# 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 626 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 2018-19 follows.

1. **Board of Governors:**
   Key decisions regarding development of the institute which were taken by the BOG are listed below.

- Revised UG and PG curricula conforming to Outcome-Based Education (OBE)/Choice Based Credit System (CBCS) and revised Ph.D. Ordinance have been made operational in the AY 18-19.
- 9 UG students participated in Immersive Summer Research Experience (ISRE) at Illinois Institute of Technology (IIT), Chicago and 3 at Carnegie Melon University (CMU) with equal sharing of expenses by BIT, BIT Mesra Alumni Association-North America (BITMAA-NA) and the participants
- The 7th CPC stands fully implemented. Arrears of 7th CPC stand fully paid.
- 7 distinguished academics/researchers have been inducted as Adjunct Professor/Adjunct Fellow.
- Institute Research Fellowship (IRF) provision matching those from CSIR, UGC, etc. has been implemented w.e.f. SP-2018 session.
- Additional solar power capacity of 700 KW is deployed to bring up the installed solar power capacity in the campus to 1 MW.
- Upgradation of existing 11KVA electrical sub-station to 33 KVA sub-station is under implementation

## 2.0 Student Placements

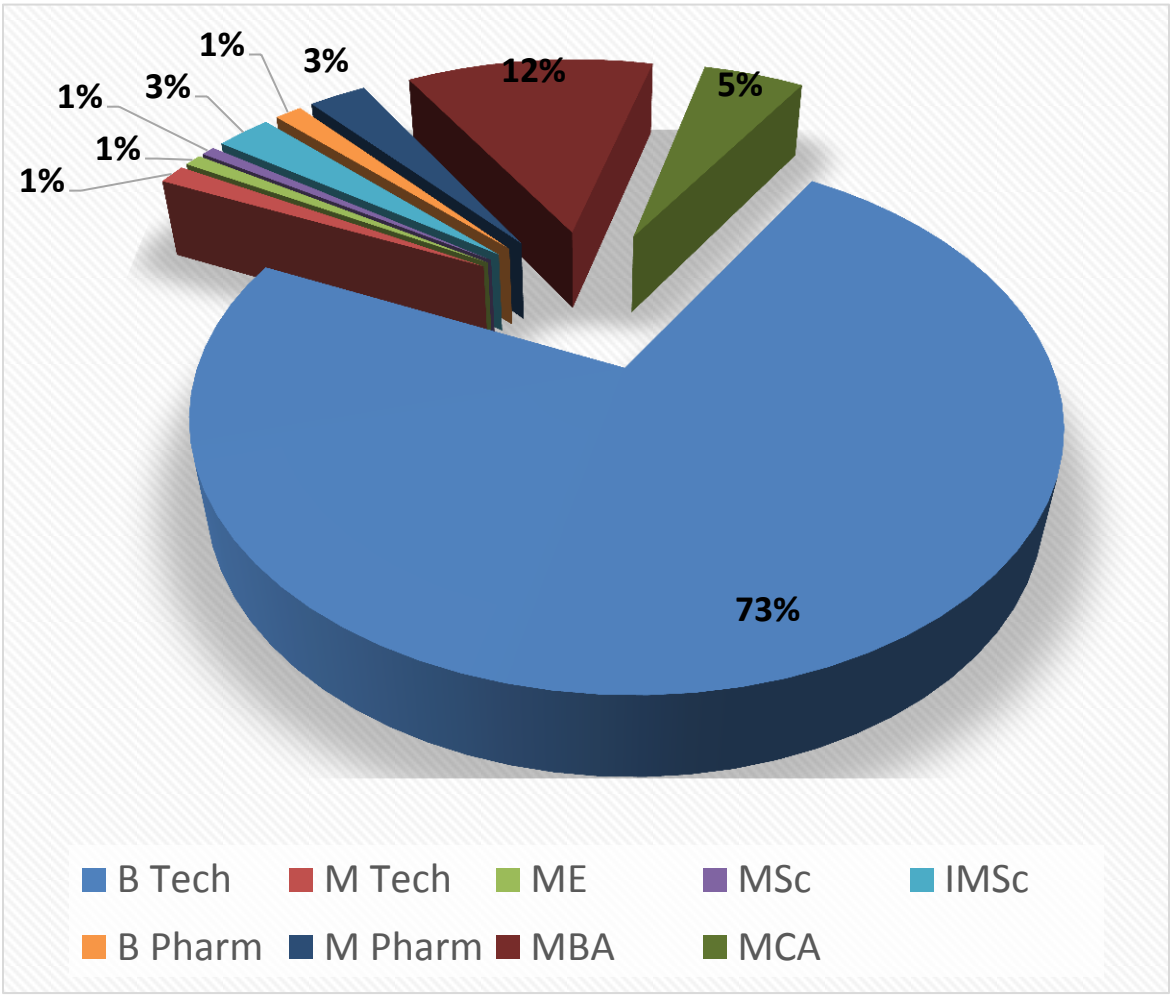
The Campus Recruitment Programme for students demonstrates the confidence of the Industry in the quality of graduates of BIT Mesra. In Academic Year 2018-19, as many as 108 recruiters visited the campus and generated a total of 614 offers including 190 offers for internship made by different companies. Numbers of Internship offers across different sectors of the industry.

