrete Mathematical Sciences and Cryptography, Vol.22(8), 1365-1381. [Indexed in SCOPUS and ESCI]
- Vats S. & Sagar B. B. (2019). Performance Evaluation of K-Means Clustering on Hadoop Infrastructure. Journal of Discrete Mathematical Sciences and Cryptography, vol. 22, no. 8, pp. 1349-1363. [Indexed in SCOPUS and ESCI]
- Srivastava N., Sharma V. & Chaklader B. (Sep 2019). A study to assess impact of Carbon Credit Trading into Costs and Prices of different Goods and Services- A study from Airline Industry, International Journal of Global Environmental issues, Vol. 18, No.2, pp. 126-141. [Scopus Unpaid Indexed]
- Gupta N. & Sharma V. (Aug 2019). Employee Engagement: A Structured Review of Antecedents and Consequences, Int. J. of Business Innovation and Research (IJBIR), Vol. 19, Issue 4. [Scopus Indexed]
- Ray K. & Sharma M. (2019). Qualitative study of challenges and strategies of Indian IT organizations toward global branding, Benchmarking: An International Journal, 708-731,Vol 27(2), p. 708-731. [Emerald journal & ABDC & Scopus ESCI Indexed]
- Alam M. M., Mittal A. & Chawla D. (2019). Patients' Perception towards Branded and Generic Medicines in an Emerging Economy: A Scale Development and Validation Study, 20(5), 1292-1310. [Scopus indexed, ABDC – C]

4.2 Publications in Proceedings

- Sharma R. and Prasad A. (2020). Prevalence of workplace bulling in Indian healthcare organization: Empirical Evidence. 5th IIMA International Conference on Advances in healthcare management services, February 14th - 16th, 2020.
- Sharma, R. and Prasad A., (2019). Exploring Relationship between Workplace Bullying and Organisational Well- Being: Role of Psychological Contract Violation and Forgiveness. 7th Pan IIM World Management Conference, 12-14 December, 2019.
- Gupta, P. and Sagar, B.B., (2019). Decision Support System for Business Intelligence Using Data Mining Techniques: A Case Study. In Proceedings of Advances in Computational Intelligence, Vol(988), pp.81-94, 2019, Springer, Singapore, ISBN: 978-981-13-8222-2.
- Vats, S. and Sagar, B.B. (2019). Data Lake: A Plausible Big Data Science For Business Intelligence. In proceedings of the 2nd International Conference on Communication and Computing Systems (ICCCS 2018), December 1-2, 2018, Gurgaon, India, 2019: CRC Press (Taylor & Francis)., pp. 442, ISBN: 978-0-429-44427-2.
- Makka, S., Arora, G., and Sagar, B.B., (2020). Consequent Formation in Security With Blockchain in Digital Transformation. In Proceedings of Impact of Digital Transformation on Security Policies and Standards, pp. 122-144, Hershey, PA: IGI Global, ISBN: 9781799823674.

4.3 Chapter(s) in Edited Book

- Saxena, A. & Prasad, A. (2019). The relationship between Ethical Leadership and Innovative Work Behaviour- Role of Appreciative Inquiry, in a book titled Appreciative Inquiry Approaches to Organizational Transformation. ISBN: 9781522596752, Publisher -IGI Global.
- Gupta, P. (2020) "Role of Digital Technology During COVID-19 Pandemic", INDIAN ECONOMY 2020 Current Issues And Future Prospects, pp.155, 2020, ISBN: 978-81-946182-0-1, Navyug Books International, Delhi.

SECTION 5 AWARD / PATENT / COLLABORATIONS

5.1 MoUs / Collaborations (Between 1st July 2019 to 30th June 2020)

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
2.	Membership of Oracle Academy	Use of Oracle resources/softwares and training modules	3 years

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.	LEARNATHON:learning prog on emerging technologies	--	Seema Sharma Rachana Pratik	4.5.2020-16.5.2020
2.	Digital Painting Class by Rajat Pandit, Creative Art Director, First Clap Productions	--	Partha Acharya	05.03.2020
3.	Annual Sports	Rishabh Jain, Atul Sharma, Samyak Jain, Amritanshu Priya, Manas Triptahi & Anant Upadhyay	Umair Ujala & Sheetal Sehgal	25.02.2020 – 01.03.2020
4.	Matribhasha Diwas celebration	Nikhil & Nitika - BCA	Pramila Joshi	21.02.2020
5.	Workshop on Python Programming	--	Sheetal Sehgal	12.02.2020
6.	Self Learning program on Software-Defined Storage Concepts	--	Charu Wahi	28.01.2020
7.	Suraksh Pakhwara	Rishabh Jain (BBA)	Pramila Joshi, Ritu Gandhi & Priti Sharma	16.01.2020 -30.01.2020
8.	Participation in a TV show Aap Ki Adalat on India TV.	Samyak Jain, B.Sc. A &M, VI Semester	Seema Sharma & Dr. Niket Mehta	10.01.2020
9.	Industrial Interaction with Focus Animation Studio	--	Partha Acharya	09.01.2020

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
10.	Bridge Prog.-Industry/ Academia Connect at AICTE	--	Dr. Asha Prasad Sadhu Mallika Rachana Pratik Dr. Abhishek Singh Dr. Niket Mehta	11.12.2019
11.	Students' visit to Japanese Cultural Festival Konnichiwa organized by AICTE	--	Aroop Kerketta	23.11.2019
12.	Experimental Animation Workshop	--	Lalit Mohan Bhatt	16.11.2019
13.	Seminar on AI	--	Muntaha Ahmad	15.11.2019
14.	Vigilance Week Celebration - organized by Indian Oil Corporation Limited	Rimjhim (BBA)	Rachana Prateek	09.11.2019
15.	BIT Noida Animation course students attended India Today's literature festival		Dr. Suparna Dutta, Dr. Niket Mehta	01.11.2019
16.	Students visited AICTE Head office, New Delhi to watch a play "Kya Karenge" enacted by Out of the Box Production Mumbai.	--	Mrs Rachana Pratik and Dr Niket Mehta.	22.10.2019
17.	Visit to Alliance Francis to watch the exhibition of graphics and paintings by B.Sc. Animation and Multimedia student Anumegha Bhattacharya	--	Dr. Suparna Dutta, Dr. Niket Mehta	09.09.2019
18.	Blood Donation Camp	Rishabh Kumar Choudhary (BCA), Rishabh Jain (BBA), Keshav Mallick (MCA)	Charu Wahi & Dr. Niket Mehta	04.09.2019
19.	Art of Living course	--	Harpreet Charanjit	03.09.2019 - 06.09.2019
20.	"Swachhata Hi Sewa" message communicated through Nukkad Natak and posters by students of BIT Noida	--	Dr. Niket Mehta	02.10.2019
21.	Gaming Day Celebrations	--	Dr. Niket Mehta	28.8.2019

6.2. List of Faculties

Sr. No.	Name	Designation	TEQIP Sponsored
Department of Computer Science			
1.	Dr. Peeyush Tewari	Associate Professor	No
2.	Dr. (Mrs) Ila Sahay	Associate Professor	No
3.	Mrs. Sadhu Mallika	Assistant Professor	No
4.	Dr. Satya Prakash Singh	Assistant Professor	No
5.	Mr. Anil Kumar	Assistant Professor	No
6.	Dr. Pankaj Gupta	Assistant Professor	No
7.	Mrs. Mrinalini Mehta	Assistant Professor	No
8.	Dr. (Mrs) Vibha Kaw Raina	Assistant Professor	No
9.	Mrs. Soma Sircar Dasgupta	Assistant Professor	No
10.	Mr. Aruna Malik	Assistant Professor	No
11.	Mrs. Sheetal Sehgal	Assistant Professor	No
12	Mrs. Pramila Joshi	Assistant Professor	No
13.	Mrs. Muntaha Ahmad	Assistant Professor	No
14.	Dr. (Mrs.) Smitha Jha	Assistant Professor	No
15.	Mr. Anurag Joshi	Assistant Professor	No
16.	Mrs. Priti Sharma	Assistant Professor	No
17.	Ms. Charu Wahi	Assistant Professor	No
18.	Mrs. Seema Sharma	Assistant Professor	No
19.	Dr. Bharat Bhushan Sagar	Assistant Professor	No
20.	Mr. Umair Ujala	Assistant Professor	No
21.	Mr. Sanjay Kumar	Assistant Professor	No
22.	Mrs. Lipika Jha	Associate Lecturer	No
23.	Mr. Rakesh Singh	Associate Lecturer	No
Department of Management			
24.	Dr. (Mrs.) Asha Prasad	Professor	No
25.	Dr. (Mrs.) Vandna Sharma	Associate Professor	No
26.	Dr. (Mrs.) Meenakshi Sharma	Associate Professor	No
27.	Mrs. Rachana Pratik	Assistant Professor	No
28.	Ms. Harpreet Charanjit	Assistant Professor	No
29.	Mrs. Ritu Gandhi	Assistant Professor	No
30.	Mrs. Preety Bajaj	Assistant Professor	No
31.	Dr. Arun Mittal	Assistant Professor	No
32.	Dr. (Ms.) Monika Bisht	Assistant Professor	No
33.	Dr. Abhishek Singh	Assistant Professor	No
34.	Dr. (Mrs.) Suparna Dutta	Associate Professor	No
35.	Dr. Soumendra Bhattacherjee	Assistant Professor	No
Department of Animation & Multimedia			
36.	Dr. Niket Mehta	Assistant Professor	No
37.	Mr. Partha Acharya	Assistant Professor	No

Sr. No.	Name	Designation	TEQIP Sponsored
38.	Mr. Aroop Kerketta	Assistant Professor	No
39.	Mr. Kiran A. Shetti	Sr. Animation Trainer	No
40.	Mr. Lalit Mohan Bhatt	Editor	No
41.	Mr. Rahul Dora	Tech. Superintendent	No
42.	Mr. Obed H. Longvah	Cinematographer	No
43.	Mr. Manoj Kumar	Animator	No

6.3 List of Adjunct Faculties

Sr. No.	Name	Designation
1.	Ms. Prema Sinha	Visiting Faculty
2.	Mr. Deepak Goel	Visiting Faculty

SECTION 7 OTHER INFORMATION

7.1 Publication by students

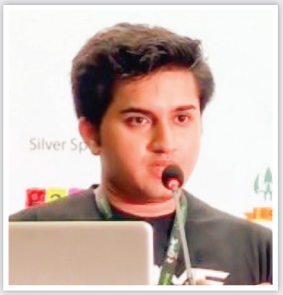
1. Tewari, S, H. (2019). Artificial Intelligence and Its impact on Cyber Security. In the Proceedings of 6th Conference of Information Technology for Business Transformation (ITBT-2019), Vol. 4, pp 165-167.

7.2 Achievements of Students

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
1.	Rajat Naskar	Winner in Delhi/NCR zone	STEP from THE HINDU GROUP	14.05.2020 STEPATHON9
2.	Mimansa Sinha	Level Reached 10.7	STEP from THE HINDU GROUP	14.05.2020 STEPATHON9
3.	Rimjhim Sharma	State Topper in National Communication Skills Challenge 2019	ICT Academy, Chennai	26.02.2020 (Online)
4.	Shreya	State Topper in National Communication Skills Challenge 2019	ICT Academy, Chennai	26.02.2020 (Online)
5.	Mink Sinha	Certificate of Completion	SkillSlate and Zovy organised a national level awareness program - Patience - a Key to success.	23.7.2020 (Online)
6.	Nishant Kumar Nishu, Sarvesh Gupta, Gaurav Kumar and Kartikey	Second Prize in the category of college students and amateur film makers' films.	CMS Vatavaran Short film competition 2019	30.11.2019 B R Ambedkar Auditorium, New Delhi

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
7.	Madhulika Anand and Vartika Tyagi	Nomination and Screening at prestigious film festivals	International Science Film Festival of India, Kolkata and CMS Vatavaran Short Film Competition and Festival 2019, New Delhi	9.11.2020 Satyajit Ray Film and Television Institute, Kolkata and New Delhi
8.	Puru Bhardwaj	First prize and got the copy of game and a gift hamper in prize.	Wretlefanet	25.11.2019

7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Mr. Rajat Ojha, CEO Gamittonics	9.5.2020 (Online)	
2.	Mr. Jainareshh	26.5.2020 (Online)	
3.	Mr. Atrita Mukherjee	26.5.2020 (Online)	
4.	Prof Chander Mohan, Scientist G., & Advisor, Department of Science & Technology, Ministry of Science & Technology, Government of India, (Retired) & currently Chair Professor, JNU, New Delhi	22.7.2019	

7.4 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	Rahul Jha, MCA 2011-14, BCA 2008-11 Data Scientist, Ganit Business Solution	Joined as a campus hire in Verizon India and then transitioned to Data Science in the same organization. Worked for a brief time in Deloitte India handling the Data Engineering pipelines there. Currently, he is a Data Scientist in Ganit Business Solution, Chennai. Working on a retail project for 'More' online business. Has a very wide and vast experience with Machine Learning and advanced AI Techniques.
2.	Saumya Ambastha, MTech (CS) 2014-16, Senior Software Engineer, HCL Technologies	She is currently working with HCL Technologies, Noida as Senior Software Engineer in Robotic Process Automation (RPA) and had worked with spectrum of RPA tools through several of the projects. She had also worked as Junior Engineer in Electrical Department with Delhi Urban Shelter Improvement Board, Govt. of NCT for nearly 2 years.
3.	Anil Kumar Dalar B.Sc A&M (2008 Batch), Director, Dollar Infotech Pvt. Ltd., CTO & Founder OKLABS, CEO & Co-Founder OKLABS, CEO & Co-Founder Myschoolio	Anil exemplifies the proverb "Where there's will, there's way". Coming from a small town of Neemuch in Madhya Pradesh, Anil through his grit and determination has been able to attain so much success in such a little time.
4.	Indrajeet Kumar B.Sc A&M (2004 Batch), Digital Marketing Consultant Cloud, Oracle India	Indrajeet was the bright, hardworking lad who believed in achieving anything with the dint of his hard work. His rise in corporate life is prime proof of his belief and achievement.
5.	Mr. Deepak Kumar MBA 2003-2005, Allahabad Bank	Presently working as Asst. General Manager, Allahabad Bank and Heading the Retail & MSME Processing Centre (RMPC) in Noida. Prior to his joining at Allahabad Bank, he has served UCO Bank as Credit Officer and Dhanlakshi Bank as Junior Officer.
6.	Ms. Khyati Dwivedi, MBA 2015-17, BBA 2009-12 Tech Mahindra	Presently working as Sr. Trainer (International Communication Training) with Tech Mahindra. She has also served Wipro as Assistant Manager (Voice and Accent Training).

7.5 Any other relevant information

- **Placement details:**

Course	Number of student	Number of students placed	Name of the company	CTC
MCA	3	1	COLLABERA	5 LAC
Mtech(CS)	1	0	-	-
MBA	11	5	ICICI Prudential Life Insurance, ICICI Bank	5 LAC

- **Ph.D. Degree awarded to**

  a. Ms. Pooja Jha (PhD/MB/10007/12) on the topic "Factors affecting the performance of Indian Women Entrepreneurs" on August 30, 2019.

  b. Mr. Debdutta Chattopadhyay (PhD/MB/1053/11) on the topic "A Study of Energy Mix for Sustainable Development of Power Sector in India" on September 11, 2019.

  c. Ms. Neha Gupta (PhD/MB/10012/12) on the topic "A Study of Imapct of Human Resource Practices on Employee Engagement in Mass Rapid Transit System Organizations in India" on September 23, 2019.

- An Alumni Meet was organized on 29th Feb'2020 by a team comprising of Mrs. Rachana Pratik, Mrs. Seema Sharma, Dr. Abhishek Singh, Mrs. Muntaha Ahmad, Mr. Partho Acharya, Dr. Monika Bisht and Ms. Charu Wahi.

OFF CAMPUS : PATNA

SECTION 1 **CAMPUS PROFILE**





1.1 About the Campus

Birla Institute of Technology, Mesra, Patna Campus came into existence in the year 2006 with the initiative of Government of Bihar and BIT Mesra with a vision to provide quality education to 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 college in the state of Bihar. The Institute offers Bachelor of Technology in Civil, Mechanical, Production, CSE, IT, ECE and EEE disciplines. Apart from this Institute also offers BBA, BCA, M. Tech. (ECE & CSE) and Ph.D. Programmes in different disciplines.

Central Library The BIT Central Library(Off campus Patna), functions as a model of an embryonic and dynamic facility in technical learning since 2006. The library, as an established knowledge resource hub that is conveniently accessible by the users. The Library's collection comprises hybrid resources (Print & Electronic) in the field of science and technology, engineering and management. The Library also has a separate Internet section consisting of a number of networked terminals for providing recent and most comprehensive access to online journals, online databases and other online reference resources to the faculty, students and staff under Intranet and Internet environment. The Central library has automated all its routine activities through library software called "LIBSYS 10" and also extended the scope of various services like database search and OPAC (online public access catalogue). The books have bar coded accession numbers for which laser scanners are used.

Laboratories of different Departments are well equipped with latest softwares and good quality equipments required to provide quality education, research and training. A glimpse of laboratories includes Computer Application lab, Analog and Digital Communication lab, Digital Electronics and Integrated Circuit lab, Circuit Simulation lab, Microprocessor lab, Fiber Optics Communication lab, Instrumentation & Industrial Instrumentation lab, VLSI Design lab, Wireless Communication & Networking lab, Microwave & Advanced Communication lab, Power System Lab, Power Electronics lab, Material Science lab, Digital Electronics lab, Digital Signal Processing lab, Scientific Computing lab, Measurements & Instrumentation lab, APE lab, Control System lab, Electrical Machine lab, MATLAB & E-CAD, Microprocessor and Micro controller lab, Engineering Mechanics lab, Fluid Mechanics lab, Manufacturing Processes lab, Automobile Engineering lab, Heat Transfer lab, Thermal Engineering lab, Dynamics lab, Solar Application Lab, Heat Treatment furnace, 3-axis CNC Lathe,

Metrology lab, Tool Design lab, Work study lab, Soil Mechanics lab, Strength of Materials lab, Hydraulics & Hydraulic M/c lab, Highway Engineering lab, Field Surveying & Geology lab etc.

Training & Placement office at Patna is well equipped and designed to smoothly handle and support the campus placement process of students at every stage. A detailed placement report of 2019-20 batch is appended below:

Total Offers								
Row Labels	**Civil**	**CSE**	**EEE**	**ECE**	**IT**	**MECH**	**PROD**	**Total**
Alstom Transport India Limited			3			1		4
Amdocs		12		3	3			18
Byjus	1							1
CGI		1						1
Cognizant		3	5	7	2			17
Doubtnut	1	2	1	1	1	3		9
Ericsson		3			1			4
Infosys Ltd.		9	1	7	4	1		22
KPMG		1	1					2
My Captain				1				1
Namekart		2						2
Nomura RI		4			1			5
Nucleus Software		1						1
OnePlus		1			1			2
Oracle FBGBU		1		1				2
PWC Bangalore		2						2
Vedantu	1		3	3				7
Verizon Data Services					1			1
Vodafone		1	7	6				14
ZS Associates India Pvt. Ltd.		1						1
Grand Total	**3**	**44**	**21**	**29**	**14**	**5**	**0**	**116**
Eligible Students	**21**	**51**	**39**	**47**	**23**	**28**	**9**	**218**
(%) Placed	14.29	86.27	53.85	61.70	60.87	17.86	0.00	53.21

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.	Energy Audit 11KV feeder under PESU area	PI-Mr.Sanjay Kumar Co-PI-Mr.Kumar Nikhil	BREDA	03-10-2012	4.75 Lacks	2012-2021

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
2.	Amplitech Automation Private Ltd.	Mentor & Incubator	Govt. of Bihar (Start-up)	20/04/2018	Rs. 10,00000 + Rs. 2,00000	5 Years

b) Projects Completed (Completed between 1st July 2019 to 30th June 2020)

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Mix Design	Dr. Balram Singh and Dr. S.T. Rushad	BSEIDC, Patna Ram Kripal Singh Construction Pvt. Ltd.,	September, 2019	50,000	3 months

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.	One Week Workshop on MATLAB/ Simulink for Engineering Applications Number of participant (72)	Mr. Kumar Nikhil & Mr. Md. Asif Hasan	Satcom Nano Technologies *The workshop was conducted in self financed mode with full expenditure from sponser and participants Also it generated revenue for Institute.	14th -18th October 2019
2.	National Seminar on 'Pragmatic Role of Technological Innovations in START UP' organized at BIT – Patna.	Co-Convenor	START – UP, Bihar	21-22 Feb. 2020.
3.	Short Term Training Programme on Internet of Things	Dr. Megha Dadel	GoI, DST	08.05.2019 -18.05.2019
4.	National seminar on Pragmatic Role of Technological Innovation in START- UP' held at B.I.T Patna	Dr. K. P. Tiwary (Co-convener)	Department of Industries, Government of Bihar	21-22 Feb 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.	Mr. Kumar Nikhil	One week Online STTP on Matlab	Govt. of Bihar	New Government Polytechnic Patna-13	Patna	18th May 2020 to 22nd May 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
2.	Mr. Shardha Kishore	"Recent Trends in Control System Engineering"	Govt. Of India	Electronics & ICT Academies, NIT Patna	NIT Patna	22nd – 28th June, 2020
3.	Dr. Kaushlendra Sharma	National Seminar on Pragmatic Role of Tecnological Innovation in Start-Up	Dept. of Industries Govt.of Bihar	B.I.T. Patna	B.I.T. Patna	21/02/2020 to 22/02/20
4.	Dr. Anubha Singh	National Seminar on PragmaticRole of Tecnological Innovation in Start-Up	Dept. of Industries Govt.of Bihar	B.I.T. Patna	B.I.T. Patna	21/02/2020 to 22/02/20
5.	Ms. Sheel Shalini	MATLAB Programming	Self	NITTTR, Chennai	Chennai	24-02-2020 to 28-02-2020
6.	Dr. Upendra Kumar	Pragmatic role of Technological Innovation in Start-up	Start-up,Govt. of Bihar	Convener	BIT, Patna	21-22, Feb,2020
7.	Dr. Ratesh Mishra	National Seminar on Programatic role of Techology Innovation in Startup	DSC Govt. of Bihar And Deptt of Industries	BIT Mesra Patna Campus	BIT Mesra Patna Campus	21-22 Feburary 2020
8.	Dr. Ratnesh Mishra	STTP on IOT	Deptt of ECE	BIT Mesra Patna Campus	Deptt of ECE BIT Mesra Patna Campus	
9.	Dr. Ratnesh Mishra	AWON-2019	TEQUIP	ECE DEPTT MNNIT Allahabad	ECE DEPTT MNNIT Allahabad	27th Mau-01 June 2019
10.	Dr. Sweta	International Conference on Energy and Environmental Technologies for Sustainable Development	NIL	MNNIT, Allahabad	MNNIT, Allahabad	14-16 February 2020

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
11.	Dr. Sweta	One Week Online STTP on MATLAB	DST, Govt. of Bihar	DST, Govt. of Bihar	Virtual Platform	18-5-2020 to 22-05-2020
12.	Dr. Vijay Agrawal	Emerging Technologies for Higher Education 'Post COVID-19	NIL	Department of Computer Science & Technology Central University of Jharkhand, Ranchi	CUJ-Ranchi Virtual Platform (Webinar)	16-17 May 2020
13.	Ms. Sohini Ghosh	Relevance of Corporate Governance in M&A Transactions-Insights from Indian IT sector" at 21st Annual Convention of Strategic Management Forum	BIT-Patna	IIM Lucknow	IIM Lucknow	27-29 December, 2019.
14.	Dr. Rajnish Kumar	Pragmatic role of technology innovatuion in start-up	start-up Bihar&Dept. Of Industries Govt. Of Bihar	BIT Patna	BIT Patna campus	21-22. Feb. 2020
15.	Dr. P.C. Srivastava	Pragmatic role of technology innovatuion in start-up	start-up Bihar & Dept. of Industries Govt. of Bihar	BIT Patna	BIT Patna campus	21-22. Feb. 2020
16.	Dr. P. Singh	Pragmatic role of technology innovatuion in start-up	start-up Bihar&Dept. of Industries Govt. of Bihar	BIT Patna	BIT Patna campus	21-22. Feb. 2020
17.	Dr. P. Singh	84th Orientation Programme	UGC	Patna University, Patna	HRDCPatna University,	29nov-19 Dec. 2020
18.	Dr. Arbind Kumar	Energy Policy Initiatives in Jharkhand	CUJ Ranchi	CUJ Ranchi	Ranchi	08/01/20

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
19.	Dr. Manish Oraon	2nd International Conference on Processing and Charctrization of Materials, ICPCM-2019	BIT Mesra	Department of Metallurgy and Materials Engg.	NIT Rourkela	12-14 Dec. 2019
20.	Dr. Manish Oraon	1st International Conference on Advances in Materials and Manufacturing Engineerings,	BIT Mesra	Department of Metallurgy and Materials Engg.,	NIT Siclhar	15-17 March. 2019
21.	Dr. Prashant Prakash (Conferences Two papers)	2nd International Conference on "Processing and Characterization of Materials (ICPCM-2019).	BIT, PATNA	NIT Rourkela	NIT Rourkela	12th - 14th Dec. 2019
22.	Dr. Prashant Prakash (Workshops)	Advances in Design & Manufacturing Engineering	Self	NIT, Patna	Online	August 03-07, 2020
23.	Dr. B. Bhushan	AICTE-UKIERI Technical Leadership Development Program	Institute	AICTE	New Delhi	30July to 2nd Aug 19
24.	Dr. B. Bhushan	AICTE-UKIERI Technical Leadership Development Program	Institute	AICTE	Jodhpur	4 Dec to 7 Dec 19

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals : (International/National)

1. Shradha Kishore, Vijaya Laxmi, "Hybrid Coarse and Fine Controller Tuning Strategy for Magnetic Levitation System,"Iranian Journal of Science and Technology, Transactions in Electrical Engineering, 44, 643–657, (2020).
2. Shradha Kishore, VijayaLaxmi, "Modeling, analysis and experimental evaluation of boundary threshold limits for Maglev system," InternationalJournal of Dynamics and Control, 8, 707–716, (2020).
3. Kumar Rakesh, Praveen Resma, Rani Shikha, Sharma. K., Tiwary K.P., & Kumar K. Dinesh (2019) ZnSe Nanoparticles Reinforced Biopolymeric Soy Protein Isolate Film, Journal of Renewable Materials Volume 7(8), 749-761

4. Kumar Rakesh, Arjun K. N., Rani Shikha, Sharma. K., Tiwary K.P., &Kumar K. Dinesh (2019) Material properties of ZnS nanopartical incorporated Soy Protein isolate biopolymeric film, Plastic, Rubber and Composites 48, 01-08 (2019)

5. Tiwary. K. P, Sharma K., Bala Neha, Ali. Firdaus, (2019) Microwave assisted synthesis of undoped and Cu doped CdS Nanoparticle and their Structural, Morphological and Optical Characterization; Materials Today; 1380-1387 (2019)

6. Mandal A. & Maity D. (2019). Seismic analysis of dam-foundation-reservoir coupled system using direct coupling method, Coupled Systems Mechanics; Techno-Press 8(5), 393-414 (2019). DOI: http://dx.doi.org/10.12989/csm.2019.8.5.393.

7. Anish, Chaubey, A. K., Vishwakarma, S., Kumar, A., and Stanis. (2019a). "Transient response of rhombic laminates.", Structural Engineering and Mechanics, Techno-Press, 70(5), 551.

8. Anish, Chaubey, A., Kumar, A., Kwiatkowski, B., Barnat-Hunek, D., and Widomski, M. K. (2019b). "Bi-Axial Buckling of Laminated Composite Plates Including Cutout and Additional Mass.", Materials, Multidisciplinary Digital Publishing Institute, 12(11), 1750.

9. Y. S. Rao, A. K. Keshri, B. K. Mishra, T. C. Panda; Distributed denial of service attack on targeted resources in a computer network for critical infrastructure: A differential e-epidemic model, Physica A: Statistical Mechanics and its Applications, Elsevier, (2020): 123240. (Impact Factor: 2.924) https://doi.org/10.1016/j.physa.2019.123240

10. A. K. Keshri, B. K. Mishra, B. P. Rukhaiyar; When rumors create chaos in e-commerce, Chaos, Solitons & Fractals, Elsevier, (2020): 109497. (Impact Factor: 3.764) https://doi.org/10.1016/j.chaos.2019.109497

11. B. K. Mishra, A. K. Keshri, Y. S. Rao, B. K. Mishra, B. Mahato, S. Ayesha, B. P. Rukhaiyyar, D. K. Saini, A. K. Singh; COVID-19 created chaos across the globe: Three novel quarantine epidemic models, Chaos, Solitons & Fractals, Elsevier, (2020): 109928. (Impact Factor: 3.764) https://doi.org/10.1016/j.chaos.2020.109928

12. Vikash Kumar, Ditipriya Sinha, Ayan Kumar Das, Subhash Chandra Pandey, Radha Tamal Goswami, "An Integrated Rule based Intrusion Detection System: Analysis on UNSW-NB15 Dataset and the Real Time Online Dataset", in the journal Cluster Computing, Springer, doi: 10.1007/s10586-019-03008-x, ISSN: 1386-7857, Vol. 22, No. 4, pp. 1-22, SCI-E Indexed, Impact Factor: 3.458, 2019.

13. 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 Indexed, Listed in ABDC journal list, Category-A, 2020

14. 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 Networks, https://doi.org/10.1007/s11276-020-02393-1, Impact Factor: 2.659, SCI Indexed, 2020.

15. 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 journal of Ambient Intelligence and Humanized Computing, DOI: 10.1007/s12652-020-02238, Impact Factor: 4.594, SCI Indexed, 2020.

16. R. S. Pandey, Vivek S. (2020) "A Dominance of the Channel Capacity in Load Balancing of Software Defined Network", authored by Dr. R.S.Pandey, Vivek Wireless Personal Communications, Springer, https://doi.org/10.1007/s11277-020-07130-7, 06 Feb-2020.

17. Dr. R.S. Pandey, Vivek Srivastav (….). A QoS based Formal Model for Software Defined Network", authored by International Journal of Sensors, Wireless Communications and Control.

18. Lal Babu Yadav, Vivek Srivastava, Ravi Shankar Pandey (2020). Detection of Fake Request and Response using Certificates Information and IP Address of SDN" authored by Journal of Network Security ISSN: 2395-6739 (Online), ISSN: 2321-8517 (Print) Volume 8, Issue 1 www.stmjournals.com 2020

19. Shalini, S. and Lal, K. (2019) Mining Changes in Temporal Patterns in Latest Time Window for Knowledge Discovery, Journal of Information & Knowledge Management, 18, 1950028

20. Shalini, S. and Lal, K. (2019) Optimized Incremental Mining of Customer Buying Behavior using Temporal Association Rules, International Journal of Innovative Technology and Exploring Engineering

21. Upendra Kumar, Shreyasi Uphdhyay, Neeraj Kumar, Subhash Chandra Pandey,May,2020, Isolation of DDoS Attack in IoT : A New Perspective, Wireless Personal Communications,PP. 1-18,(SCI).

22. Neeraj Kumar, Upendra Kumar, Dec-2019,Fuzzy Controlled Network Intrusion Detection System, I.J of Innovative Technology & Exploring Engineering, vol-09, No-02, PP-228-235,. (Scopus).

23. [1]Ratnesh Mishra, Ravi Shanker Shukla, Rajesh K. Shukla, R.R. Tewari, "Energy Optimization On Symmetric key Encryption & Decryption Algorithm Using Genetic Algorithm" International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-8 Issue-10,.DOI: 10.35940/ijitee.I7722.0881019, August 2019

24. Kumar U., Navaneet S., Kumar N., & Pandey S. C. (2020). Isolation of DDoS Attack in IoT: A New Perspective. Wireless Personal Communications. https://doi.org/10.1007/s11277-020-07486-w (SCI)

25. Kumar V., Sinha D., Das A. K., Pandey S. C., Goswami R T (2020). An integrated rule based intrusion detection system: analysison UNSW-NB15 data set and the real time online dataset. Cluster Computing23, 1397–1418.(SCI)

26. Mittal M., Kaur I., Pandey S. C., Verma A., Goyal L. M. (2019). Opinion Mining for the Tweets in Healthcare Sector using Fuzzy Association Rule. EAI Endorsed Transactions on Pervasive Health and Technology, August, 2019. (Non-paid Scopus)

27. 19. S. Sweta, K. Lal, "Optimized Fuzzy Rule-Based System to Measure Uncertainty in Human Decision Making System" Soft Computing: Theories and Applications, AISC-1154, Springer Nature ISSN- 2194-5357, Vol-1, pp:799–811,2020,DOI: http://doi.org/10.1007/978-981-15-4032-5_72, 30 June 2020

28. Atul Kumar Pandey, and Nisha Gupta,"An energy efficient distributed queuing random access (EE-DQRA) MAC protocol for wireless body sensor networks." Wireless Networks, pp. 1-15, 2020.

29. Atul Kumar Pandey, and Nisha Gupta,"An Energy Efficient Clustering-based Load Adaptive MAC (CLA-MAC) Protocol for Wireless Sensor Networks in IoT", International Journal of Wireless and Microwave Technologies (IJWMT), Vol.9, No.5, pp.38-55, 2019.

30. P. Suraj, B. R. Behera, R. K. Badhai (2020). Optimization of Metamaterials-Based Wi-Fi Antenna Using Genetic Algorithm." National Academy Science Letters, 43, 333-337 (2020). DOI: https://doi.org/10.1007/s40009-020-00876-5

31. Shahiruddin, M.A. Hassan, S.S. Singh, Dharmendra K. Singh, Methanol-Filled Hybrid Photonic Crystal Fiber with High Birefringent and Negative Dispersion, Braz J Phys, Vol. 50, pp.282–290, 2020, 10.1007/s13538-020-00738-x

32. Shahiruddin, M.A. Hassan, Anand Kumar, and D.K. Singh, "Structural and Behavioural Analysis of As2Se3, TeO2, SiC, SiO2 and Si3N4 for Photonic Application", Materials Science Forum, Vol: 978, pp. 360-368, 19 Feb. 2020, Article

33. Shahiruddin, M.A. Hassan, Manisha Singh, and D.K. Singh, "Poly Lactic Acid, Poly Acrylic Acid and Ethanol Based Bio-Materials for PCF Design", Materials Science Forum, Vol: 978, pp. 360-368, 19 Feb. 2020, Article

34. Anand Kumar, Shahiruddin, M. A. Hassan and D. K. Singh, Two Sides Rhombus Shaped Cladding Hexagonal PCF with Low Confinement Loss and Negative Dispersion, SSRN-Elsevier, 11 April 2020, DOI: 10.2139/ssrn.3573506

35. Singh, R., & Agrawal, V. (2019). "Impact of Disinvestment on Financial Performance of Select PSUs Post Liberalization". Indian Journal of Finance, Vol.13(11), pp.36-52, ISSN:0973-8711 Indexed Scopus (Elsevier). doi:10.17010/ijf/2019/v13i11/148416.

36. R. Sehgal, A.M. Dubey (2019), "Identifications of Critical Sucess factor for Public-Private Partnership Projects" in J Public Affairs. 2019;e1956. Wiley. DOI: https://doi.org/10.1002/pa.1956

37. Srivastava P.C., Chaurasia A. Gupta Y (2020) Numerical scheme based on non-polynomial spline functions for the system of second order boundary value problems arising in various engineering applications Journal of Applied and Computational Mechanics Vol 7 N0 2 (2021) xx-x https://jacm.scu.ac.ir/article15501.html

38. S.K. Pradhan, A. Kumar, P. Kour, R. Pandey, P. Kumar, M. Kar, A.N. Sinha; Piezoelectric and mechanical properties of PVDF-PZT composite, Ferroelectrics 558(1), 59-66 (2020)

39. P. Kour, S.K. Pradhan, R. Pandey, R.K. Singh, P. Kumar, M. Kar; Effect of Fe Concentration on Ferroelectric and Magnetic properties of Lead Iron Niobate, Journal of electronic materials, 49,5631-5637 (2020)

40. P. Prakash, R.S. Anand, S.K. Jha; Prediction of weld zone shape with effect of tool pin profile in friction stir welding process, Journal of Mechanical Science and Technology 34 (1), 279-287 (2020)

41. P. Prakash, R.S. Anand, S.K. Jha; Effect of Weld Zone Shape on Microstructure and Tensile Properties in Friction Stir Welding Process, Materials Science Forum 978, 84-90 (2020)

42. A. Kumar, A. Kumar, K. Prasad; Power generation characteristics of 0.50(Ba0.7Ca0.3)TiO3–0.50Ba(Zr0.2Ti0.8)O3/PVDF nanocomposites under impact loading, Journal of Materials Science: Materials in Electronics, 31(15) 12708-12714 (2020).

43. Oraon M., Sharma V. (2020). Measurement of electromagnetic radiation in the single point incremental forming of AA3003-O, International journal of Lightweight materials and Manufacturing Paper title, 3 p 113-119.

44. Mandal S., Kumar S, Oraon M., Process Parameter Effects over Bead Properties during Material, Deposition of PTAW Process, Materials Science Forum, Vol. 978, p 55-63.

45. Prakash, Prashant, Ravi Shankar Anand, and Sanjay Kumar Jha. "Prediction of weld zone shape with effect of tool pin profile in friction stir welding process." Journal of Mechanical Science and Technology 34, no. 1 (2020): 279-287.

46. Anand, Ravi Shankar, Prashant Prakash, Sanjay Kumar Jha, and Abhishek Kumar Singh. "Numerical investigations of effect of input process parameters on heat generation in friction stir welding." Materials Today: Proceedings (2020).

47. Prakash, Prashant, Ravi Shankar Anand, and Sanjay Kumar Jha. "Effect of Weld Zone Shape on Microstructure and Tensile Properties in Friction Stir Welding Process." In Materials Science Forum, vol. 978, pp. 84-90. Trans Tech Publications Ltd, 2020.

48. Prakash, Prashant, Sanjay Kumar Jha, and Shree Prakash Lal. "Numerical investigation of stirred zone shape and its effect on mechanical properties in friction stir welding process." Welding in the World 63, no. 6 (2019): 1531-1546.

49. S.K. Sinha, S. Kumari, R.K. Chaudhary, Dielectric and piezoelectric properties of PbTi 0.8–xSe0.2SmxO3 nanoceramics prepared by high energy ball milling, A. Phys. A,125(2019)171-175 (SCI Indexed)

50. S.K. Sinha, S. Kumari, R.K. Chaudhary, Studies of dielectric and piezoelectric properties of PbTi0:8_x Te0:2GdxO3 nano ceramics prepared by high energy ball milling, Jr of Advance dielectrics,9(2) 2019,1950017 (SCI indexed)

51. Kumar R., Anjum K. N., Rani S., Sharma K., Tiwary K. P. & Kumar K. D. (2019). Material properties of ZnS nanoparticles incorporated soy protein isolate biopolymeric film. Plastics, Rubber and Composites 48 (10), 1-8.

52. Kumar R., Praveen R., Rani S., Sharma K., Tiwary K. P. & Dinesh K. (2019). ZnSe Nanoparticles Reinforced Biopolymeric Soy Protein Isolate Film. Journal of Renewable Materials 7 (8), 749-761.