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.
24 companies have visited BIT Mesra for the first time this year and the recruiters who visited last year for the first time have continued this year, and the process yielded satisfactory results. Several meritorious students have received multiple offers.

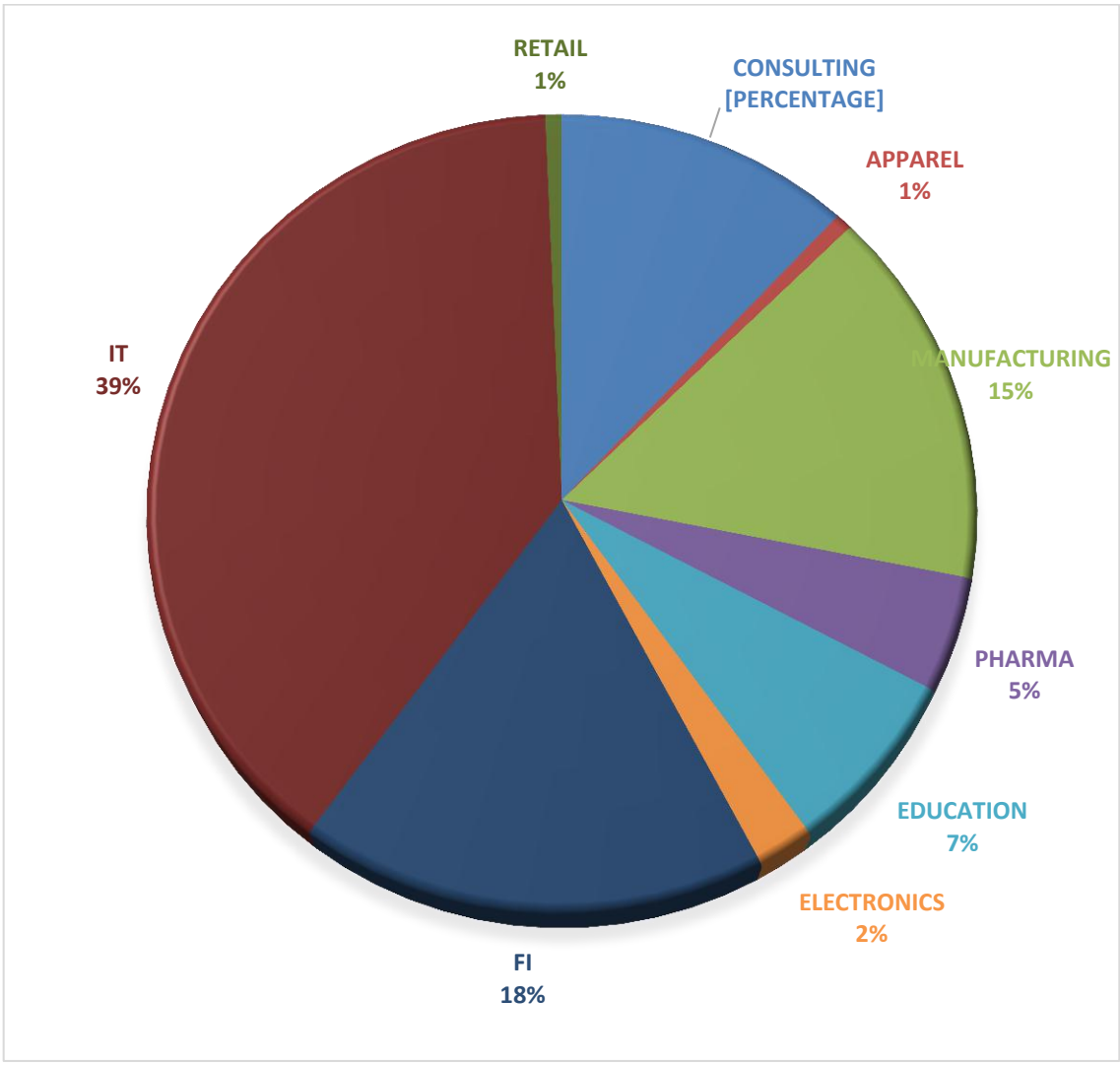
The BE students of Mesra Campus with a total batch strength of 666 and a total of 554 eligible students, received a total of 398 offers and 380 students have been placed this year. Considering the percentage placement of eligible students, 88% students from BE Computer Science, 73% from BE Electronics & Communication & 94% from BE Information Technology, 56% of the BE Mechanical Engineering, 63% of BE Production Engineering and 62% of BE Electrical Engineering students got offers from different sectors. Likewise, 65%, 52%, 44% and 38% of students from Chemical, Chemical & Polymer, Civil and Bio-Engineering respectively have got placed.
Major Recruiters were Adobe, Microsoft, Salesforce, Amazon, Amazon Development Center, Intuit, Goldman Sachs, Walmart Labs, Vm Ware, Visa, SocieteGenerale, HP, Samsung R&D, Accenture, Axis Bank, Maruti Suzuki, Vedanta, HCL Technologies.