53. Pradhan S.K., Kumar A., Kour P., Pandey R., Kumar P., Kar M., Sinha A.N. (2020) Piezoelectric and mechanical properties of PVDF-PZT composite,Ferroelectrics 558(1),59-66

54. Kour P., Pradhan S.K., Pandey R., Kumar P., Kar M(2020) Effect of Fe Concentration on Ferroelectric and Magnetic properties of Lead Iron Niobate, Journal of electronic materials, 49,5631-5637

4.2 Publications in Proceedings: (International/National) with ISBN numbers only

1. M. A. Hasan and S. K. Parida, "Modeling and Design of a Synchronous Reference Frame Enhanced Phase Locked Loop," 2019 IEEE PES Innovative Smart Grid Technologies Europe (ISGT-Europe), Bucharest, Romania, 2019, pp. 1-4, doi: 10.1109/ISGTEurope.2019.8905493.

2. M. A. Hasan, R. K. Mishra and S. Singh, "Speed Control of DC Motor Using Adaptive Neuro Fuzzy Inference System Based PID Controller, "2019 2nd International Conference on Power Energy, Environment and Intelligent Control (PEEIC), Greater Noida, India, 2019, pp. 138-143, doi: 10.1109/PEEIC47157.2019.8976579.

3. Srishti Singh, Raj Kumar Mishra, M. A. Hasan, "Fuzzay Logic based PID Controller Tuning for Speed Control of DC Servo Motor", 2019, BIT Mesra

4. Adhishree Srivastava, S.K. Parida,"Frequency and Voltage Data Processing Based Feeder Protection in Medium Voltage Microgrid", IEEE PES Innovative Smart Grid Technology (ISGT-Europe),Bucharest, Romania 29-2 Oct, 2019.

5. Adhishree Srivastava, S.K. Parida," Recognition of Fault Location and Type in a Medium Voltage System with Distributed Generation using Machine Learning Approach", 20th International Conference on Intelligent System Application to Power System (ISAP), IIT Delhi, India,10-14 Dec, 2019

6. Ayan Kumar Das, Sidra Kalam, NausheenSahar, DitipriyaSinha, LASF–A Lightweight Authentication Scheme for Fog-Assisted IoT Network, Modelling, Simulation and Intelligent Computing (MoSICom 2020), BITS Pilani, Dubai, 29-31 January, 2020, DOI: 10.1007/978-981-15-4775-1_27, pp.246-254, Springer.

7. Vivek Srivastava, Dr. Ravi Shankar Pandey," History Based Adaptive Approach for Blocking the malicious Host in SDN", 2nd International Conference on Advanced Computing and Software Engineering. KNIT Sultanpur 8-9 February 2019. ISBN : 978-93-882337-44-4,pp 504-507

8. Subhash Chandra Pandey, Utpal Kant Kumar, A novel fuzzy based artificial bees colony algorithm for medical record classification, International conference on 'Big Data Machine Learnng and their Applications', MNNIT – Allahabad, 5june to 7june, 2020.

9. 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

10. 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

11. Kumar R. and Singh S., 2020 Computational analysis of EMHD flow of Nanofluid over a rotating disk with convective boundary layer: Buongiorno's Model

12. Kumar R. and Singh S., 2020 Artificial Neural Network analysis for Carbon Nanotubes based nanofluid flow over exponentially stretching sheet

13. S.K. Pradhan, V. Kedia, P. Kour; Review on different materials and their characterization as rocket propellant, Materials Today Proceedings (2020)

14. Neha Bala, Swati Raj, Deep Shikha Kumari, Ali Furdaus, Anjali Singh, P. Kour and S.K. Sinha, Synthesis and Study of Zirconium Doped Lithium Titanate Ceramics, Material Today Proceeding18, (2019)1459-1464 (Scopus Indexed)

15. Tiwary K. P., Sharma Kaushlendra, Bala Neha & Ali Firdaus (2019). Microwave assisted synthesis of undoped and Cu doped CdS nanoparticles and their structural, morphological and optical characterization Materials Today: Proceedings 18 (3), 1380 – 1387.

16. Choubey S. K., Kaushik A. & Tiwary K. P. (2020). Influence of MG on Structural and Optical Properties of ZnSe Nanocrystals Synthesized by Microwave Assisted Technique, Materials Today: Proceedings 21(4), 1943-1948.

17. Pradhan S.K., Kour P., Kedia V (2020), Review on different materials and their characterization as rocket propellant, Materials Today Proceedings.

18. Abhishek, A. Utsav, R. K. Badhai and P. Suraj, "Design of Beam Steering Antenna for ISM Band III Using Corporate Feed Network," 2019 International Conference on Communication and Electronics Systems (ICCES), Coimbatore, India, 17-19 July 2019, pp. 1468-1472, doi: https://doi.org/10.1109/ICCES45898.2019.9002206.

4.3 Book:

1. Arbind Kumar (2020)'Bio-fuels for rural electrification' published in 'Advances in Science & Technology' ISBN: 978-81-946375-0.

4.3.1 Co-Authored

1. Mishra K. N., Pandey S.C. (2020). Cloud-Based M-Health Systems for Vein Image Enhancement and Feature Extraction: Emerging Research and Opportunities. IGI Global, July 2020. ISBN13: 9781799845379

4.3.2 Chapter(s) in Edited Book

1. Singh M., Jha R.C., Hasan M.A. (2019) Prediction of Energy Availability from Solar and Wind for Demand Side Management. In: Malik H., Srivastava S., Sood Y., Ahmad A. (eds) Applications of Artificial Intelligence Techniques in Engineering. Advances in Intelligent Systems and Computing, vol 698. Springer, Singapore.
2. Tenable Irrigation system with Internet of ThingUpendra Kumar, Smita Pallavi and Pranjal Pandeys, CRC Press,DOIhttps://doi.org/10.1201/9780429289057,pp-,July,2020
3. Security Issues of Internet of Things in Health-Care Sector: An Analytical Approach Pranjal Pandey, Subhash Chandra Pandey and Upendra Kumar, Springer,pp 307-329,March 2020
4. Pandey P., Pallavi S., Pandey S. C. (2019). Pragmatic Medical Image Analysisand Deep Learning: An Emerging Trend (Editors: Verma, O.P., Roy, S., Pandey, S.C., Mittal, M.) Advancement of Machine Intelligence in Interactive Medical Image Analysis, Algorithms for Intelligent Systems, Springer. ISBN 978-981-15-1100-4
5. Pandey P., Pandey S. C., Kumar U. (2019). Security Issues of Internet of Thingsin Health-Care Sector: An Analytical Approach (Editors: Verma, O.P., Roy, S., Pandey, S.C., Mittal, M.) Advancement of Machine Intelligence in Interactive Medical Image Analysis, Algorithms for Intelligent Systems, Springer. ISBN 978-981-15-1100-4.
6. Sweta Kumari, Sitanshu Sekhar Sahu, Bharat Gupta and Sudhanshu Kumar Mishra, "Energy Harvesting via human body activities", Smart Biosensor in Medical Care, Advances in ubiquitous sensing applications for healthcare, Elsevier publication, Pages 87-106, Elsevier publication, 24 Feb 2020.
7. S.K. Jha, P. Suraj, R.K. Badhai. (2021) Bow-Tie Shaped Meander Line UWB Antenna for Underwater Communication. International Conference on Innovative Computing and Communications. Advances in Intelligent Systems and Computing, New Delhi, India 21-23 February 2020.(Publised in Advances in Intelligent Systems and Computing book series, Springer, Singapore, vol 1165. Doi: https://doi.org/10.1007/978-981-15-5113-0_91
8. Kumar R. and Kumar R. 2020. "Scope and Challenges of Using Polyfurfuryl Alcohol as Thermoset Adhesive/Sealant", Chapter 6, pp 129-144. by being Edited by Inamuddin, Boddula Rajender, Ahamed Mohd Imran, Asiri Abdullah M in a book published entitled "Green Adhesives: Preparation, Properties and Applications" (ISBN: 978-1-111-965508-4)" from Wiley.

SECTION 5 AWARD / PATENT / COLLABORATIONS

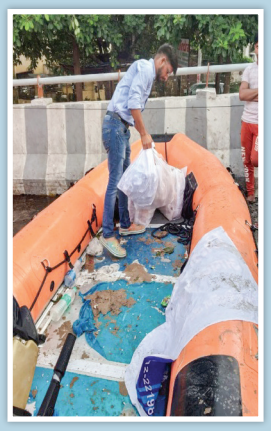
5.1 Award / Recognition Bestowed on Faculties (State / National / International)

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Dr. Anish	Editorial Board Member	International Journal of Statistical Analysis	International	2019- Till date

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
2.	Dr. Anish	Reviewer	Journal of Aerospace Engineering (ASCE)	International	2019- till date
3.	Dr. Manish Oraon	International Research Award 2020 for research excellence	International journal for research under literal access (IJRULA)	International	2020

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.	IEEE Student Chapter, BIT Patna		Dr. Mayank Singh	30-31st July, 2019
2.	Xordieum, Electrical Club		Dr. Mayank Singh	24 Aug, 2019
3.	Flood Relief Work at "Patna Flood Disaster"	Abhishek Krishnan and Subham Kumar  	Dr. Angshuman Mandal (Faculty In Charge, Civil Engineering Society) and Prof. (Dr.) Balram Singh (Prof. In Charge, Civil Engineering Department)	01-10-2019 (1 day)

Sr. No.	Name of the Activity	Students' Co-Ordinator	Faculty Co-ordinator	Date / Duration
4.	"Technical Event Edifice 2019" Organised by Civil Engineering Society	Ankita Kiran (General Secretary, Civil Engineering Society)	Dr. Angshuman Mandal (Faculty In Charge, Civil Engineering Society)	09/08/2019-11/08/2019 (3 days)
5.	Departmental seminar presented by the 'V-semester' students in the presence of the faculty members and other students.	Ankita Kiran (General Secretary, Civil Engineering Society)	Dr. Angshuman Mandal (Faculty In Charge, Civil Engineering Society)	02-08-2019 (1 day)
6.	"Induction Program for III Semester Students" through Civil Engineering Society in Civil Engineering Department	Yogesh Pratap Singh (General Secretary, Civil Engineering Society)	Dr. Angshuman Mandal (Faculty In Charge, Civil Engineering Society)	19-07-2019 (1 day)
7.	Departmental Industrial Tour to Indrapuri Barrage, Sasaram	Yogesh Kumar (2k17) Vibhu Kumar (2k17)	Dr. S. T. Rushad Er. Bandana Mahto	15-02-2020 (One Day)
8.	XorDium (Science Exhibition and PaperPresentation) by Techni	Mr. Sarthak Singh	Dr. Ritesh Kumar Badhai	24.08.2019
9.	Internal Smart india hackathon-2020	Mr. Sarthak Singh MrShusank	Dr. Ritesh Kumar Badhai	16.01.2020 To 17.01.2020
10.	Infineon India hackathon 2019 (Won 2nd Prize with 50000/- cash prize)	Kamal Kant Vishal Kumar	Dr. Shahiruddin	12-13 Nov 2019
11.	Team ASHWA	Shubham Kumar	Dr. Somen Mandal	1-8 March 2020 One week
12.	Workshop by Nanotech Society on "Material Graphene-Bringing Revoluation in Industry"	Kishlay Raj	Dr. S.K. Sinha	20th Oct 2019 One Day

6.2. List of Faculties

Sr. No.	Name	Designation
1.	Prof. (Dr.) Arbind Kumar	Director
2.	Dr. Anamika Nandan	Assistant Professor
3.	Ar. Ashutosh Kumar	Assistant Professor
4.	Ar. Nitish Chandra	Assistant Professor
5.	Dr. Kaushlendra Sharma	Assistant Professor
6.	Dr. Anubha Singh	Assistant Professor

Sr. No.	Name	Designation
7.	Prof. (Dr.) Balram Singh	Professor
8.	Prof. (Dr.) Rajeev Ranjan Sahay	Professor
9.	Dr. Anish	Assistant Professor
10.	Dr. Syed Tabin Rushad	Assistant Professor
11.	Ms. Bandana Mahto	Assistant Professor
12.	Dr. Angshuman Mandal	Assistant Professor
13.	Mr. Bishwas Narayan Singh	Associate Lecturer
14.	Dr. Kanhaiya Lal	Assistant Professor
15.	Mr. Sujit Kumar Chatterjee	Assistant Professor
16.	Mr. Subho Chaudhuri	Associate Professer
17.	Ms. Sheel Shalini	Assistant Professor
18.	Dr. Ravi Shanker Pandey	Assistant Professor
19.	Dr. Subhash Chandra Pandey	Assistant Professor
20.	Dr. Kumar Keshri	Assistant Professor
21.	Mr. Ratnesh Mishra	Assistant Professor
22.	Mr. Shridhar Kumar	Assistant Professor
23.	Dr. Upendra Kumar	Assistant Professor
24.	Dr. Ayan Kumar Das	Assistant Professor
25.	Mr. Madhup Kumar	Associate Lecturer
26.	Mr. Adnan Mahmood	Associate Lecturer
27.	Mr. Sanjay Kumar	Assistant Professor
28.	Mr. Raj Kumar Mishra	Assistant Professor
29.	Mr. Kumar Nikhil	Assistant Professor
30.	Dr. Mayank Singh	Assistant Professor
31.	Ms. Shradha Kishore	Assistant Professor
32.	Mr. Asif Hasan	Assistant Professor
33.	Ms. Adhishree	Assistant Professor
34.	Dr. Shahiruddin	Assistant Professor
35.	Dr. Poonam Priyadarshini	Assistant Professor
36.	Dr. Megha Dadel	Assistant Professor
37.	Ms. Shipra	Assistant Professor
38.	Mr. Atul Kumar Pandey	Assistant Professor
39.	Dr. Ritesh Kumar Badhai	Assistant Professor
40.	Dr. Sweta Kumari	Assistant Professor
41.	Dr. Priyadarshi Suraj	Assistant Professor
42.	Dr. Vijay Agarwal	Associate Professer
43.	Dr. Iftekhar Ahmad	Assistant Professor
44.	Dr. Adhip Kumar Mahanty	Assistant Professor
45.	Dr. Sweta	Assistant Professor
46.	Dr. Ashish Mohan Dubey	Assistant Professor

Sr. No.	Name	Designation
47.	Dr. Sohini Ghosh	Assistant Professor
48.	Dr. Amit Raghuvanshi	Assistant Professor
49.	Dr. Sunil Kumar Pandey	Asst. Professor
50.	Dr. Sushil Kumar	Asst. Professor
51.	Mr. Sultan Khan	Asst. Professor
52.	Dr. Nidhi Tiwari	Asst. Professor
53.	Dr. Rajnish Kumar	Assistant Professor
54.	Dr. Prakash Chandra Srivastav	Assistant Professor
55.	Dr. Premlata Singh	Assistant Professor
56.	Mr. Girish Pathak	Assistant Professor
57.	Dr. Anand Kumar	Assistant Professor
58.	Dr. Sudipta Kishore Pradhan	Assistant Professor
59.	Dr. Soumen Mandal	Assistant Professor
60.	Mr. Chandan Kumar	Assistant Professor
61.	Dr. Ravi Shankar Anand	Assistant Professor
62.	Dr. Amit Kumar	Assistant Professor
63.	Dr. Sanjay Kumar Sinha	Associate Professer
64.	Dr. Binay Bhushan	Assistant Professor
65.	Dr. Kamala Pati Tiwary	Assistant Professor
66.	Dr. Paramjit Kour	Assistant Professor
67.	Prof. (Dr.) Shree Prakash Lal	Professor
68.	Mr. Kapil Deo Prasad	Assistant Professor
69.	Dr. Manish Oraon	Assistant Professor
70.	Dr. Prashant Prakash	Assistant Professor
71.	Mr. Thakur Abhinav Amar	Assistant Professor
72.	Dr. Hareram Singh	Assistant Professor
73.	Mr. Suresh Singh Yadav	Associate Lecturer

6.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Prof. R.A. Khan	Visiting Faculty	None
2.	Ms. Shalini Agrawal	Visiting Faculty	None

SECTION 7 OTHER INFORMATION

7.1 Publication by students, if any

1. Shradha Kishore, Neelendra Pandey, Vivek Kumar, Abhishek Raj, "Performance comparison of PID and TID controllers using Genetic Algorithm and Grey Wolf Optimization technique forMagnetic levitation system,"International Journal of Engineering Research and Applications (IJERA), Vol No.: 10, Issue No.: 6, Publication: June2020.DOI: 10.9790/9622-1006040109

2. 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 Indexed, Listed in ABDC journal list, Category-A, 2020.

3. Ayan Kumar Das, Sidra Kalam, Nausheen Sahar, Ditipriya Sinha, LASF—A Lightweight Authentication Scheme for Fog-Assisted IoT Network, Modelling, Simulation and Intelligent Computing (MoSICom 2020), BITS Pilani, Dubai, 29-31 January, 2020, DOI: 10.1007/978-981-15-4775-1_27, pp.246-254, Springer.

7.2 Achievements of Students

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
1.	Ankit Kumar	Silver Medal in "Electrical Installation"	Skill India Competition	June, 2018
2.	Abhishek Datta	Secured 3rd position in a Research Workshop on Recent Scientific Development in the field of military and Defence mechanism	IIM Ahmedabad	05.09.2019 to 08.09.2020
3.	Abhishek Datta	Interned with DRDO and developed a room clearance task which will be a compulsory criteria to be qualified by NDA cadets to check their neural activity and response to critical situations.	DRDO	July 2019-October 2019
4.	Abhishek Datta	KITE POWER TECHNOLOGY, National Seminar on Pragmatic Role of Technology	BIT Patna	21.02.2020 to 22.02.2020
5.	Mohit Choubey	Secured first position in Inter branch Football Tournament.	BIT Patna	25.01.2020
6.	Harsh Vardhan	Secured first position in inter branch football tournament.	BIT Patna	25.01.2020
7.	Harsh Vardhan	Awarded best goalkeeper award in inter-branch football tournament	BIT Patna	25.01.2020
8.	Himanshu Ranjan; Shyam Kumar and Vishal	1st Position in the Paper Bridge Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
9.	Manish Kumar; Nishant Kumar and Rajat Kumar	2nd Position in the Paper Bridge Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
10.	Sumit Kumar; Satish Patel and Suhail Ahmed Bhat	3rd Position in the Paper Bridge Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
11.	Harsh Vardhan, Shouvik Deb and Abhishek Datta	4th Position in the Paper Bridge Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
12.	Rajat Kumar and Nishant Kumar Singh	1st Position in the Quiz Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
13.	Vivaswan Kaushik and Sourav Kumar	2nd Position in the Quiz Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
14.	Pushkar raj and Manish Kumar	3rd Position in the Quiz Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
15.	Sidhhant Kumar and Shruti Prakash	1st Position in the Float the Boat Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
16.	Nitin Kumar and Shyam Kumar	2nd Position in the Float the Boat Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
17.	Pushkar Raj and Manish Kumar	3rd Position in the Float the Boat Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
18.	Abhishek Datta and Shouvik Dev	1st Position in the Poster Presentation Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
19.	Pushkar Raj and Manish Kumar	2nd Position in the Poster Presentation Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
20.	Satish Patel and Sumit Kumar	1st Position in the Save the Egg Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
21.	Abhishek Datta and Souvik Deb	2nd Position in the Save the Egg Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
22.	Vivaswan Kaoushik and Sourav Kumar Sinha	3rd Position in the Save the Egg Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
23.	Prashant Kumar, Prashant Bharti, Rajat Kumar and Shashi Raj	1st Position in the Treasure Hunt Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
24.	Shankar, Shreya, Nikita and Smiti	2nd Position in the Treasure Hunt Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019
25.	Abhishek Datta, Harsh Vardhan, Suhail Ahmed Bhat and Souvik Dev	3rd Position in the Treasure Hunt Competition in the Technical Event "Edifice 2019"	Civil Engineering Department, BIT Patna	09/08/2019-11/08/2019

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
26.	Avantika Singh (2014 passed out student)	Women in Circuits 2020 Rising Stars	IEEE Solid-State Circuits Society (ISSCC 2020 and SSCS Women in Circuits proudly present our 2020 Rising Stars)	November 9-10, 2020, the University of California, Berkeley
27.	Anju Chaurasia	Ph.D Degree Award	BIT	03.09.2020 BIT Allahabad (on line Mode)

7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Prof. (Dr.) P.R. Thakura BIT Mesra	14.10.2019	
2.	Shri S.M. Sahay Chairman Electricity Regulatory Committee	14.10.2019	
3.	Dr. Sanjay Kumar Parida IIT Patna	15.10.2019	

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
4.	Dr. Dharmendra Kumar Dhir NIT Patna	16.10.2019	
5.	Dr. Balendu Bhushan Upadhayay IIT Patna	17.10.2019	
6.	Dr. Ranjan Kumar Behera IIT Patna	17.10.2019	
7.	Dr. Nishat Anwar NIT Patna	18.10.2019	
8.	Er. Ashok Kumar (Chief Engineer, PHED, Govt. of Bihar)	25-10-2019	

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
9.	Er. Anil Kumar Sariar (Sr. Consultant, Shamvwi Consultant)	18-10-2019	
10.	Ms. Ananya Kumari, Executive Business Development, Scanpoint Geomatics Limited Company,	30/08/2019	
11.	Prof. Ashok Kumar Keshri, IIT Delhi	26.07.2019	
12.	Mr. Rajesh Pratap (Director, IIM Lucknow Alumnus)	18/09/2019	
13.	Ms. Anuradha S. Palanichamy (Professor & Dean, School of Development Studies) IIHMR	01/10/2019	
14.	Dr. Raj Kishan SS (Professor & Area Chair, Economics, Public Policy and International Business) IILM Graduate of Management, New Delhi	16/10/2019	
15.	Dr. Kishor Barad (Professor) Shanti Business School	21/10/2019	
16.	Mr. Abhishek Kumar (Branch Manager) HDFC Bank	22/10/2019	
17.	Dr. Sazzad Parwez (Assistant Professor) School of Development Studies, Indian Institute of Health Management Research University, Jaipur	13/11/2019	

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
18.	Dr. Ajay Pathak (Director- ICFAI Business School)	13/11/2019	
19.	Dr. Snigdharani Mishra (Professor & HOD) Department of HR ITM Business School, Mumbai	18/11/2019	
20.	Mr. Manoj Kumar Japanese Language Expert and Interpreter (EMPOWERING ANIRVANA Pvt. Ltd.) Indo-Japan Cultural Ambassador Progra, Patna	14/01/2020	
21.	Ms. Anuradha S. Palanichamy (Professor & Dean, School of Development Studies) IIHMR Jaipur	17/01/2020	
22.	Dr. A.D. Thakur, Dept. of Physics, Indian Institute of Technology	Delivered an Invited talk on "Material Graphene-Bringing Revolution in Industry" on 20th Oct 2019	

7.4 List of Distinguished Alumni:

Sr. No.	Name, Batch and Affiliation	Short Description
1.	Shivam Shrivastava, 2007-2011 Batch, IES (rank 8 2014 batch)	Working in Indian Railway service
2.	Ankur Dhanuka, 2006-2010	He left IOCL after 8 Yrs of service and now presently doing master in pubic policy program from Harvard University.
3.	Saurav Murarka, 2008-2012	Working in IOCL, Participated in NASA Lunar Robot Competition 2011, Washington DC
4.	Arkajyoti Chatterjee	Working in Infineon at package of 13 LPA
5.	Shreya Kumar	Working at Open System International, Minnesota, USA as Engineer
6.	Saurav, 2014 Batch/Engineer/Officer at Engineer India Limited (EIL)	
7.	Vikas Kumar Soni, 2014 Batch/ Young Professional in MHRD, GoI.	
8.	Ankit Kumar, 2014 Batch/JE-RRB	
9.	Shitanshu Kumar/2014 Batch/ MBA, XLRI Jamshedpur	
10.	Arpan Singh, 2015 Batch/MS, IIIT Hyderabad.	

7.5 Any other relevant information

1. On May 31, 2020, Ajit Kumar Keshri has successfully completed a 4-week long online course titled "Essential Epidemiologic Tools for Public Health Practice" authorized by Johns Hopkins University and offered through Coursera.

UNIVERSITY POLYTECHNIC

SECTION 1 PROFILE



1.1 About the Polytechnic :

University Polytechnic contributes to national development through dissemination of specialized knowledge and skill to help students know themselves better and create value for the society and country. It is a centre for facilitating learning and acquisition of knowledge through teaching, discussions, and trainings imparted in a vibrant ecosystem of growth. University Polytechnic offers Diploma in Engineering program in six different disciplines and BMLT program. It has well equipped library, laboratories, T&P cell, NSS, sports, games facilities and other amenities. University polytechnic function as a genuine laboratory of ideas and innovative solutions to produce globally competent technical manpower.

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	MHRD	01-09-18	1.0 lakh	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.	Two-day Workshop on Circuit Simulation Software EDWIN XP	Dr. Sumana Kumari	University Polytechnic, BIT, Mesra	15.11.19-16.11.19
2.	Student Induction Programme (2019)	Dr Sandhya Rani Dr. Neeru Singh	University Polytechnic, BIT, Mesra	11.07.19-26.07.19

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. G M Ansari	Online FDP on Mentoring and Facilitation Skills for institutional mentors	The Dept. of Higher Education, MHRD Govt. of India	PMMMNMTT Hyderabad	PMMMNMT, Hyderabad	27.05.2020-31.05.2020
2.	Dr. Shambhu Sharan Kumar	Online FDP on Innovation and Research Trends in Mechanical Engineering (IRTME)"	AICTE	Kallam Academy of Educational Society AICTE	On-line FDP	18.05.2020 to 22.05.2020
3.	Dr. Rohit Kamal Chatterjee	IIC Innovation Ambassador Training Program	MHRD's Innovation Cell	Institution's Innovation Council	IISER, Kolkata	06.03.2020 - 07.03.2020
4.	Dr. Mohd Neyaz Ahsan	Application of Recent Innovation in Industry & Hospital Pharmacy	AICTE	Dept. of Pharmaceutical Sciences & Technology, BIT	Dept. of Pharmaceutical Sciences & Technology, BIT	21.02.2020 -05.03.2020
5.	Dr. Chanchal Kumar Mishra	A green Therapeutic Approach towards Cancer	AICTE	Dept. of Pharmaceutical Sciences & Technology, BIT	Dept. of Pharmaceutical Sciences & Technology, BIT	07.02.20-20.02.20
6.	Dr. Meena Singh, Dr. Sumana Kumari, and Dr. Neeru Singh	Faculty Development Program For Student Induction (FDP-SI)	AICTE	AICTE	Central University of Jharkhand	20.01.2020 – 22.01.2020
7.	Dr. Shambhu Saran Kumar, Dr Sandhya Rani, Ms. Nirupam & Md Maqubool Hosain	Faculty Development Program For Student Induction (FDP-SI)	AICTE	AICTE	R&D Hall BIT, Mesra Ranchi	13-12-2019 – 15.12.2019
8.	Dr. Satish Kumar	Workshop on Coal Chemistry and Health Impacts due to Coal	TEQIP	Department of Civil and Environmental Engineering	BIT, MESRA	10-12-2019

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
9.	Dr. Meena Singh & Dr. Neeru Singh	98th Orientation Programme	UGC	Human Resource Development Centre Ranchi University Ranchi	Ranchi University	4.12.2019 - 24.12.2019
10.	Dr. Shambhu Sharan Kumar	One Day Workshop on "Intellectual Property Rights"	NRDC (DSIR), Ministry of Sc. & Technology, Govt. of India.	BIT Mesra	BIT Mesra	07.09 2019
11.	Dr. Sandhya Rani	Excellence in Pedagogy and Quantitative Research	TEQIP	Deptt of Management and Computer Science&Engg.	R&D Hall BIT Mesra, Ranchi	26-08.2019 – 30.08.2019

SECTION 4 RESEARCH PUBLICATIONS

4.1 Publications in Journals : (International/National)

Hosain M.M., Kumari S., & Tiwary A.K. (2020). Sunflower shaped fractal filtenna for WLAN and ARN Application, Journal of Microwave and Optical Technology Letters, 62(1), 346-354

Singh N., Hussain A. & Singh, S.K. (2020). Morphological transitions of Bacillus subtilis in the presence of food-grade lipidic nanoemulsions. Journal of Food Science. 85 (4), 2020, 1223-1230 (IF: 2.478).

Singh M., & Prerna P. (2019), Floating admittance Matrix Modelling approach to BJT. International Journal of Research and Scientific innovation. 6, 115-120.

4.2 Chapter(s) in Edited Book

Nehra S, Ghosh P.K., Singh M., (2020) Simulating and Designing of High-Order LPF with DFI. In: Nath V., Mandal J. (Ed.). Lecture notes in Electrical engineering book series, vol 476, Springer Singapore, ISBN 978-981-15-2853-8, pp 551-566.

Nehra S., Ghosh P.K., Singh M., (2019) Performance Analysis of Tunable Third and fifth order filter using an active inductor In: Nath V., Mandal J. (Ed.) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems. Lecture Notes in Electrical Engineering, vol 556, Springer Singapore, ISBN 978-981-13-7090-8, pp 489-504.

SECTION 5 AWARD / PATENT / OLLABORATIONS

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. Chanchal Kumar Mishra	Got best speaker from North India.	World Congress, Bangkok, Thailand	International Conference	02.12.2019 - 03 12.2019

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
2.	Dr. Meena Singh	Women Researcher Award in International Scientist Award on Engineering, Science and Medicine	VDGOOD Professional Association.	International	16.11.19-17.11.2019
3.	Dr. Sandhya Rani	Guest of Honour (Science Exhibition)	Loyalla Convent	NA	01.10.2019
4.	Dr. Satish Kumar	Teacher Innovation Award	Sri Aurobindo Society	National	30.09.2019
5.	Dr. Meena Singh	Best Faculty award in International Award on Engineering, Science and Medicine	VDGOOD Professional Association.	International	14.09.19 - 15.09.2019
6.	Dr. Chanchal Kumar Mishra	2nd prize in Paper presentation	Directorate of Sports, Govt. of Jharkhand in association with Kolhan University, Chaibasa.	National	25.07.2019 – 27.07.2019
7.	Dr. Sandhya Rani	Mentor: Atal Tinkering Lab	Surendranath Centenary School	National	2019-2020

5.2 MoUs / Collaborations (Between 1st July 2019 to 30th June 2020)

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	ALCAST, SITRDO Industrial Estate, BIT, Mesra, Ranchi-835215 (Jharkhand)	Training, Industrial visit, Summer internship	31-8-2019
2.	Care Tronics, Roshpa Tower, Main Road, Ranchi-834001 (Jharkhand)	Training, Industrial visit, Summer internship	31-8-2019
3.	Meditron, SITRDO Industrial Estate, BIT, Mesra, Ranchi-35215, (Jharkhand)	Training, Industrial visit, Summer internship	31-8-2019
4.	Bridgetech, Ranchi, Jharkhand	Training, Industrial visit, Summer internship	31-8-2019
5.	IoT Laboratories, Ranchi.	Training, Industrial visit, Summer internship	31-8-2019

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.	Saraswati Puja and other cultural activities	Students of 6th semester	Dr. Chanchal Mishra Mr. P. R. Mahto Mr. Shankar Kumar	30.01.20 - 31.01 2020

6.2. List of Faculties

Sr. No.	Name	Designation
1.	Dr. S. S. Solanki	Professor and Director
2.	Mr. Devendra Kumar Jain	Assistant Professor
3.	Dr. Shambhu Sharan Kumar	Assistant Professor
4.	Mr. Ramkesh	Assistant Professor
5.	Dr. (Mrs.) Meena Singh	Assistant Professor
6.	Dr. G. M. Ansari	Assistant Professor
7.	Mr. Abhay Kumar	Assistant Professor
8.	Dr. (Mrs.) Sandhya Rani	Assistant Professor
9.	Dr. Satish Kumar	Assistant Professor
10.	Dr. T. K. Parashar	Assistant Professor
11.	Mr. Pradeep Toppo	Assistant Professor
12.	Mr. Ramnish Sinha	Assistant Professor
13.	Mr. Rajendra Mahto	Assistant Professor
14.	Dr. (Mrs.) Sumana	Assistant Professor
15.	Dr. (Mrs.) Neeru Singh	Assistant Professor
16.	Mrs. Rekha Kumari	Assistant Professor
17.	Dr. Mohd. Neyaz Ahsan	Assistant Professor
18.	Dr. Chanchal Kumar Mishra	Assistant Professor
19.	Mr. Manoj Kumar	Assistant Professor
20.	Mr. Niraj Kumar	Assistant Professor
21.	Ms. Nirupam	Assistant Professor
22.	Dr. Rohit Kamal Chatterjee	Assistant Professor
23.	Mr. Rakesh	Associate Lecturer
24.	Mr. N. K. Mukherjee	Associate Lecturer
25.	Mr. Maqubool Hossain	Associate Lecturer
26.	Mr. Narendra Kumar Singh	Physical Training Instructor
27.	Mr. Sanjay Jha	Teaching Assistant
28.	Mr. Shankar kumar	Teaching Assistant
29.	Mr. P. R. Mahto	Teaching Assistant

6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. P. Padmanabhan, BIT, Mesra	Dean AP	Chairperson
2.	Prof. (Dr.) S. S. Solanki	Professor and Director, University Polytechnic	Vice-Chairperson
3.	Dr. J. P. Pandey	Professor and Controller of Examination	Vice-Chairperson
4.	Dr. R. P. Sharma	HOD, Mechanical, BIT, Mesra	Institute Member and Subject Expert
5.	Dr. Sanjay Kumar Jha	HOD, Production, BIT, Mesra	Institute Member and Subject Expert
6.	Dr. P. R. Thakura	HOD, EEE, BIT, Mesra	Institute Member and Subject Expert
7.	Dr. Srikanta Pal	HOD, ECE, BIT, Mesra	Institute Member and Subject Expert
8.	Dr. Vandana Bhatacharjee	HOD, CSE, BIT, Mesra	Institute Member and Subject Expert
9.	Dr. S. Samanta	HOD, Pharmacy, BIT, Mesra	Institute Member and Subject Expert
10.	Mr. Arvind Kumar	GM, JSPL, Patratu	Member from Industry
11.	Dr. P. K. Chatterjee	GM, Mecon	Member from Industry
12.	Mr. Arvind Prasad	GM, BSNL	Member from Industry
13.	Mr. N. C. Agarwal	CEO, Meditron	Member from Industry
14.	Mr. Pratyush Pathak	SDE, BSNL	Member from Industry
15.	Mr. Ashok Prabhakar	SDE, BSNL	Member from Industry
16.	Dr. Noman Alam	Microbiologist, Medanta	Member from Industry
17.	Mr. Lalji Prasad	JE, JSEB	Member from Industry
18.	Mr. Dhiman Das	Proprietor, Mind Tree, Tatisilwai	Member from Industry
19.	Dr. Shambhu Sharan Kumar	Assistant Professor and coordinator	Internal Member
20.	Mr. Ramkesh	Assistant Professor	Internal Member
21.	Mr. Rekha Kumari	Assistant Professor and Coordinator	Internal Member
22.	Mr. Manoj Kumar	Assistant Professor and Coordinator	Internal Member
23.	Mr. Rakesh	Associate Lecturer	Internal Member
24.	Mr. P. Toppo	Assistant Professor	Internal Member
25.	Dr. G. M. Ansari	Assistant Professor and Coordinator	Internal Member
26.	Mr. Ramnish Sinha	Assistant Professor	Internal Member
27.	Dr. Sumana Kumari	Assistant Professor and Coordinator	Internal Member
28.	Dr. Meena Singh	Assistant Professor and Coordinator	Internal Member

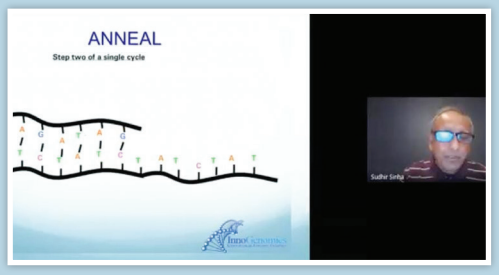
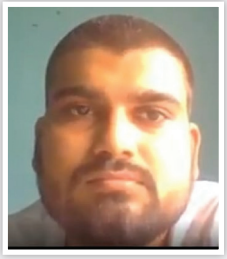
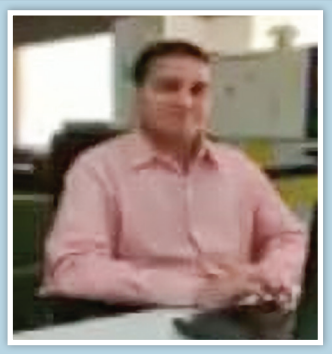
Sr. No.	Name of the Member	Designation	Role
29.	Mr. N. K. Mukherjee	Associate Lecturer	Internal Member
30.	Dr. Mohd. Neyaz Ahsan	Assistant Professor and Coordinator	Internal Member
31.	Dr. Neeru Singh	Assistant Professor	Internal Member
32.	Dr. T. K. Parashar	Assistant Professor	Internal Member
33.	Dr. R. K. Chatterjee	Assistant Professor	Internal Member
34.	Ms Sada Firdaus Alam	Guest Faculty	Guest Faculty

SECTION 7 OTHER INFORMATION

7.1 Achievements of Students

Sr. No.	Name of Student	Achievement/Position/ Award etc.	Organised by	Date and Venue
1.	Nishant Khalkho (2K19 batch)	Gold medal in Lawn Ball	National games held in Guwahati, under Khelo India	December 2019, Guwahati

7.2 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Sudhir Sinha, Founder and CEO, InnoGenomics Technologies, LLC, Founder and Chief Scientific Officer, Cadex Genomics and Adjunct Professor of Biochemistry, Tulane University Health Science Center	5th June 2020, through Google Meet.	
2.	Mr. Gautam Tufan, TCS	31st May 2020 through Google Meet.	
3.	Mr. Deepak Kumar, Cloud Analyst, NCR Corporation	30th May 2020, through Google Meet	

Sr. No.	Name of Visitor with Affiliation	Date of Visit	Picture
4.	Mr. Imran Ahmad CEO, Caretronics	13.03.2020	-
5.	Mr. Bibhuti, Cyber Cell, Ranchi, Jharkhand	05.03.20 & 06.03.2020	-
6.	Dr. Ashish Nayan, ex-Expert, Innovation & Entrepreneurship, NITI Aayog, Government of India	01.08.2019	

7.3 List of Distinguished Alumni

Sr. No.	Name, Batch and Affiliation	Short Description
1.	Sagar Kumar, EEE branch, Batch 2013	Technical internship at The Yokohama Rubber Co. Ltd. Japan
2.	Pawan Kumar, Automobile branch, Batch 2009	Field engineer at Jaiprakash associate Ltd. Shankhuwasabha, Nepal
3.	Kumar Buddhiraj, Manufacturing branch, Batch 2007	Deputy engineer at Tata Technologies Ltd. Jamshedpur
4.	Amar Kumar, BMLT branch, Batch 2005	Senior Laboratory Technologist Intermediate Reference Laboratory, Itki Sanatorium, STDC, Ranchi, Jharkhand
5.	Rahul Kumar, BMLT branch, Batch 2005	Territory Manager at Fujifilm India Pvt. Ltd. Ranchi
6.	Sudhir Kumar, computer branch, Batch 2004	DevOps Engineer at Australia post, Melbourne, Victoria, Australia

7.4 Any other relevant information

1. Mr. Abhay Kumar, Ms. Nirupam & Md. Maqubool Hosain attended webinar on the topic 'Artificial Intelligence: Science of Present and Future organised by Chandil Polytechnic Chandil on 19 June, 2020.
2. Dr. Satish Kumar appointed as reviewer of International Journal 'Environmental Monitoring and Assessment' Springer.
3. Dr. Satish Kumar delivered an Invited Lecture on International webinar titled 'Abatement Technique and Impact of COVID 19, organized by Physical & Environmental Science Bulletin, An International Bi-Annual Research Journal (www.pesbjournals.org), ISSN 2347-4866 from May 23-24, 2020.
4. Dr. Satish Kumar and Mr. Niraj Kumar served as Organizing Secretary and Joint Organizing Secretary, respectively, in an International webinar titled 'Abatement Technique and Impact of COVID 19, organized by Physical & Environmental Science Bulletin, An International Bi-Annual Research Journal (www.pesbjournals.org), ISSN 2347-4866 from May 23-24, 2020.
5. Dr. Satish Kumar serves as National level Reviewer to reviewed the ideas/innovations under the INSPIRE Awards-MANAK for the year 2019-20 organized by National Innovation

Foundation-India, Autonomous Body of Department of Science and Technology, Govt. of India.