The Average Salary for various programmes is B.E - INR 10.56 L, M.E - INR 5.8 L, M.B.A - INR 4.3 L, M.C.A - INR 5.28 L, B. Pharm - INR 3.9 L, M. Pharm - INR 4.37 L & IMSc – INR 6.2 L.

**Program wise Campus Placement Distribution**



**Sector Wise Placement**




## 3. GP BIRLA SCHOLARSHIP AND OTHER INITIATIVES

- It is my pleasure to mention that during the period GP Birla Scholarships worth INR 2.25 Crore were awarded, and INR 37.16 Lakhs have been provided to fund the best BE & ME Projects.

## 4. ACADEMIC & RESEARCH ACTIVITIES:

- CBCS Course Structure has been implemented for all UG and PG courses at BIT Mesra and its extension centers.

- Dr. Deepak Kumar has successfully completed his Post-Doctoral Research from Aalto University, Finland from July-December 2018.

- Mr. Subrat Kumar Swain has been selected for Ph.D. Programme with a scholarship at Kyungpook National University, South Korea and will be joining in Feb. 2019

- More than 75% of the Programmes being offered by the Institute are accredited by NBA.

- Dr. D. K. Mohanta has been named as Program Committee Member for INTELLI 2017, The Sixth International Conference on Intelligent Systems and Applications, 2018, Nice, France and 31st Canadian Conference on Computer and Electrical Engineering (CCCE18), Quebec City, Canada, 2018

- Industrial Visit to Jindal Steel & Power Limited, Patratu was organized for ME Students of Department of EEE on 12th Dec.2018

- Ms. Varsha Singh joined as DST Woman Scientist, under the mentorship of Dr. Padmini Padmanabhan