6. Dr. Satish Kumar served as jury member in State Level program Inspire Award Manak scheme (Science exhibition) organized by Deptt. of Science & Technology, Govt. of India and Education deptt. at Ranchi on17-18 January, 2020.
7. Dr. Meena Singh appointed as reviewer of Journal International Traction on electrical Energy System in October 2019.
8. Dr. Meena Singh delivered an expert talk in national conference on "Computational and characterization techniques in Engineering and Science organized by Dept of Applied science and humanities, Rajkiya Engineering college Ambedkar Nagar during Sept 6,7 2019.
9. Dr. Shambhu Sharan Kumar was selected as Editorial Board member of International Journal of Engineering & Technical Research; ER Publications. ISSN: 2454-4698.
10. Dr. Shambhu Sharan Kumar was appointed as member 0f Kendriya Vidyalaya Managing Committee for the year 2020-21

7.4 Training and Placement Cell

1. 137 students of Diploma and BMLT were placed in various reputed companies and hospitals, respectively, in the year 2019-20.
2. Fourty five Students of Fifth semester (Manufacturing Engg. & Mechanical Engg) visited Jharkhand Govt MSME Tool Room on 11th Nov 2019.
3. Fourty two Students of Fifth semester (Automobile Engg) visited Jharkhand Govt MSME Tool Room on 13th Nov 2019.
4. Students of EEE visited Meditron Ltd., SIRTDO in November 2019.
5. Some students of BMLT VI semester availed fellowship during their internship-2020 in various Hospitals.

7.5 NSS

1. Dr. G. M. Ansari Programme Officer NSS has conducted, "Matdan Jagrukta Abhiyan" and "Sakcharta Abhiyan", "School Chalo Abhiyan", "Nukkad Natak on Sakcharta Mission" and "Nasha Mukti" in adopted Village Neori.
2. Dr. Neeru Singh Programme officer NSS has conducted various events such as Women's & Teacher's day celebration, Essay competition and collection of flood relief material for Bihar. Furthermore, the team organized an event for Orphanage welfare, Deworming day, Medicinal garden setup, Plantation at University Polytechnic campus. Also, Plastic free campaign was organized in the adopted village, Nayatoli, and in campus along with Fit India Plogging Run. Swachh Bharat Abhiyan was conducted every month in the campus of University Polytechnic.

7.6 Sports

1. Volleyball tournament was held in the month of September 2019 between Boys Hostels and the winner was Hostel 1.
2. Inter branch football match for girls was organized. Final diploma girls won the match.
3. Inter semester tournament was organized in boys category. Final 2K18 batch won the match.
4. A cross country race was organized on 1st February 2020 for girls and boys.
5. 13th Annual athlete meet was held on13th and 14th February 2020. In this meet 200 students participated in 26 athletic events. The individual championship for girls was bagged by Prity Kumari, EE, 2K17 and for boys it was bagged by Punit Tirkey, EE, 2K17. Overall championship trophy was bagged by Mechanical Branch.

BIT DISPENSARY





About Dispensary

The present BIT Dispensary is 20 bedded including 8 bedded two isolation wards fully functional Health Care Centre providing facilities to BIT Students, Faculties, their families and staff members & their families plus Villagers around the Campus. The Dispensary is functioning in all the 3 shifts (Round the clock 24x7) including Sunday & Holidays attending all OPD and IPD & Emergency Cases. Presently it is manned by 4 Allopath & 1 Homeopath Doctor put in shift/General shift and about 20 paramedical staff. We have also Dentist, Physiotherapist, Skin, eye specialist and psychiatrist as visiting doctor & Gynaecologist as visiting specialist 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 give our services in a better way. The dispensary is functioning essentially as a primary health centre and patients who need specialized treatment or hospitalization are referred to multi speciality hospitals. All students and staff members & their two dependent children are covered under Mediclaim policy by Oriental 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 Staffs

S.N.	Medical Officers	Contact No.
1.	Dr. Mona Deepa	7763855564
2.	Dr. Anju Kumar	7319905831
3.	Dr. Madhu Pramanik	9546745091
4.	Dr. Dharmendra Kumar	9576174033
	Visiting Specialist	**Specialization**
1.	Dr. Rishi Raj	Dentist
2.	Dr. Renu Sinha	Gynaecologist
4.	Dr. R. P. Chaudhary	Skin Specialist
5.	Dr. Pramod Kumar	Physiotherapist
6.	Dr. M. E. Asraf	Eye Specialist
7.	Dr. Subhodh Kumar	Psychiatrist
	Dressing Staffs	
1.	Mr. Anil Kumar	
2.	Mrs. Janki Devi	

S.N.	Medical Officers	Contact No.
	Ward Attendants	
1.	Mr. Radhe Shyam Mahto	
2.	Mr. Saurav Kumar	
3.	Mr. Jitendra Kumar	
4.	Mr. Akash Kermali	
5.	Mr. Bijay Kumar Lakra	
	X Ray Technician	
1	Mr. Kaleshwar Mahto	

S.N.	Homeopathy Physician	Contact No.
1.	Dr. P. Mohanty	9430118376
	Pharmacist	
1.	Mr. A. K. Tarun	
2.	Mr. B. P. Yadav	

S.N.	Homeopathy Physician	Contact No.
3.	Mr. Umesh Prasad	
	Store Keeper	
1.	Mr. Mahesh Kumar Sinha	
2.	Mr. Rajeev Ranjan	
	Nursing Staffs	
1.	Mrs. Renu Kumari	
2.	Ms. Suman Lovely Tigga	
3.	Mr. Ram Eqbal Singh	
4.	Mrs. Sanju Devi	

S.N.	Homeopathy Physician	Contact No.
5.	Mrs. Pinki Kachhap	
6.	Mrs. Nisha Kumari	
7.	Mrs. Sunita Pallai	
8.	Mrs. Nupur Tigga	
9.	Mrs. Aruna Goswami	
	Office Attendant	
1.	Mr. Bhuneshwar Munda	
	Lab Technician	
1.	Mr. Surendra Kumar Singh	

Facilities and Services:

1. OPD services including part time specialist OPD viz. Skin, Obs / Gynecologist & Dental surgeon & Physiotherapist.
2. In patient services 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

Service Details	
• Total number of patients	32758
• Number of outdoor patients treated & supplied medicines	32758
• Male	21762
• Female	10996
Categories	
• Students	11941
• Staff members & their dependants	15836
• Non-entitled cases	4981
• Number of patients admitted & treated	686
• Number of patients referred	327

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 net worked 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	:	1,50,466
Total Titles	:	48,927
Online Books	:	43,42,649

Online Journals, Conference

Proceedings, Standards	:	26, 228
Print Journals/Magazine	:	139

Print Journals

Indian	:	129
Foreign	:	00
Magazine	:	10
Indian	:	08
Foreign	:	02
CD/ DVD	:	4,400

Bound Volumes : 18,902

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

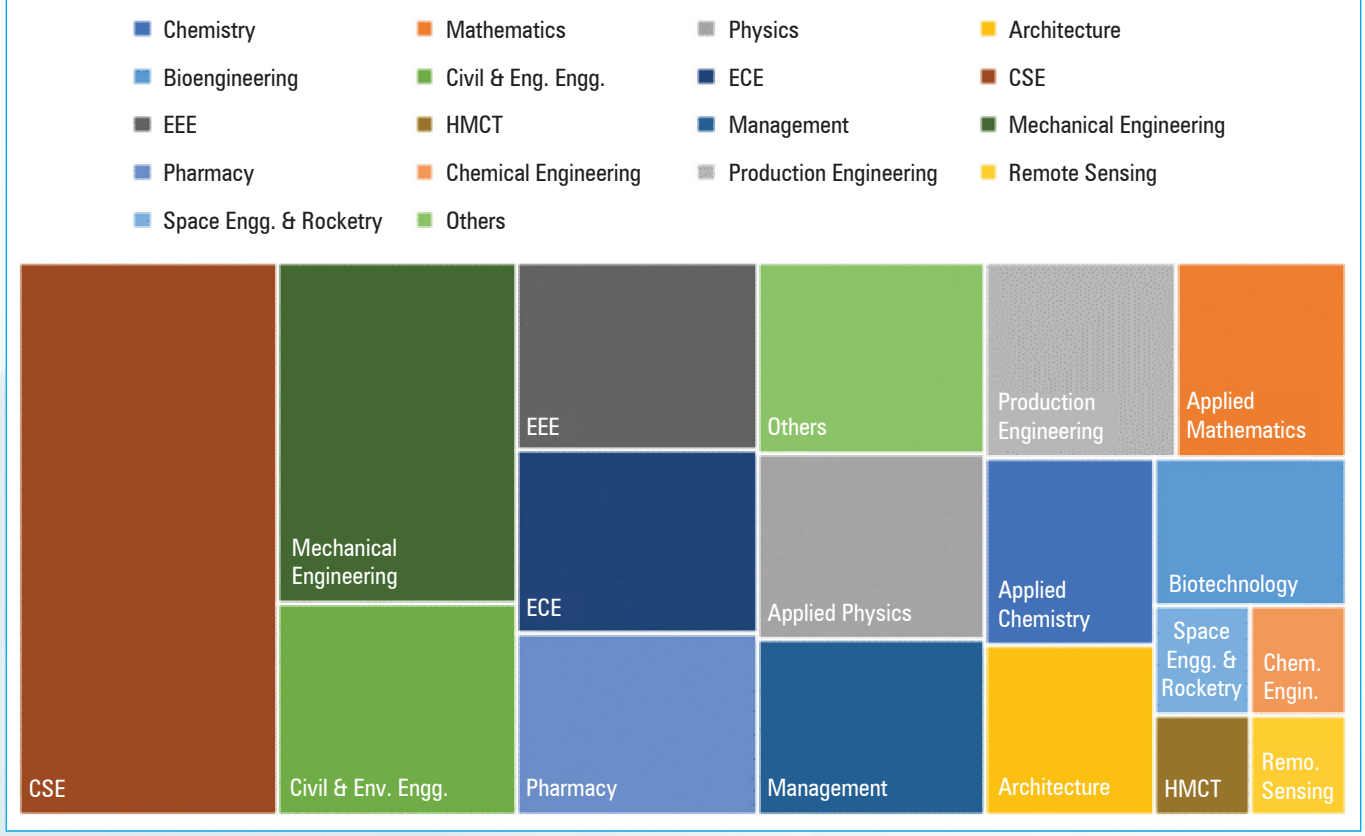
Description	No. of Books	Period of Loan
Teaching Faculty	08	One Month
Non-Teaching Staff	04	One Month
All Under Graduate and Post Graduate students	05	15 Days
All Under Graduate and Post Graduate SC/ST students	10	One Semester
All Under Graduate and Post Graduate OBC student	5	One Semester
Research Scholars	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 Consortium
- NDL India

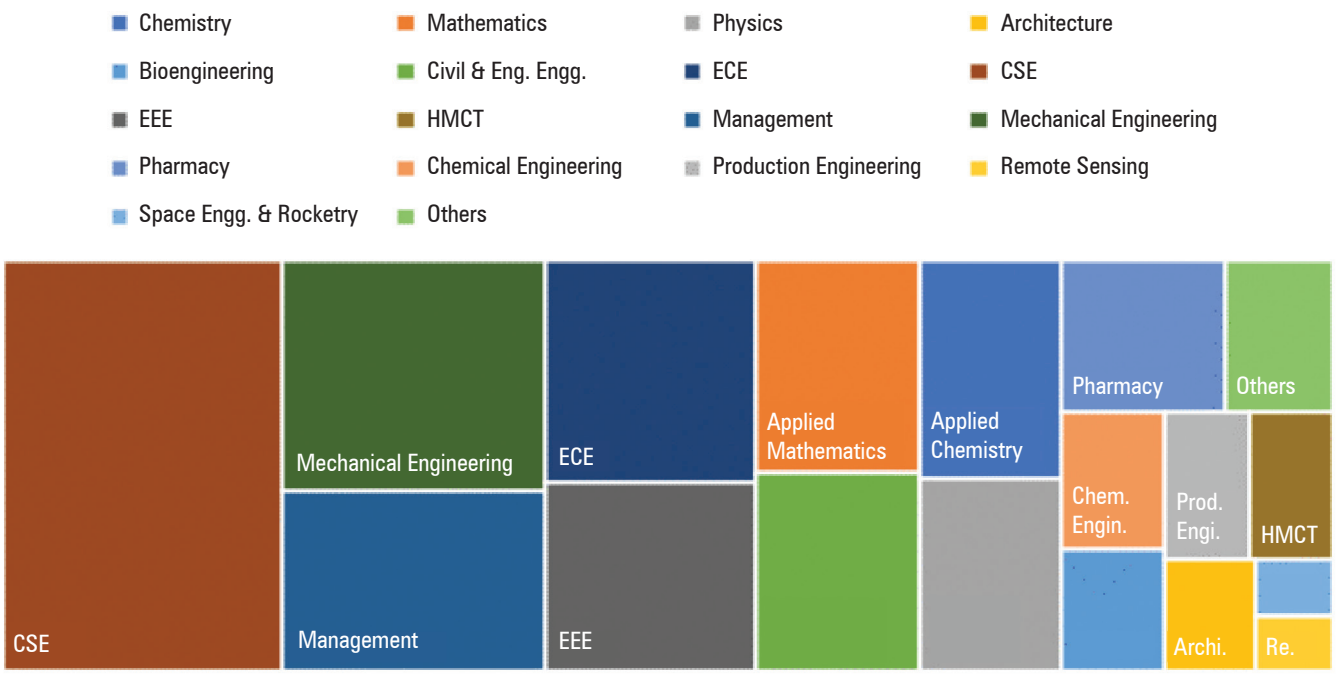
Department Wise Book Titles



Library Statistics

Total Books Added	:	Title - 198 & Volumes – 198
Total Journals Procured	:	Print - 34 & Online – 26, 228
Total Online books Procured	:	43,42,649
Total Number of Membership enrolled	:	1421
Total Number of Books Issued	:	26376
Total Number of Books Returned	:	28254

Department Wise Volumes



Details of Online Journals/books/thesis & dissertations

Sl. 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
11.	EBSCO Databases (Art & Architecture, Hospitality & Tourism Complete	http://web.ebscohost.com
12.	Economic & Political Weekly	http://www.epw.in
13.	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

Sl. No.	Publishers	Web Link
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 BIT Mesra Library automated with full RFID technology using Open source Software "KOHA.

TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME

Introduction and Objectives

The Project, Third phase of Technical Education Quality Improvement Programme (referred to as TEQIP-III) is fully integrated with the Twelfth Five-year Plan objectives for Technical Education as a key component for improving the quality of Engineering Education in existing institutions with a special consideration for Low Income States and Special Category States and support to strengthen few affiliated technical universities to improve their policy, academic and management practices. Based on the good performance in TEQIP-I and TEQIP-II and on the strength of our Institutional Development Proposal (IDP) for TEQIP-III, our Institute has been selected to participate in TEQIP-III.

Birla Institute of Technology is selected under sub-component 1.1 in which the Institute will receive Rs. 15 crores for Improving quality and equity in engineering institutions.

BIT is under the twinning arrangements to Build Capacity and Improve Performance of the institutions in partnership with Institute of Chemical Technology, Mumbai.

Induction programme for the benefit of newly joined students of first year B.Tech, Workshops for pedagogy training, improve student learning, Graduate employability, Faculty and Staff development, Joint research projects, Research and Development, Mentoring/Twinning, Management Capacity Development, Industry-Institute Interaction etc., Establishment of Infrastructure for SWAYAM PRABHA, enhanced GATE participation rate and Joint activities with Industry are among the main objectives of TEQIP-III.

Details of Activities Carried out:

❖ **Improvement in Teaching, Training and Learning Facilities:**

➲ **Up gradation of Existing & new laboratory facilities:**

- Horizon Material Testing Software with Dongle and Firmware for Old H100KT Universal Testing Machine and COMSOL Multiphysics software has been purchased through TEQIP-III for Mechanical Engineering Department
- Origin and Graph Pad Prism software has been purchased for Bioengineering Department
- Tensile Testing Machine, Autoclave, COMSOL software and workstations has been purchased for Chemical Engineering Department.
- FTIR Spectrometer, (Potentiometer with Electrodes { Pt- Electrode, Ag/AgCl & Sat. Calomel Electrode}, Digital Colorimeter, Gauss View 6 software, (FLAME PHOTOMETER, Benchtop Dissolved Oxygen M) and COD Meter has been purchased for Department of Chemistry.
- Thermal Conductivity Apparatus has been purchased for Central Instrumentation facility.
- Geo Studio Professional (Software), Centrifuge and Humidity Chamber has been purchased for Depat. of Civil & Env. Engineering.
- NetSim Simulation Software, Emulator, Computer based - Examination tools, Desktops & Workstations has been purchased for Department of Computer Science & Engg.
- Rsoft OptSIM v 2019, OptSIM Circuit add-on, ANSYS HFSS Academic CAE suite Software, Pupil's experiments with microwaves (One Set), Horn Antennas with connectors, 8085 Microprocessor kit and Microwave Active Components has been purchased for Department of ECE.
- NI ELVIS Rotary inverted Pendulum, ETAP Software and Micro Lab Box has been purchased for Department of EEE.
- Ref Management tools, Incites-Complete (Benchmarking and Analytics including JCR, e-books and RFID setup has been purchased for Central Library of the Institute.

- USB Data acquisition Card, Youngs Module, MedeA-VASP Software, origin software, LABVIEW software, UPS, Planck's constant set-up and Magnetron has been purchased for Department of Physics
- Ultrasonic Flaw Detector and Cubictek Manufacturing Process Simulation Software Kit has been purchased for Department of Production Engg.
- LAI Meter, Arc GIS software and Handheld spectroradiometer has been purchased for Remote Sensing Department.
- High Speed Camera has been purchased for Department of SE&R
- Furniture's are also procured for some of the Departments.

➲ **Faculty and Staff Development :**

- Two hundred twenty three faculty members were financially supported for attending seminar, conference, workshop, training programme etc. under TEQIP.

➲ **Workshop/Training program/ Conferences organized under TEQIP:**

Sr. No.	Title of Programme	Programme Duration
1.	Workshop on Pedagogy and Quantitative research	26.08.19 to 30.08.19
2.	Workshop on Teaching Learning in a Digital Age: MOOCS	13.09.19
3.	1st Research Scholar Colloquium	31.08.19 to 01.09.19
4.	SELP Program conducted for 1st year students 5 days program	05.08.19 to 10.08.19
5.	IOT Boot Camp organized by Dept. of CSE	14.08.19 to 19.08.19
6.	International Conference on Emerging Trends for Smart Grid Automation and Industry 4.0	5.12.19 to 7.12.19
7.	Jharkhand Science and Environment Festival (JSEF'20, East Zone)	01.01.2020
8.	National Science Day Celebration	28.02. 2020
9.	One day Webinar on Battle against COVID-19: Challenges and interventions. organized by Dept. of Bioengineering	27.06.2020

➲ **R&D Activities under TEQIP-III**

- Dr. A. Sathia Narayanan Principal scientist, NAL Bangalore delivered invited lecture in dept. of SE&R on 20.09.2019
- Dr. S. K. Karthick, Israel Institute of Technology delivered Invited lecture on 18.10.2019 in Dept. of SE&R
- Mr. Debashis Mitra, Ms. Shefali Agarwal, IIRS, ISRO Dehradun and Mr. Yalamanchili S Ra, IIT Bombay deliver Invited Lecture in Dept. of Remote Sensing on 20.10.2019.
- Dr. Rama Rao N., Asso. Prof. Dept. of Earth & Space Science, IIST, ISRO delivered lecture on 25.10.2019 in Dept. of Remote Sensing
- Dr. Sanjay Kumar, Asso. Prof. Aerodynamics Faculty Aerospace Engg. at IIT Kanpur delivered Invited talk on 08.11.2019 in Dept. of SE&R.
- Dr. M. Chandradathan, Scientific Advisor to Chief Minister of Kerala delivered expert lecture in Dept. of SE&R on 04.11.2019.
- Dr. Somsubhra Chakraborty, Agriculture & Food Engg. Dept. IIT Khragpur delivered invited lecture on workshop on coal chemistry and the Health impacts of coal in Dept. of Civil & Env. Engg.
- Dr. G. Bala, Prof. IISC Bangalore, delivered Invited talk in Dept. of Remote Sensing on 28.01.2020.

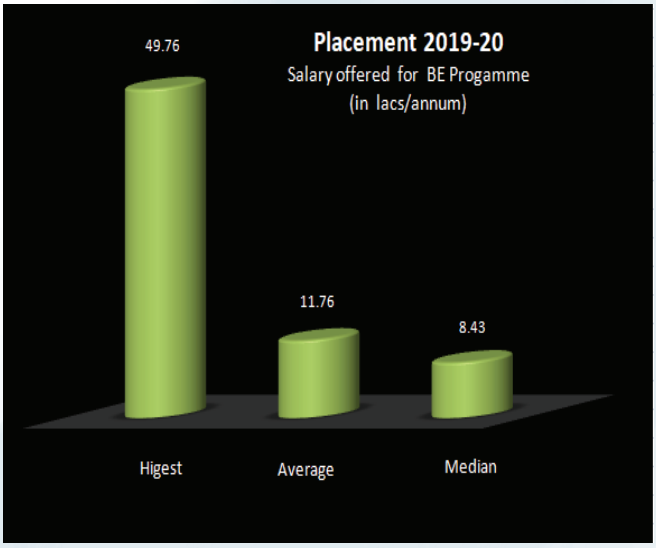
- **Assistantship to PhD Scholar**
  - Assistantship to 100 Ph.D Scholars has been provided through TEQIP.
  - Spares & expenditure for Electric & other cars has been financed for three teams of students: Team Srijan, Team Avean, Team Fire Bolt.
- **Industrial Visit**
  - Dr. Praveen Mishra, Department of Mechanical Engineering with 3rd Semester BE students went for Industrial visit at Paradeep refinery, IOCL Odisha from 25.10.19 to 28.10.19.
  - Dr. Indrajit Roy with UG & PG Students of Civil & Environmental Engg. Department went for Industrial visit at IIM Ranchi on 04.02.2020.
  - Dr. Richa N. K. Sharma with PG Students of Remote Sensing Department went to Industrial trip from 30.01.202020 to 11.02.2020 at K. J. Somaiya Institute of Applied Agriculture Research, Sameerwadi.
  - Dr. Binay Kumar with 24 students of Department of Production Engg. visited Tata Motors Pune on 17.01.2020 to 22.01.2020.
  - Mr. K. Vamsi Kumar and Dr. Tarkeshwar with 45 students of EEE Department visited Bokaro Steel Plant on 15.02.2020.
- **Development of Research Interest among student:**
  - Two hundred fifteen BE/ME/M.Tech/Ph.D students have been financially supported for attending Seminar/Conference etc. from TEQIP fund.

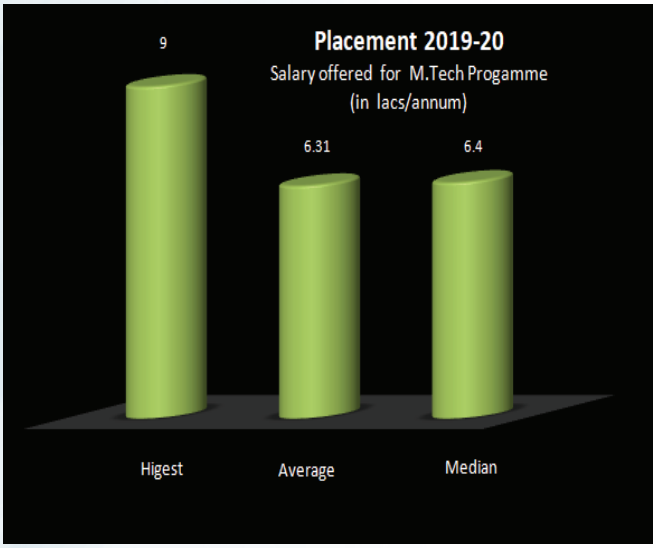


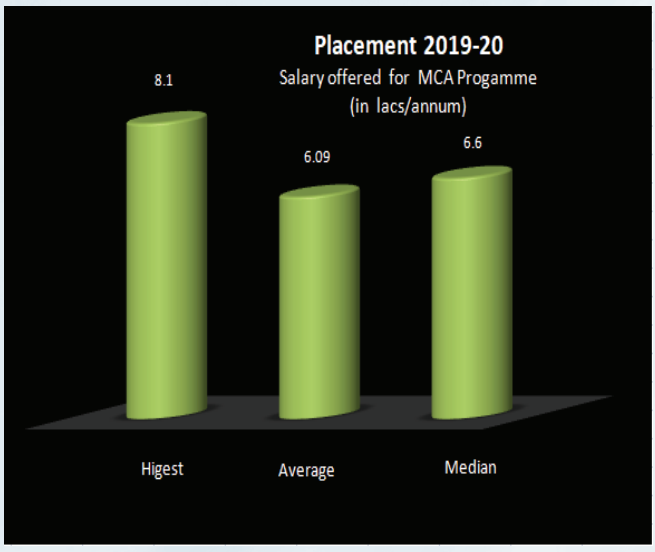
National Science Day

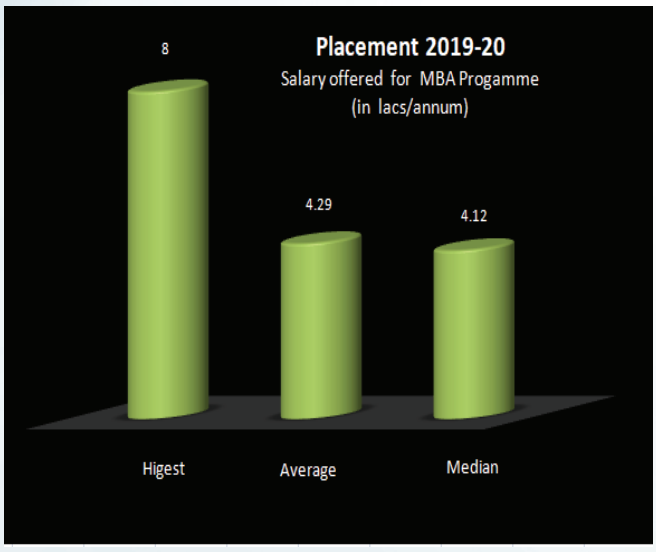
TRAINING AND PLACEMENT

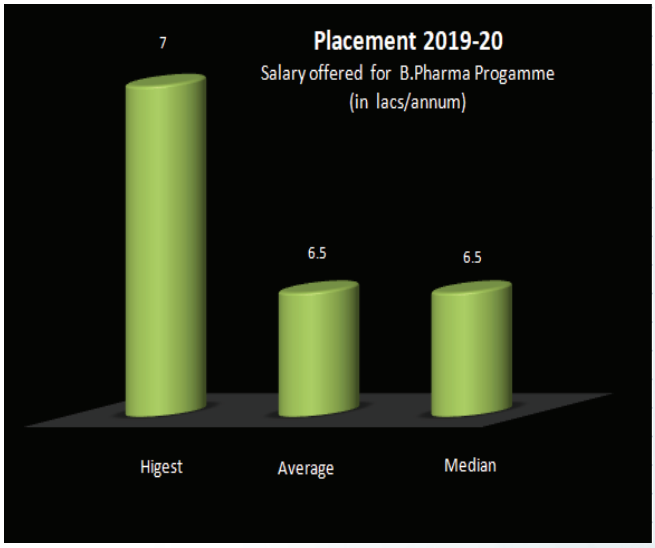
The Campus Recruitment Programme of BIT has been strengthening and also nurturing value added relationships with recruiters across a wide spectrum of industries over the years. Every year new milestones are achieved which speak for the strength of the BIT student community as well as the diversity in academic programmes. One of the key factors which bring BIT into limelight, as an institution of high repute, is its campus recruitment. Placements of high caliber students have always been adding to the health of the nation. The Campus Recruitment Programme of BIT, over the years, has been nurturing value added relationships with recruiters across a wide spectrum of industries. Every year new milestones are conquered and new standards are established which speak for the ever-growing strength of the BIT student community as well as the diverse academic programmes offered. During the **year 2019-20**, the Campus Recruitment Programme maintained its strong position with visits from 120 recruiters (FTE+Internship) across all campuses and by achieving an overall target of **831 job offers**. The Mesra campus boasts of an average package of **INR 11.76 lakhs** per annum and the highest national salary of **INR 49.76 lakhs** per annum for BE Programme.

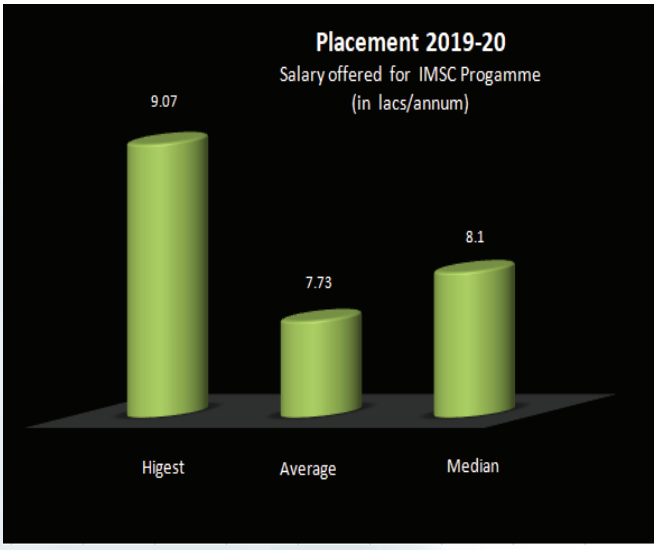












STUDENT PLACED IN VARIOUS DEPARTMENTS OF BIT MESRA

Sl. No.	Name of the Recruiters	BE	B. Pharma	IMSC	M.Sc.	M. Tech	MBA	MCA
1.	Accenture	3						
2.	Aditya Birla Group	6						
3.	ADROSONIC IT Consultancy Services Pvt. Ltd.	5		2				
4.	Affine Analytics	3				1	2	
5.	Airtel						1	
6.	Amadeus Software Labs	1						
7.	Amazon Development Centre India Pvt. Ltd.	2						
8.	Amdocs	13						18
9.	American Express	2						
10.	Analytics Quotient Services India Pvt. Ltd.	4						
11.	Atlassian	7						
12.	Avtec	3						
13.	Axis Bank	8						
14.	Bajaj Allianz						1	
15.	Bandhan Bank						8	
16.	BOX8	12						
17.	Byjus	5	2	4	4		1	
18.	CGI	3						
19.	CodeNation Solutions LLP	1						
20.	Cognizant	10						7
21.	Collabera					1		
22.	Cypress Semiconductors	2						
23.	DBSync	0					2	

Sl. No.	Name of the Recruiters	BE	B. Pharma	IMSC	M.Sc.	M. Tech	MBA	MCA
24.	Deloitte Consulting India Pvt. Ltd.	27		5		1		2
25.	DirectI	1						
26.	Doubtnut	2						
27.	Ericsson	3						
28.	EXL Service	2						
29.	Fastenal India Sourcing	3						
30.	Federal Bank					2		
31.	Futures First Info Services Pvt. Ltd.	5						
32.	GEP	4						
33.	Goldman Sachs	5						
34.	Harman Technology	3						
35.	HDFC AMC							1
36.	Hero Moto Corps	3						1
37.	IBM	14						2
38.	ICICI Bank						27	
39.	ICICI Prudential						2	
40.	ICICI Securities Limited						7	
41.	IFB	3						
42.	Increff	2						
43.	Indus Valley Partners (IVP)	2						
44.	IndusInd Bank						1	
45.	Infoedge	6						
46.	Infosys Ltd.	15				2		3
47.	Intuit	4						
48.	ISWPL	3						
49.	Jubilant	1						
50.	Jubilant Food						2	
51.	JUSCO	8						
52.	Lido Learning	4	2					
53.	Lowes India Services	9						
54.	Makemytrip	7						
55.	Maruti	2						
56.	Microland Limited	4						
57.	Microsoft India Development Centre	10						
58.	Mylo	1						
59.	NEI	3						
60.	Nomura RI							2

Sl. No.	Name of the Recruiters	BE	B. Pharma	IMSC	M.Sc.	M. Tech	MBA	MCA
61.	Novartis	3		3				
62.	Oda Classes	4						
63.	Ola	3						
64.	One Plus	2						
65.	Oracle GBU	1				1		
66.	Oracle OFSS	4				2		
67.	OYO Rooms	10						
68.	Pricewaterhouse Coopers (PWC)	23		4				
69.	Prism Johnson						1	
70.	PWC Bangalore	3						
71.	Reliance Industries Limited	14						
72.	S. K. Samanta	2						
73.	Saint Gobain	1						
74.	Salesforce	3						
75.	Samsung R&D Institute Bangalore	11						
76.	Samsung R&D Institute Delhi	16						
77.	Samsung R&D Institute Noida	5						
78.	Societe General	4						
79.	Synopsys	10						
80.	Tata Steel IT Sys	1						
81.	Tata AIG						4	
82.	Tata Autocomp	2						
83.	Tata Power	5						
84.	Tata Steel	17						
85.	Tata Steel IT Sys	4						
86.	Times Internet	1						
87.	Truminds	3						
88.	Utkarsh Small Finance Bank						7	
89.	Visa	1						
90.	Vodafone	1						
91.	Walmart Labs	10						
92.	Wheelseye Technology India Pvt. Ltd.	2						
93.	Wipro	4		1				
94.	Xion Multiventures	3						
95.	ZS Associates India Pvt. Ltd.	4						
	TOTAL	**423**	**4**	**19**	**4**	**10**	**66**	**36**

PHYSICAL EDUCATION & SPORTS

- **Inter Hostel Football tournament** was organised and final match was played on 25.8.2019 between Hostel -13 and Hostel -12. **Hostel – 13 was the winner** and Hostel- 12 runners-up.

- **Following teams of the Institute participated in the Spardha'19 at IIT BHU** during 17th October to 21st October 2019.

S. No.	Name of Games	Captain	Team Size
1.	Badminton (M)	Anurag Gupta Roll No. BE/10628/2016	04
2.	Badminton (W)	Shambhavi Pandey Roll No. IMH/10037/2016	03
3.	Basketball	Ganesh Murmu Roll No. BE/10280/2016	08
4.	Football	Tsetan Gombu Roll No. BE/10402/2016	14
5.	Volleyball	Siddant Maruti Roll No. IMH/10018/2016	08
6.	Athletic	Ankit Singh Chauhan B.Tech/10639/2018	03

Results : Ankit Singh Chauhan secured the 3rd place in Hammer throw event in Athletics

- **Power lifting competition was organized on 22.10.2019 and winners are mentioned below:**

S. No.	Weight category	Name	Branch	Place
1.	59 KG	Phuleshwar Baitha	Mechanical Engg.	1st
2.	66 Kg	Rayansh Raj	B.Pharm	1st
3.	74 Kg	Ankit Shukla	CHP	1st
4.	83 KG	Shubham Layek	IFT	1st

Dr. Gopal Pathak, Vice Chancellor, Jharkhand Technical University was invited as Chief Guest and Sri Inderjeet Singh as Chief Judge.

- **Vajra Sports Festival, 2019 was organised during November 06-10, 2019 and the winners are:**

Sl. No.	Games	Winners	Runners-up
1.	Cricket	NIT, Jamshedpur	BIT, Mesra
2.	Badminton (M)	BIT, Mesra	ST. Xavier's, Ranchi
3.	Badminton (W)	BIT, Mesra	NIT, Jamshedpur
4.	Volleyball (M)	BIT, Mesra	BIT, Sindri
5.	Volleyball (W)	BIT, Mesra	BIT, Sindri
6.	Football	BIT, Mesra	BIT, Sindri
7.	Basketball (M)	XISS, Ranchi	BIT, Mesra
8.	Basketball (W)	St. Xavier's, Ranchi	NIT, Jamshedpur
9.	Chess	BIT, Mesra	NIT, Jamshedpur

10.	Table Tennis(M)	BIT, Patna	NIT, Jamshedpur
11.	Table Tennis(W)	NIT, Jamshedpur	BIT, Mesra

BIT, Mesra was declared the Overall Champion of the tournament, whereas NIT, Jamshedpur was declared the Overall Runners-up

❖ **Cross Country Race was organized on January 25, 2020**

	BOYS		GIRLS	
S. No.	**Name**	**Place secured**	**Name**	**Place secured**
1.	Sumit Kumar Yadav	First	Niharika Sharma	First
2.	Doman Mandi	Second	Bushra Akhatar	Second
3.	Rohit Kumar Hembrom	Third	Swati Pradhan	Third

❖ **34th Annual Athletic Meet 2019-20 was organised during 04th – 05th February, 2020**

- Sri Binod Kumar, IAS, Commissioner, South Chotanagpur Division was invited as Chief Guest
- Shri Akhilish Kr. Jha, IPS was invited as Guest of Honours

i. Mr. Puleshwar Baitha, (Roll No. BE/10135/2016), of Mechanical Engineering and Miss Shreya Bhagat (2K17 batch) was declared Individual Champion in Men and Women categories, respectively.

ii. Hostel 2 and 4 were declared Overall Champion.

❖ **29th Chetan Devraj Memorial East Zone Inter Technical Cricket Tournament 2019-20 was organized during February 19-23, 2020.**

- BIT, Mesra was declared winner of the tournament.
- IGIT Sarang was declared runner-up.
- Harsh Mishra (B.TECH/10674/2019, ECE) of BIT Mesra was the Man of the Match in the final.
- Aman Kumar (BE/10042/2017, CSE) of BIT Mesra was the Man of the Series.

NATIONAL CADET CORPS

ABOUT NCC, BIT MESRA

3 JHAR CTC NCC, BIT Mesra is the composite technical company imparting Army training to young student enthusiasts. Our motto is Unity & Discipline, which is the foremost thing taught along with both theoretical studies as well as physical training. Technical Council has approved the duration of NCC training for 3 years (6 semesters) starting from 2017- 18 batch. Currently, NCC BIT Mesra has a total of 130 SD & SW cadets enrolled in the programme. NCC enhances the overall personality of the cadets and shape young minds as well as inculcate nationalism, patriotism among new generation.

TOTAL STRENGTH – 130 (SD Cadets – 100, SW Cadets – 30)

ACTIVITIES IN THE SESSION 2019-2020 -

Sl. No.	Activities	Venue	Date	No. of Cadets
1.	Independence Day Parade	BIT Mesra Campus	15/8/2019	130
2.	Cycle Rally	BIT Mesra Campus	10/9/2019	65
3.	Swachh Bharat Cleanliness Drive	BIT Mesra Campus	23/10/2019	30
4.	Prize Distribution Ceremony	Ranchi College	24/9/2019	7
5.	Flag Hosting Ceremony	Jharkhand War Memorial, Army Cantonment Dipatoli, Ranchi	9/1/2020	10
6.	Republic Day Parade	BIT Mesra Campus	26/1/2020	129
7.	Webinar on Independence Day	Online	15/8/2020	50

OUR CURRENT NCC COORDINATORS -

Sl. No.	Name of Faculty Member / NCC Officer	Department / NCC	Designation
1.	Kishore Kumar Senapati	CSE Department	Lieutenant
2.	Amritanjali	CSE Department	Caretaker Officer

MISCELLANEOUS -

Apart from imparting class lectures, NCC cadets are involved in a lot of social work, physical training & patriotic activities. In every semester, NCC BIT Mesra organizes huge events like blood donations, Cycle Rally, Village Awareness programme, Cleanliness Drive, Yoga performance in the premises of the college as well as in Ranchi, in which all cadets along with non cadet students, faculty members and workers take part in actively & enormously. The cadets also display their elegant drill on the occasion of Independence day & Republic Day every year. In today's scenario, we have sought to online media for connecting with all the cadets & establish the outreach of NCC BIT Mesra by using platforms like Facebook, Whatsapp, Instagram, Youtube & Telegram.