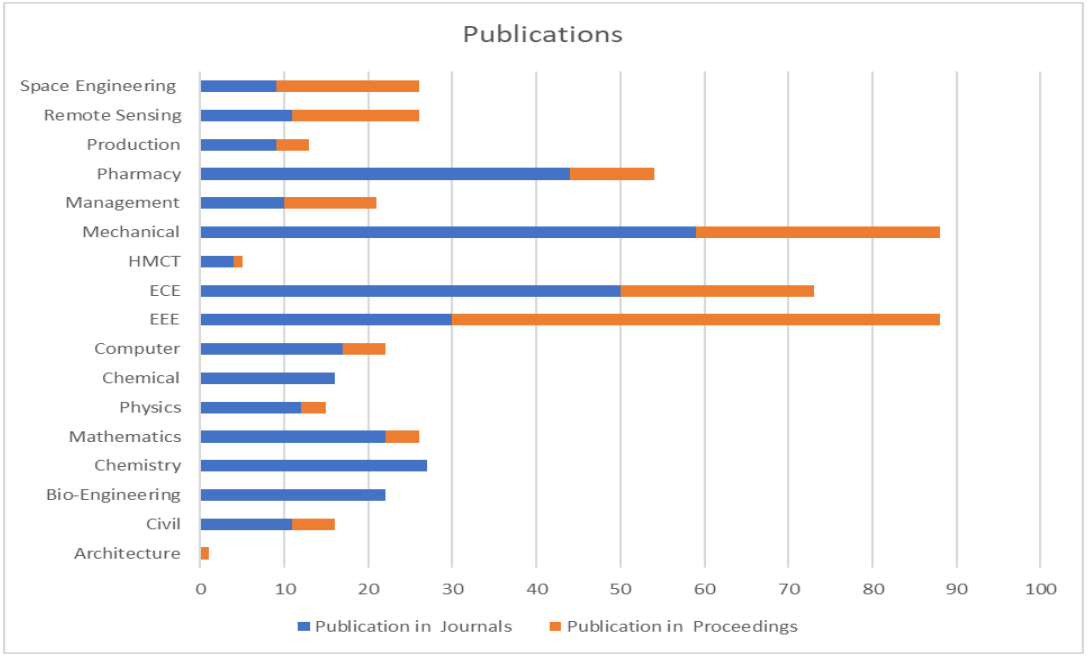
- Dr. D. M. Pandey- Organizing Committee Member in 3rd International Conference on Molecular Biology & Nucleic Acids-2018 scheduled at Toronto, Ontario, Canada from August 27-28, 2018

## 5. 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 March 2018 to Feb 2019, 308 faculty members were supported by the Institute to attend National Seminars, and many faculty members were supported financially to attend International Conferences. 44 Ph.D. scholars are being provided with Institute Research Fellowships.

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:


Publications
Space Engineering
Remote Sensing
Production
Pharmacy
Management
Mechanical
HMCT
ECE
EEE
Computer
Chemical
Physics
Mathematics
Chemistry
Bio-Engineering
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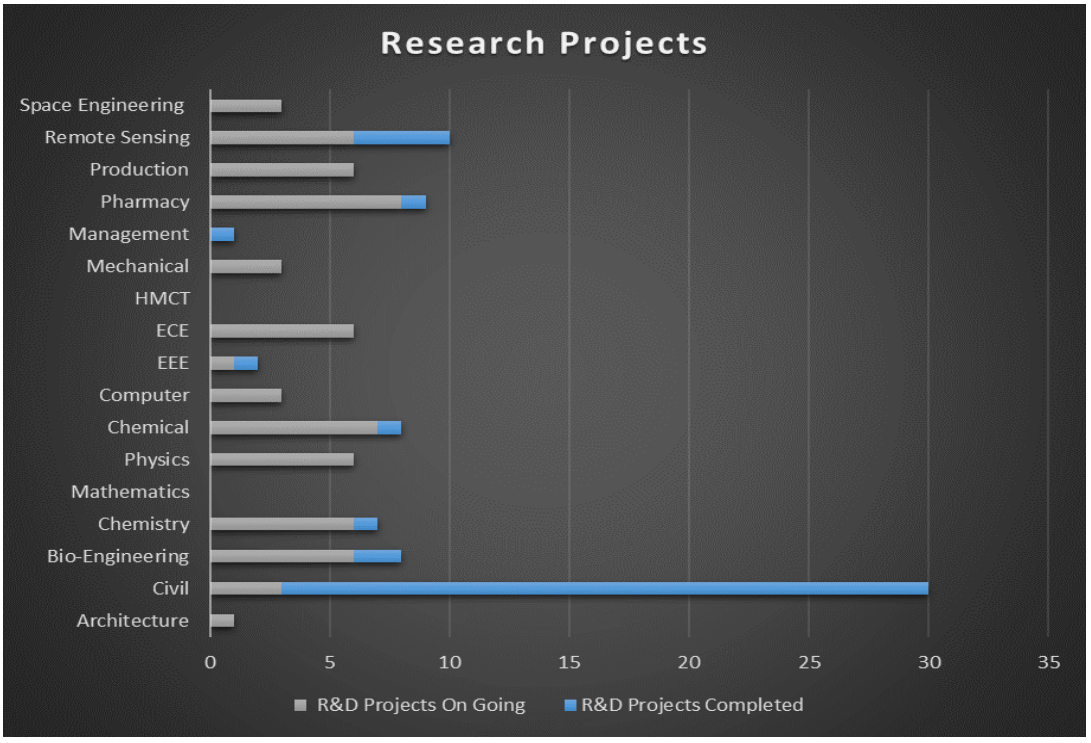
100
Publication in Journals
Publication in Proceedings