STUDENT ACTIVITIES

BIT TECHFEST PANTHEON (28th - 29th SEP, 2019)



Prof. Anandmaye Tej from Indian Institute of Space Science, Kerela speaks on Star formation



Dr. Amitesh Anand, Founder 366Pi speaks on Innovations and Startups



Prof. Soumen Mondol from S.N. Bose center for Basic Science, Kolkata speaks on Galactic Stars



Dr. Ms. S. Kaul, RIMS speaks on Menstrual Hygiene









Coding, Robotics and Model making events





BIT Sports FEST: Vajra 2019 (8th-10th NOV, 2019)



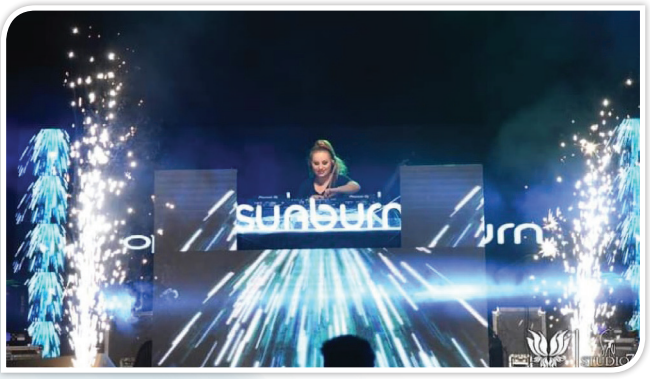


BIT Cultural Fest BITOTSAV 2020(13th -16th FEB, 2020)



Hon'ble Chief Minister of Jharkhand Sri Hemant Soren during the Heritage Night of BITOTSAV'20













Asis Kaur

Mithoon



Pro Nite Artists from Bollywood: Asis Kaur, Mithoon

Aerospace Society

The Aerospace society aims to ignite interest in the field of aviation and aerodynamics.We are an interdisciplinary organization of students whose mission is to innovate, learn and create attractive opportunities for research and interaction with industry professionals

Major Events & Footfall

- ANSYS CFD WORKSHOP — 25
- SOLIDWORKS WORKSHOP — 40
- RECRUITMENT DRIVES — 150+
- INTRODUCTION TO SIMSCALE AND SIMULATION OF EXTERNAL FLOWS — 45
- FOLD N FLY BITOTSAV (EVENT) — 45
- LECTURE ON SPACE RESEARCH BY PADMA SHRI M CHANDRADATHAN — 100

STARTED IN 2019
July'19-June'20

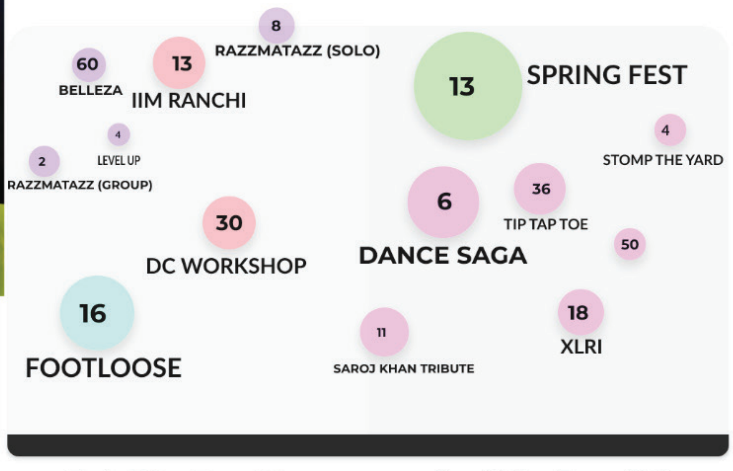
Social Media Platforms Established

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

IIM Ranchi

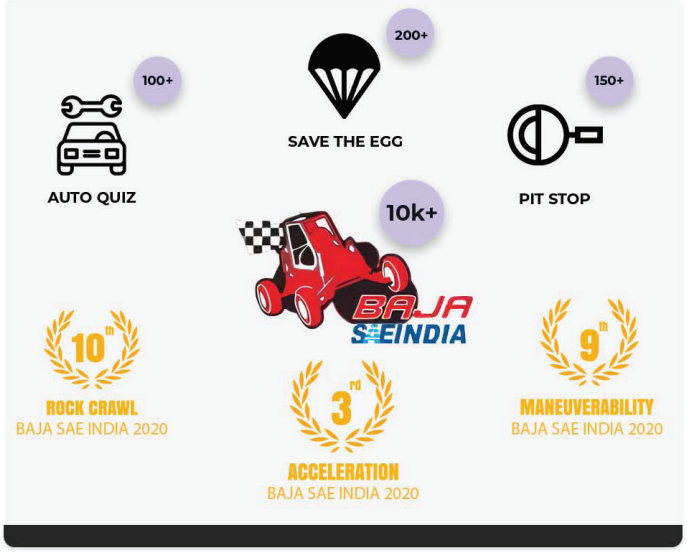
Secured the first position in the group dance event Rush' 20

FIREBOLT RACING

Major Events, Footfall & Achievements



A group of ardent automobile fanatics from multi disciplinary engineering backgrounds quenching their thirst for off roading. The team is symbolic of persevernce, passion, resilience and utmost deligence towards the dream of fabricating its own vehicle.



JULY '19- SEPT '20

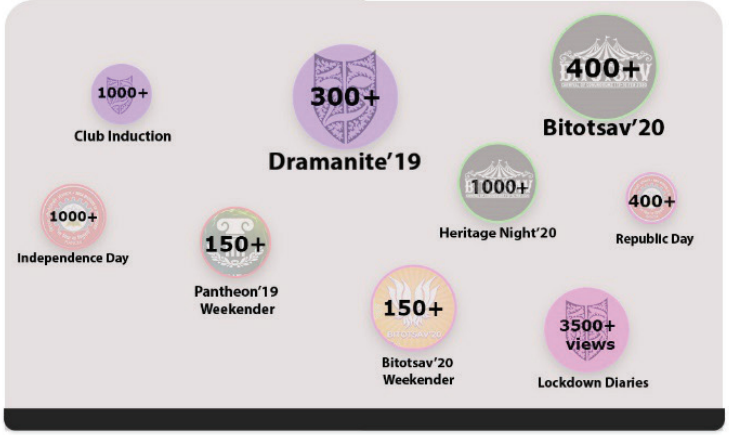
EHSAAS DRAMATICS SOCIETY, BIT MESRA.

It has seen great heights since its inception. We are a group of 100+ Drama enthusiasts, and together we have represented BIT Mesra at major intra and inter College fests across the country.



Winners at ENSEMBLE-VALHALLA'19 (Nukkad)
2nd Runner up at ENSEMBLE VALHALLA'19 (Play)
1st Runners up at MOOD INDIOGO'19 (Nukkad)
Winners at BITOTSAV'20 (Nukkad and Play)

Major Events and Footfall.



July'19 - June'20

Entrepreneurship Development Cell, BIT Mesra

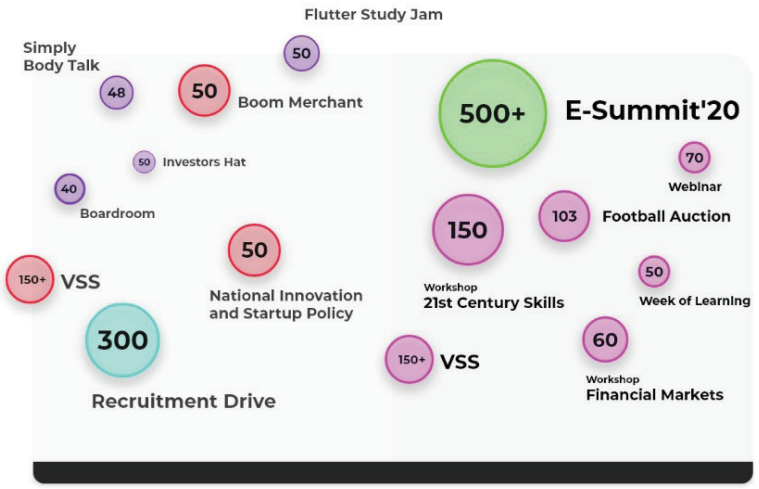
Started in 2007, Entrepreneurship Development Cell has fostered and celebrated innovation in college. The cell provides a platform and mentorship to student entrepreneurs in the college.



Winners at BITOSA MUMBAI BIZ FETE'19

BITOSA Mumbai in collaboration with BITMAA-NA organized BIT Shark Tank where Utkarsh Mishra and Hrithik Shubham were judged the winners for their start-up presentation.

Major Events & Footfall



July'19 - Dec'19 Jan'20 - June'20

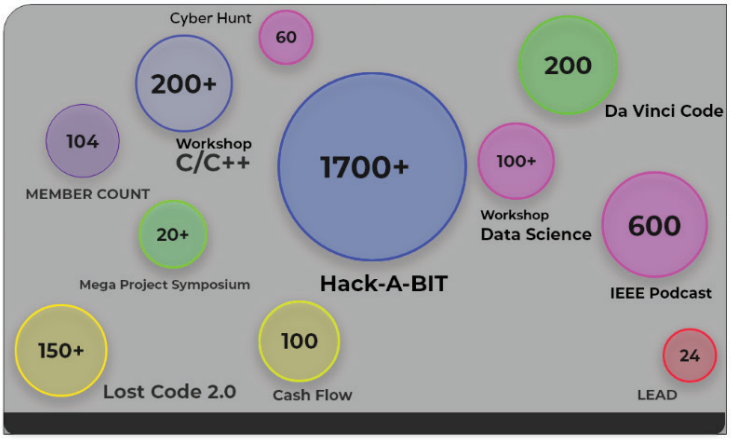
IEEE Students' Chapter Birla Institute of Technology, Mesra

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.



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.

MAJOR EVENTS



July'19 - June'20

IET BIT MESRA

The Institution of Engineering and Technology , On Campus , BIT Mesra

We are a congregation of tech aficionado trying to inculcate technological knowledge and programming skills in the student community. We have a vehement commitment towards new technologies and programming for the advancement of the society. Our ultimate goal is to feed the grey matter of our learners and aggrandize their dexterity in programming and other technical fields.



Major Events & Footfall



HACKATRON 2019 , BIT Sindri
5th position

ICPC (International Collegiate Programming Contest) Qualification Online Round
National Rank 11th-Kharagpur Regional, National Rank 82nd

Hack36 , NIT Allahabad
1st and 4th position

ABOUT IETE:

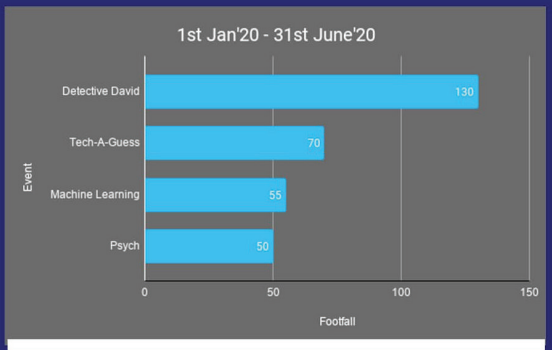
The Institution of Electronics and Telecommunication Engineers is India's leading recognised professional society devoted to the advancement of Science and Technology of Electronics, Telecommunication & IT.

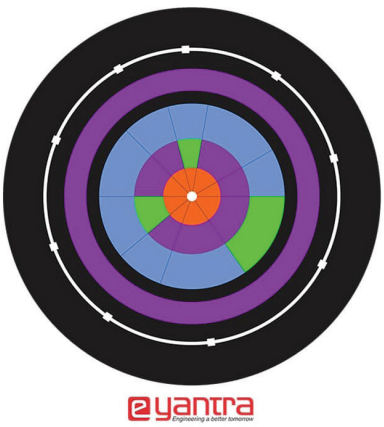
For more details visit: https://ietebitmesra.github.io/#about

IETE BIT MESRA STUDENTS' CHAPTER

MAJOR EVENTS & FOOTFALL







ACHIEVEMENT

Members of our club (Sanidhya Singh and Anil Singh Negi) along with their team were declared finalists at e-yantra Robotics competition under the theme supply Bot organised by IIT Bombay.

DHWANI-Music Club
BIT Mesra

Started in 1962, Dhwani- Music Club, BIT Mesra has encouraged the art of music in the college. The club provides a platform for students to pursue their keen interest in music, be it in any genre, instrument or language.



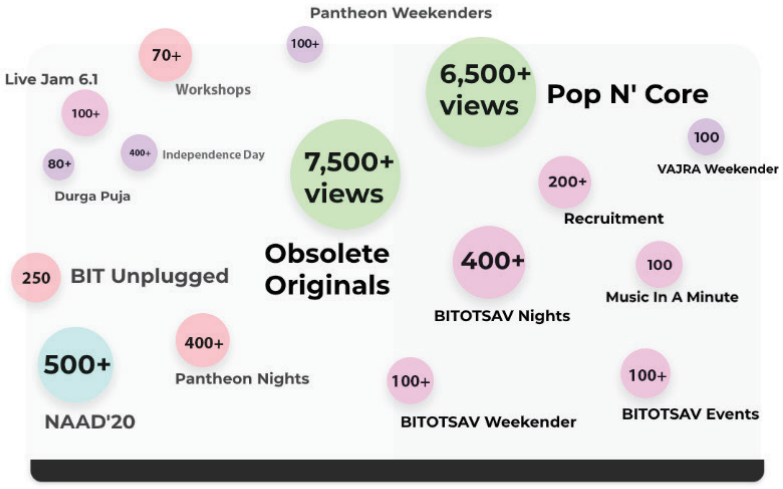
Achievements

Ensemble Valhalla 2019, XLRI -
2nd position in Euphoria, Battle of Bands
1st position in Raagalay, Solo Singing competition

Mood Indigo 2019, IIT Bombay -
2nd position in MI's Got Talent
Qualified for Finals of Singing the Indigos, Solo singing competition
2 bands qualified for the Semi finals of Mantra, Battle of Bands

Kashiyatra 2020, IIT BHU -
1st position in Sanlayan, Solo instrumental competition
2nd position in RaagSamar, Acoustic Unplugged Singing competition
3rd position in Sur, Solo Singing Competition

Major Events & Footfall



News and Publication Society,
BIT Mesra

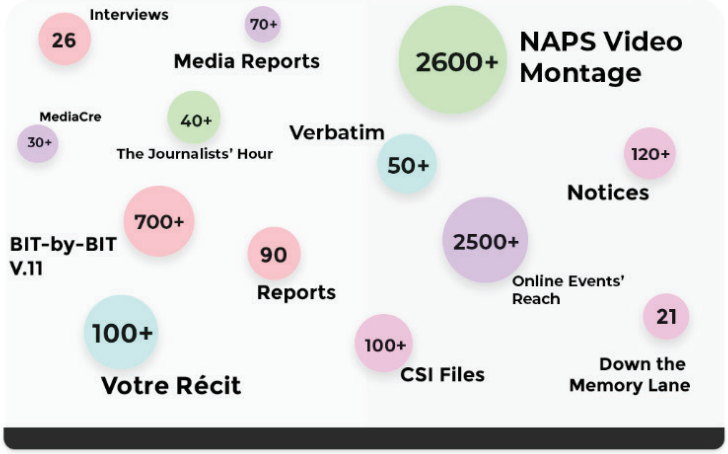
Started in 1973, the News and Publication Society acts as an interface between B.I.T. and the outer world and since its very inception, it has ensured that it presents a deservedly virtuoso image of this magnificent institution.



Achievements



Major Events & Footfall



3 JHAR CTC NCC, BIT Mesra

The Technical Composite Company is the only institution in collaboration with BIT Mesra providing Army equivalent training for theoretical, physical, emotional, & social development of the cadets inculcating the sense of patriotism & serving as a defense line in case of national or state emergencies.





Independence Day Parade	Cycle Rally	Swachh Bharat Abhiyan	Felicitation Ceremony	Flag Hosting Ceremony	Republic Day Parade
130	65	30	7	10	129
15/8/2019	10/9/2019	23/9/2019	6/10/2019	9/1/2020	26/1/2020



Major Events

PHOTOGRAPHIC SOCIETY

- DSLR Handling Workshop
- Basic Photography Workshop
- scribbled Frames
- Digixpress
- 'Utkrisht' Annual Fest
- 'Raunaq' Diwali Album
- 'Noel' Winter Album
- Advance Photography Workshop
- 'Talkies' Short Film Competition
- Fests Albums
- E-Pic
- Antrang
- 'Yaandein' Farewell Album

Achievements

Chitra Bharati Film Festival 2019

Our Film 'The Virtual Trap' has been chosen as the 3rd Best Film.

Rotaract BIT Mesra



ACHIEVEMENT

WAS AWARDED TWO AWARDS IN THE ANNUAL DISTRICT ASSEMBLY OF RID 3250. ONE OF THEM, TITLED "SUSTAINABLE LIVELIHOOD PROMOTION AWARD", WAS FOR OUR 'ANNUAL DONATION DRIVE'. THE OTHER ONE, TITLED 'BEST PROJECT UNDER PROFESSIONAL SERVICE' WAS FOR THE 'PAPER BAG PROJECT'

ROTARACT CLUB OF BIT MESRA IS AN OFFICIAL STUDENT CHAPTER OF ROTARY. THIS SOCIO-CULTURAL CLUB AIMS TO HELP THE COMMUNITY AND DEVELOP YOUTH COOPERATIVELY.

MAJOR EVENTS & FOOTFALL



JULY'19 - DEC'19 JAN'20 - JUN'20

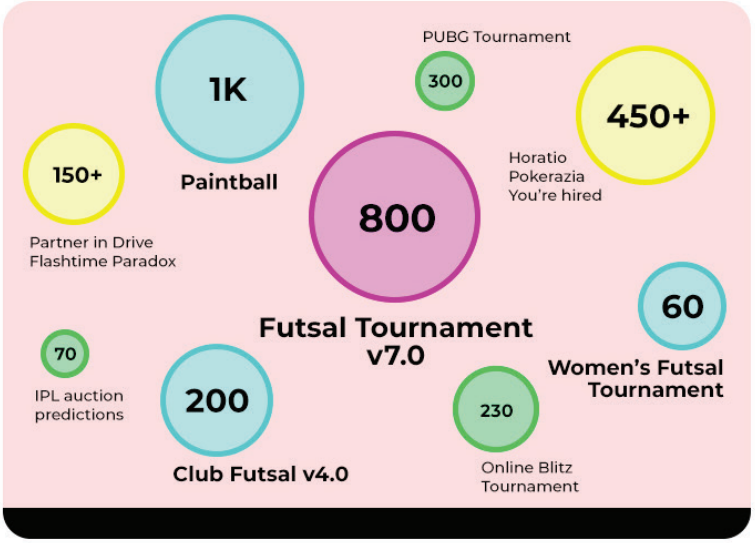
SPORTS MENTORSHIP & ADVENTURE CLUB



Vajra'19 in association with SMAC organised a recreational and competitive sport Paintball.

Sports Mentorship and Adventure Club encourage physical and mental well being of all students by organizing sports-related events. Also, we organize Mentorship Drives, meticulously designed in form of seminars, webinars and interactive sessions with our Alumni and other inspirational personalities.

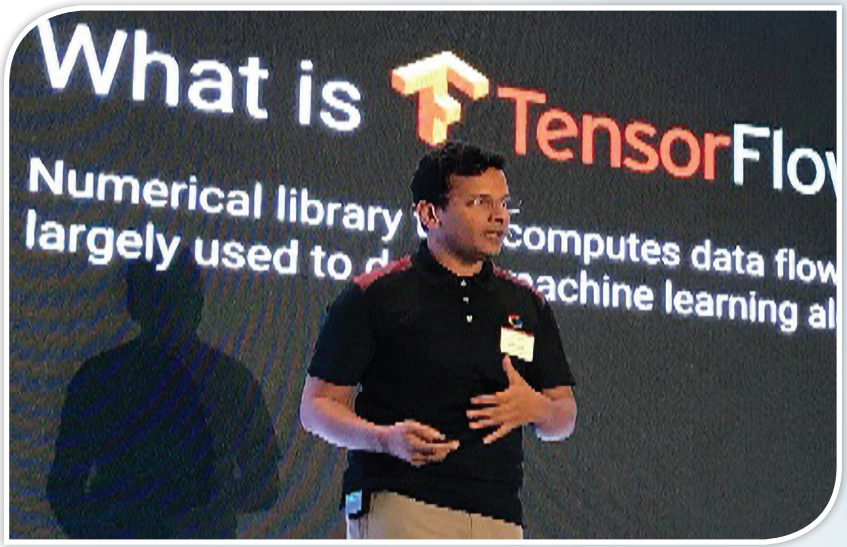
Major Events & Footfall

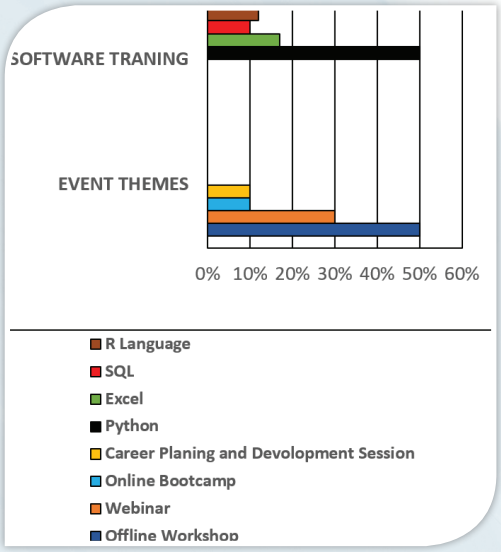


July'19 - June'20



Society for Data Science : This society strives to be the single focal point of overall development and growth of the student community with interest in areas of Mathematics, Programming, Statistics, Business Analysis, Data Analytics, Machine Learning, Big Data, etc.





Mr. Ajinkya Kolhe (Ml Facilitator - Google)

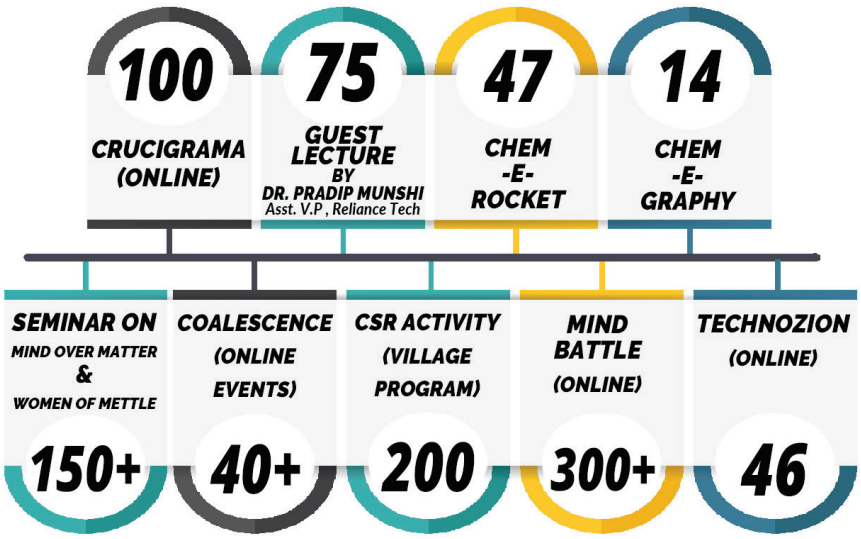
IIChE aims to promote the academic pursuit of chemical enthusiasts. To promote better relation between all the people through a framework of friendship and service. To provide opportunity for the students to enhance their knowledge and skills that will assist them in personal development.

MAJOR EVENTS 2019-2020

IIChE Student Chapter BIT Mesra

MAJOR EVENTS

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ANNEXURE – I

LIST OF DEANS & ASSOCIATE DEANS

DEANS

S.No.	Name & Address	Designation
1.	Dr. S. Konar Professor Department of Physics BIT-Mesra, Ranchi	Dean (Faculty Affairs & Sponsored Research)
2.	Dr. (Mrs.) P. Padmanabhan Professor Department of Bio-Engineering BIT-Mesra, Ranchi	Dean (Academic Programmes)
3.	Dr. Utpal Baul Professor Department of Management BIT-Mesra, Ranchi	Dean (Alumni & International Relations)
4.	Dr. S. Dutta Professor Department of Comp. Sc. & Engineering BIT-Mesra, Ranchi	Dean (Admission & Academic Coordination)
5.	Dr. Anand Kumar Sinha Professor Department of Civil & Environment Engineering BIT-Mesra, Ranchi	Dean (Students Welfare)
6.	Dr. Sudip Das Professor Department of Remote Sensing & Rocketry BIT-Mesra, Ranchi	Director (Internal Quality Assurance Committee)

ASSOCIATE DEANS

S.No.	Name & Address	Designation
1.	Dr. Ashoke Sharon Associate Professor Department of Chemistry BIT-Mesra, Ranchi	Associate Dean (Students Welfare)
2.	Dr. (Mrs.) Vijay Laxmi Professor Department of Electrical & Electronics Engineering BIT-Mesra, Ranchi	Associate Dean (Students Welfare)

S.No.	Name & Address	Designation
3.	Dr. V. K. Nigam Associate Professor Department of Bio-Engineering BIT-Mesra, Ranchi	Associate Dean (Students Welfare)
4.	Dr. R. P. Sharma Professor & Head Department of Mechanical Engineering BIT-Mesra, Ranchi	Associate Dean (Academic Programmes)
5.	Dr. Ritesh Kr. Singh Associate Professor Department of Production Engineering BIT-Mesra, Ranchi	Associate Dean (Faculty Affairs & Sponsored Research)
6.	Dr. Abhijit Mustafi Associate Professor Department of Computer Science & Engineering BIT-Mesra, Ranchi	Associate Dean (Admission & Academic Co-ordinations)

ANNEXURE – II

Board of Governors

S.No.	Name & Address	Designation
1.	Shri C. K. Birla Birla Tower (9th Floor) 25, Barakhamba Road NEW DELHI – 110 001	Chairman
2.	Joint Secretary (Central Universities) Nominee of MHRD, Govt. of India Dept. of Higher Education 233-C Shastri Bhawan NEW DELHI - 110 001	Member (Nominee of MHRD, GoI)
3.	Dr. (Mrs.) Renu Batra Additional Secretary II University Grants Commission Bahadur Shah Zafar Marg NEW DELHI - 110 002	Member (Nominee of UGC)
4.	Prof. Ajit K. Chaturvedi Director Indian Institute of Technology ROORKEE - 247 667	Member (Nominee of AICTE)
5.	Shri Shailesh Kumar Singh, IAS Principal Secretary Dept. of Higher & Technical Education Government of Jharkhand Nepal House, Doranda RANCHI - 834 002	Member (Ex-Officio)
6.	Shri Binod Kumar, IAS Commissioner South Chhotanagpur Division, Jharkhand RANCHI - 834 001	Member (Ex-Officio)
7.	Shri Shailesh Kumar Singh, IAS Principal Secretary to the Governor Hon'ble Governor of Jharkhand Raj Bhawan RANCHI - 834 001	Member (Nominee of the Chancellor)
8.	Shri Rohit Saboo M/s. National Engineering Industries Ltd. Khatipura Road JAIPUR - 302 006	Member (Nominee of HCT)
9.	Dr. Swapan Konar Vice Chancellor BIT, Mesra RANCHI - 835 215	Member (Ex-officio)

S.No.	Name & Address	Designation
10.	Dr. Swapan Kumar Ghorai Professor Department of Electronics & Comm. Engineering BIT, Mesra RANCHI – 835 215	Member (Institute Faculty)
11.	Dr. Itu Snigdh Assistant Professor Department of Computer Science & Engineering BIT, Mesra RANCHI – 835 215	Member (Institute Faculty)
12.	Shri Aroop Zutshi 43804 Green Hills Way Fremont, CA 94539 USA	Member (Nominee of the General Council)
13.	Dr. P. Ghosh Executive Director Birla Institute of Scientific Research Statue Circle JAIPUR – 302 001	Member (Nominee of the General Council)
14.	Dr. Arup Roy Choudhury Chief Commissioner West Bengal Right to Public Service Commission Kreta Surakha Bhawan 04th Floor, 11A Mirza Ghalib Street KOLKATA – 700 087	Member (Nominee of the General Council)
15.	Shri S. N. Agarwal Chairman Bhoruka Power Ltd. 48, Lavelle Road BANGALORE – 560 001	Member (Nominee of HCT)

ANNEXURE – III

Academic Council

Sl.	Name	Design.	Department	Role
1.	Dr. S. Konar	VC (Acting)	BIT	Chairman
		Dean	FA&SR	Member
2.	Dr. J. P. Pandey	CoE	Examination	Member
3.	Dr. Utpal Baul	Dean	A&IR	Member
4.	Mrs.(Dr.) P. Padmanabhan	Dean	AP	Member
5.	Dr. Ananad Kr. Sinha	Dean	Students Welfare	Member
6.	Dr. Sandip Dutta	Dean	Admn. & Acad. Coord.	Member
7.	Dr. Satyaki Sarkar	Asso. Prof & HoD	Architecture	Member
8.	Dr. Ramesh Chandra	Prof & HoD	Bio-Engineering	Member
9.	Dr. Gautam Sarkhel	Prof & HoD	Chemical Engg.	Member
10.	Dr. P. K. Srivastava	Prof & HoD	Chemistry	Member
11.	Dr. Sudeshna Chakraborty	Prof & HoD	Civil & Env. Engg.	Member
12.	Mrs.(Dr.) V. Bhattacharjee	Prof & HoD	Comp. Sc. & Engg.	Member
13.	Dr. Srikanta Pal	Prof & HoD	ECE	Member
14.	Dr. P. R. Thakura	Prof & HoD	EEE	Member
15.	Dr. Shradha Shivani	Prof & HoD	Management	Member
16.	Dr. Soubhik Chakraborty	Prof & HoD	Mathematics	Member
17.	Dr. R. P. Sharma	Prof & HoD	Mechanical Engg.	Member
18.	Dr. Subir Samanta	Prof & HoD	Pharm. Sc. & Tech.	Member
19.	Dr. (Mrs.) Sunita Keshri	Prof & HoD	Physics	Member
20.	Dr. C. Jeganathan	Prof & HoD	Remote Sensing	Member
21.	Dr. Mohan Varma	Prof & Head	SE&R	Member
22.	Dr. Sanjay K. Jha	Asso. Prof. & Head	Production Engg.	Member
23.	Dr. Nishikant Kumar	Incharge	HMCT	Member
24.	Dr. (Mrs.) M. Chakraborty	Prof.	Architecture	Member
25.	Dr. D. J. Biswas	Prof	Architecture	Member
26.	Dr. Rakesh Kumar Sinha	Prof.	Bio-Engineering	Member
27.	Dr. Kunal Mukhopadhyay	Prof.	Bio-Engineering	Member
28.	Dr. (Mrs.) Sudipta Goswami	Prof.	Chemical Engg.	Member
29.	Dr. (Mrs.) Usha Jha	Prof.	Chemistry	Member
30.	Dr. Birendra Kr. Singh	Prof.	Civil & Env. Engg.	Member
31.	Dr. (Mrs.) Bindhu Lal	Prof.	Civil & Env. Engg.	Member
32.	Dr. (Mrs.) Nisha Gupta	Prof.	ECE	Member
33.	Dr. S. K. Ghorai	Prof.	ECE	Member
34.	Dr. Vibha Rani Gupta	Prof.	ECE	Member

Sl.	Name	Design.	Department	Role
35.	Dr. S. S. Solanki	Prof.	ECE	Member
36.	Dr. R. Sukesh Kumar	Prof.	ECE	Member
37.	Dr. Sarbani Ray Chakraborty	Prof.	EEE	Member
38.	Dr. D. K. Mohanta	Prof.	EEE	Member
39.	Dr. T. Ghosh	Prof.	EEE	Member
40.	Dr. (Ms.) Vijaya Laxmi	Prof.	EEE	Member
41.	Dr. (Mrs.) Manju Bhagat	Prof.	Management	Member
42.	Dr. R. N. Bhagat	Prof.	Management	Member
43.	Dr. S. K. Jain	Prof.	Mathematics	Member
44.	Dr. S. Padhi	Prof.	Mathematics	Member
45.	Dr. D. P. Mishra	Prof.	Mechanical Engg.	Member
46.	Dr. P. R. P. Verma	Prof.	Pharm. Sc. & Tech.	Member
47.	Dr. Shiveshwar Jha	Prof.	Pharm. Sc. & Tech.	Member
48.	Dr. R. N. Gupta	Prof.	Pharm. Sc. & Tech.	Member
49.	Dr. (Ms.) Swastika Ganguly	Prof.	Pharm. Sc. & Tech.	Member
50.	Dr. K. Jayaram Kumar	Prof.	Pharm. Sc. & Tech.	Member
51.	Dr. B. N. Sinha	Prof.	Pharm. Sc. & Tech.	Member
52.	Dr. (Mrs.) P. M. Mazumder	Prof.	Pharm. Sc. & Tech.	Member
53.	Dr. (Mrs.) S. M. Verma	Prof.	Pharm. Sc. & Tech.	Member
54.	Dr. Sanjay Kumar Sinha	Prof.	Physics	Member
55.	Dr. Sanjib Kumar Rout	Prof.	Physics	Member
56.	Dr. A. P. Krishna	Prof.	Remote Sensing	Member Secretary
57.	Dr. Nilanchal Patel	Prof.	Remote Sensing	Member
58.	Dr. Sudip Das	Prof.	SE & R	Member
59.	Dr. S. S. Solanki	Director	University Polytechnic	Member
60.	Dr. R. C. Jha	Director	Off-campus, Deoghar	Invitee
61.	Dr. Vinay Sharma	Prof.	Off-campus, Deoghar	Invitee
62.	Dr. Arbind Kumar	Prof.	Off-campus, Deoghar	Invitee
63.	Dr. Asha Prasad	Director (I/c)	Off-campus, Noida	Invitee
64.	Dr. A. N. Jha	Director (I/c)	Off-campus, Lalpur	Invitee
65.	Dr. Abhinav Dinesh	Director	Off-campus, Jaipur	Invitee
66.	Dr. Arbind Kumar	Director (Actg.)	Off-campus, Patna	Invitee
67.	Dr. Balram Singh	Prof.	Off-campus, Patna	Invitee
68.	Dr. Rajeev Ranjan Sahay	Prof.	Off-campus, Patna	Invitee
69.	Dr. Shree Prakash Lal	Prof.	Off-campus, Patna	Invitee
70.	Dr. Ganesh Prasad Mishra	Prof.	Off-campus, Jaipur	Invitee
71.	Dr. Roopali Sharma	Prof.	Off-campus, Jaipur	Invitee
72.	Dr. Krishna M. Medicherla	Prof.	Off-campus, Jaipur	Invitee

ANNEXURE – IV

Finance Committee

S.No.	Name & Address	Designation
1.	Shri C. K. Birla Birla Tower (9th Floor) 25, Barakhamba Road NEW DELHI – 110 001	Chairman
2.	Dr. Swapan Konar Vice Chancellor, BIT, Mesra RANCHI – 835 215	Member
3.	Prof. Jose Varghese Professor of Eminence Christ University (Deemed University) Hosur Road BANGALORE – 560 029	Member (Nominee of UGC)
4.	Shri Shailesh Kumar Singh, IAS Principal Secretary to the Hon'ble Governor Governor Secretariat Raj Bhawan RANCHI – 834 001	Member (Nominee of Chancellor)
5.	Shri P. C. Agarwala Birla Building 9/1, R. N. Mukherjee Road KOLKATA – 700 001	Member (Nominee of General Council)
6.	Shri Rohit Saboo M/s National Engineering Industries Ltd. Khatipura Road JAIPUR – 302 017	Member (Nominee of BoG)
7.	Shri Y. Goenka Hon. Treasurer Birla Tower (8th Floor) 25, Barakhamba Road NEW DELHI – 110 001	Member

ANNEXURE – V

Building Works Committee

S. No.	Name & Address	Designation
1.	Vice Chancellor	Chairman
2.	Honorary Treasurer	Member
3.	Registrar	Member
4.	Dr. Manjari Chakraborty, Professor Department of Architecture	Member
5.	Additional Registrar (F&MM)	Member
6.	In-charge (Construction)	Member
7.	Assistant Registrar (Works)	Member Secretary

ANNEXURE – VI

List of Heads/ In-Charges of the Department

S.No.	Name	Designation	Department
1.	Dr. Satyaki Sarkar	Asso. Prof. & Head	Architecture
2.	Dr. Ramesh Chandra	Prof & HoD	Bio-Engineering
3.	Dr. Gautam Sarkhel	Prof & HoD	Chemical Engineering
4.	Dr. P. K. Srivastava	Prof & HoD	Chemistry
5.	Dr. Sudeshna Chakraborty	Prof & HoD	Civil & Environmental Engineering
6.	Mrs.(Dr.) Vandana Bhattacharjee	Prof & HoD	Computer Science & Engineering
7.	Dr. Srikanta Pal	Prof & HoD	Electronics & Communication Engineering
8.	Dr. P. R. Thakura	Prof & HoD	Electrical & Electronics Engineering
9.	Dr. Shradha Shivani	Prof & HoD	Management
10.	Dr. Seshadev Padhi	Prof & HoD	Mathematics
11.	Dr. R. P. Sharma	Prof & HoD	Mechanical Engineering
12.	Dr. Subir Samanta	Prof & HoD	Pharmaceutical Sciences & Technology
13.	Dr. (Mrs.) Sunita Keshri	Prof & HoD	Physics
14.	Dr. C. Jeganathan	Prof & HoD	Remote Sensing
15.	Dr. Mohan Verma	Prof & Head	Space Engineering & Rocketry
16.	Dr. Sanjay K. Jha	Asso. Prof. & Head	Production Engineering
17.	Dr. Nishikant Kumar	In-charge	Hotel Management & Catering Technology
18.	Dr. Gautam Sarkhel	In-charge	Central Instrumentation Facilities
19.	Mr. Mahendra Kr. Singh	In-charge	Physical Education & Sports

ANNEXURE – VII

Addresses of Other Campuses of BIT-Mesra

DEOGHAR
BIT Mesra, Deoghar Campus
P.O.- Ratanpur, Jasidih,
Deoghar - 815 142 (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. & 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

S. No.	Name	Designation
1.	**Dr. (Mrs.) Nisha Gupta** Professor Department of Electronics & Comm. Engineering	Presiding Officer / Chairperson
2.	**Dr. Venkatesan J.** Associate Professor Dept. of Pharmaceutical Science & Technology **Dr. (Ms.) Itu Snigdh** Assistant Professor Dept. of Computer Science & Engineering	Members (Two Teaching Staff)
3.	**Mr. Rahul Rai** Deputy Registrar **Mrs. Nidhi Jaiswal** Assistant Registrar (Legal)	Members (Two Non-teaching Staff)
4.	**Ms. Kaushiki Sengupta**	Member (Representative of NGO)
5.	Co-opted each from Ph.D. Scholar, PG Student & UG Student.	Member (03 Students Nominee)



BIRLA INSTITUTE OF TECHNOLOGY

(Deemed to be University)

Mesra, Ranchi - 835 215, Jharkhand, India

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