Research Projects
Space Engineering
Remote Sensing
Production
Pharmacy
Management
Mechanical
HMCT
ECE
EEE
Computer
Chemical
Physics
Mathematics
Chemistry
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Civil
Architecture
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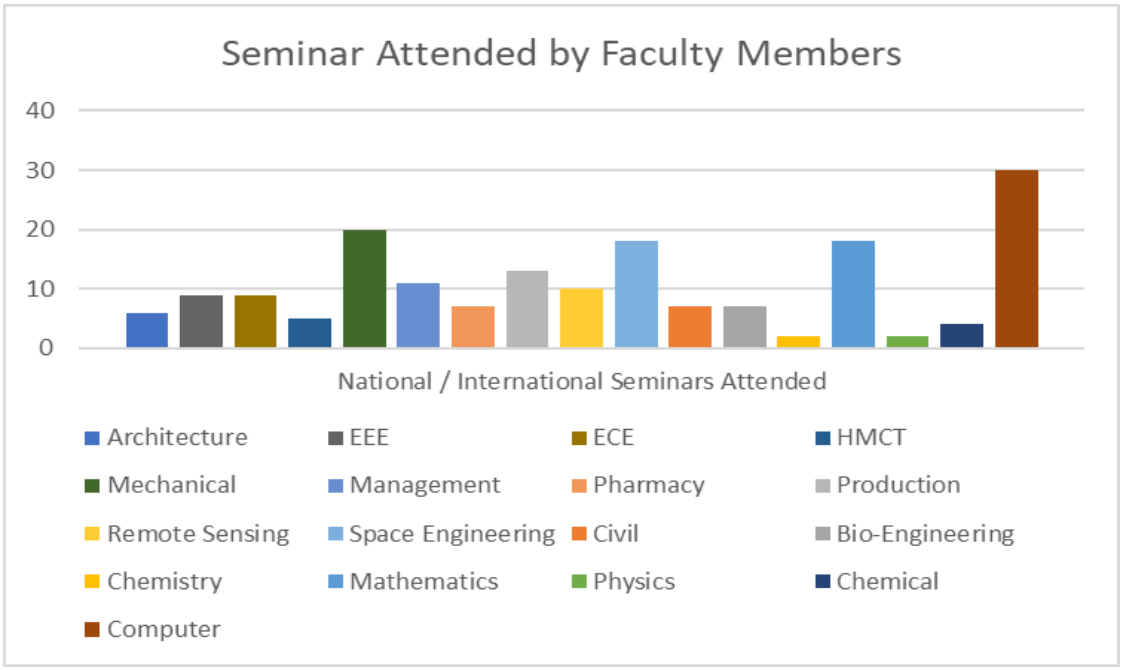
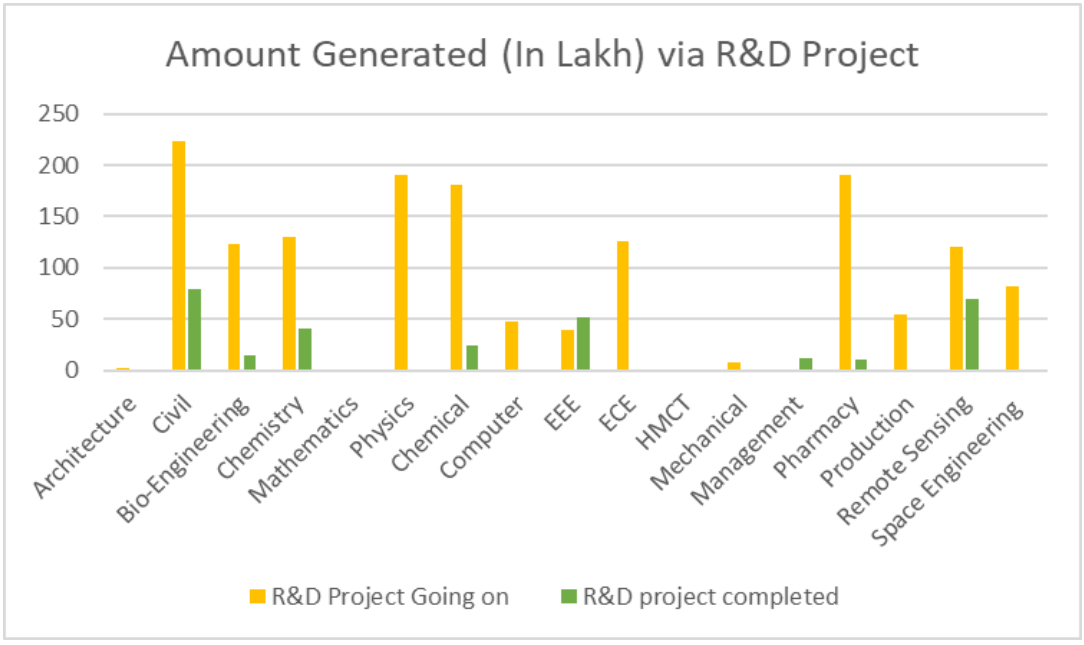
R&D Projects On Going
R&D Projects Completed

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|---|---|---|
| Publication in Journals | : 344 | |
| Publication in Proceedings | : 169 | |
| R&D Projects Granted | : 02 | (9.1 Lakh) |
| On-Going R&D Projects | : 60 | (14 Crore 25 Lakh) |
| R&D Projects Completed | : 38 | (3 Crore 54 Lakh) |
| Books Authored/Chapters | : 166 | |
| National / International Seminars/ Conference Attended | : 160 | |

During the last few years there has been a lot of thrust on improving the quality of research by faculty members of the institute. This has resulted in an improvement in the number of citations of our publications. This improvement is reflected in the data presented below

## 5.1 CITATION IN SCI-EXPANDED, SSCI, A&HCI, ESCI

| Year | Total no. of citations per year | No. of publications |
|---|---|---|
| 2016 | 3345 | 240 |
| 2017 | 3692 | 221 |
| 2018 | 4246 | 239 |

## 5.2 SEMINARS/ SYMPOSIA/ SHORT TERM COURSES ORGANISED

The Institute and its other Campuses organized more than 140 Conferences/ Seminars/ Symposia/ Workshops. These include 21 national and 1 International Conferences/ Seminars/ Symposia/ Workshops which were organized in BIT, Mesra, 3 Entrepreneurship Awareness camp organized by Department of Science and Technology, Government of India, and 10 National and 4 International Conferences/ Seminars/ Symposia/ Workshops organized by BIT, Jaipur. Delegates from BIT, Mesra were invited in more than 80 national and 12 international level Conferences/ Seminars/ Symposia/ Workshops. Some of them are:

- The Department of Space Engineering and Rocketry organized the 32nd National Convention of Aerospace Engineers jointly with the Jharkhand State Centre of the Institution of Engineers, India during October 27-28, 2018

- Department of Civil and Environmental Engineering organized a workshop on Mine Slope Stability and Mine Environment Safety on March 21-22, 2018

- Department of Chemical Engg. Organized Workshops on "Industrial Process

  Simulation" on 16-20 May 2018

- Department of Physics organized Science Academies' Refresher Course on

"Experimental Physics" on 14-29 June 2018

- TEQIP has supported to organize, International Conference on Computational Intelligence (ICCI 2018) on 10.12.18 to 11.12.18, Workshop on Outcome-based Education on 18 -19 March 18, Workshop on Industrial Process

- Simulation on 16-20 May 18, Workshop on Lab safety: Pitfall & Remedies" by ICT Mumbai on 17 December 2018, Entrepreneurship Development Cell.

- Program Flagship Fest E-Summit 19 on 19.01.19 to 20.01.19, Workshop sessions on "Grab Your Opportunity" by Mr. Waghmare under Twinning program with ICT Mumbai on 28.01.19 to 01.02.19, Mock document verification for NBA visit by ICT Mumbai on 05.11.18 to 06.11.18, Lecture series on "Particle Physics" and "Ceramics" by MR. Paresh Salame& Mr. Mohan Narayan under Twinning program with ICT Mumbai on 28.01.19 to 28.01.19

- Summer school on Wireless Communication using Network Simulation tool was organized at BIT, Jaipur campus, Jaipur from 14 - 18 May 2018

- Entrepreneurship Awareness Camp was organized at BIT, Jaipur campus, Jaipur funded by Department of Science & Technology, Govt. of India on 3 - 5 October 2018

- One day Seminar on Documentary Film Making and Screening of International Animation Films Was organized at BIT, Jaipur campus, Jaipur funded by Jaipur International Film Festival (JIFF) on 21Jan, 2019. Internationally acclaimed personality, HarikrishnaAnandan, from Switzerland, Hussain Nuri, from Iran, ArzuQaderi, from U.K., Amr Gamal, from Yemen, shared their knowledge.

**5.3 CONSULTANCY**

- Scrutiny of DPRs under PMGSY, 21.2 lakhs, State Technical Agency (STA) Team – Prof. Anand Kr. Sinha, Prof. Bindhu Lal, Dr. Arun Kumar

- 3.54 Lakhs INR received from Jharkhand Government for construction and renovation of toilets for government schools in Jharkhand by Dr. Kirti Avishek & Mr. Apurv Ashish.

- Slope Stability Study, 34.0 lakhs, PI – Dr.Indrajit Roy

- Slope Stability Study of Fly Ash in Kargali OCP, 1.0 lakhs, PI – Prof. Sudeshna Chakravarty

- Vetting of Design of SCERT Building, Mahendru, Patna, 1.35 lakhs, PI – Prof. Birendra Kr. Singh

- Vetting of Design of Workshop Building of SDI at Taraboi, Bhubaneswar, 1.33 lakhs, PI – Prof. Birendra Kr. Singh

- Consultancy Work of Rural development has been taken by Mr. P K Manoharan Dept of Production Engineering from MASSP, NABARD.

## 6. NATIONAL AND INTERNATIONAL EXCHANGE PROGRAM

Since its inception in 2017, the Immersive Summer Research Experience in US universities have gained popularity and momentum with students. This program was started with an objective of exposing our students to world-class research in their domain of specialization. There has been immense value addition in the

thoughts and concepts of the students from an academic as well as research point of view after completion.
The total cost of the program is shared on the 1/3rd basis by our Alumni Association in North America (BITMAA-NA), BIT Mesra, and the students. In 2017, 11 students were sent to Illinois Institute of Technology, Chicago during the summers to undergo the experience. In 2018, Carnegie Mellon University, Pittsburgh was added, and 3 students were sent there in addition to 9 students sent to Illinois Institute of Technology, Chicago. This year another group of 9 students will be sent to Illinois Tech and 5 students to Carnegie Mellon. We are in the process of exploring possibilities to include more such universities in Europe, Japan & Australia. Some of the other details are as follows:

- Mr. Dominik Weckmuller from Heidelberg University visited the Department of Remote Sensing, BIT during 19th May to 8th July 2018 for carrying out his Summer Research Internship funded by DAAD-RISE, Germany

- Prabhat Ranjan Tripathy, Ph.D. Scholar, attended Short Term Project on PCB Design and Power Converter at Nanyang Technological University, Singapore from July –Aug.2018

- Dr. Debomita Ghosh has been declared the winner of Main Award in Typhoon HIL'10 for 10 award Program in Feb. 2019

## 7. 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:
- Upgradation of Metallurgy and Metrology Lab – Procurement of Muffle furnaces, Specimen cutting equipment, the Surface profile measuring apparatus, Electronic comparator, Gauges, Digital measuring equipment

- CNC milling center was installed for CAM Laboratory

- Energy Management Department is engaged in the Augmentation of Power Distribution System by up-gradation of 11kV Air Insulated Substation to 33kV Gas Insulated Substation along with SCADA to meet the high-power demand of BIT Mesra campus.

- It has also managed the installation of 700kW peak Roof Top Solar Power Plant which is operational from October 2018. After this installation, BIT Mesra campus have 1MW peak Solar Power, Plant

- Department of Civil and Environmental Engineering installed the multi-channel speciation sampler with all in one weather station

- Training and Placement department has been renovated and furnished with the latest technology.

- Music room up-gradation has been completed for student activity.

- A new building for the Club House has been completed. A well equipped Gym, indoor and outdoor game facilities were installed for club activities.

- Various Administrative blocks such as Admission Section, Student Academic Section,Registrar & General office, and Purchase Section has been renovated and furnished.

- Renovation of the Examination Department is going on, and the first phase is completed

- Three Children Parks have been developed with open gym and play equipment for campus residents.

- Girls Hostel No 8 is renovated with one additional floor.

- Renovation of the Institute Guest House and Old Guest House is completed.

- An Indoor Multi-Gym with the latest equipment has been Installed in Physical Education and Sports Department for boys and in Hostel No-8 & 9 for Girls.

## 8. MOUs / COLLABORATIONS

- International MOU Collaboration with Institute of Molecular and Cell Biology, Biomedical Sciences Institutes, Singapore since 2018 for Medical Chemistry and Drug Discovery

- International MOU Collaboration with Kagoshima University, Japan since 2018 for Antiviral Drug Discovery

- National Collaboration with Department of Pharmaceutical Sciences, Central University of Punjab, Bathinda since 2016-continue in the area of Structural/Biological Studies and Drug Discovery

- National Collaboration with Department of Pharmacy, Central University of Rajasthan Ajmer, - 305817, Rajasthan (India) since 2016-continue in the area of Structural Studies and New Chemical Entity (NCE) Exploration

- National Collaboration with KIIT School of Biotechnology, Bhubaneswar since 2016-Continue in the area of Anti-diabetic Drug Development

- National Collaboration with National Centre for Cell Science (NCCS), Pune, since 2012 in the area of Anti-HIV Drug Development

- Dr. S. Keshri has collaboration with UGC-DAE Consortium for Scientific Research, Kolkata; IUAC, New Delhi and with Prof. N. Perov, Moscow State University, Russia

- Dr. S. K. Mukherjee has collaboration with UGC-DAE Consortium for Scientific Research, Indore and with S. N. Bose Institute, Kolkata.

- Dr. S. K. Sinha has collaboration with Surface Modification Technology Pvt. Ltd.

- An MoU has been signed between our Institute and CGC (Centre for Tele-infrastructure Global Capsule), Aarhus University Denmark on 08 Dec 2018 for joint research collaboration.

## 9. TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME PHASE -III

The Third phase of Technical Education Quality Improvement Programme (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 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 excellent 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 for TEQIP-III under which the Institute will receive Rs. 15 Crores for Improving quality and equity in engineering education. BIT is under the twinning arrangements to Build Capacity and Improve Performance of the institutions in partnership with the Institute of Chemical Technology, Mumbai.

- The focus is on 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. Some of them are as follows:

- The computerized test set up of Single Cylinder Automotive CRDI Dual Fuel Research Engine Test Set-up with Open ECU has been purchased through TEQIP-III for Mechanical Engineering department

- Remotex has been purchased for Central Library

- Terset, Voxler, Watershed Modeling& 3-D Modelling (UAV) processing S/W has been purchased for Remote Sensing Department
- Plaxis Software and SPSS Statistical Software have been purchased for Civil & Env. Engg. Dept
- EDS detector has been purchased for Central Instrumentation Facility of the Institute.
- One hundred eighty-two faculty members were financially supported for attending seminars, conferences, workshops, training programmes etc. under TEQIP.

- Out of twenty clubs and societies, some of them were funded for workshops and technical activities by TEQIP-III
- Workshop on Lab safety: Pitfall & Remedies" and Workshop sessions on "Grab Your Opportunity" by ICT Mumbai is supported by TEQIP-III
- International Conference on Computational Intelligence (ICCI 2018) is supported by TEQIP-III

- Prof. R.S Pant of IIT Bombay & adjunct Professor of SE&R dept. Delivered a talk on "Stratospheric airships" and a brief on Preparation and making of Hot Air Balloon" in the Dept. of Space Engg & Rocketry on 29th Oct 2018.

## 10. EMINENT VISITORS/DELEGATION FROM OTHER ORGANISATIONS

- Dr. Bhim Singh, Dean (Academic Program), IIT, Delhi, Dr. S. Biswas, Ex-Dean (Academic Program), IIT, Bombay, Dr. N. Nayak, Associate Professor, IIT Kanpur, visited on 25th Jan 2019 for review of Centre of Excellence

- Professor Janat Shah, Professor Puspendu Das & Professor Ramesh Singh visited BIT Mesra as Academic Advisory Board members.

- Dr. Shyama Prasad Das, Professor IIT Kanpur, Dr. R. K. Saket, Professor IIT-BHU, Varanasi and Mr. Sharat Kumar, Chief, Tata Steel Ltd on 07th Jan. 2019 to review Centre of Excellence proposal of the EEE department

- Mr. Sharat Kumar, Chief, Tata Steel Ltd. delivered a guest lecture in the Department of Electrical and Electronics Engineering on Electric Automation in Tata Steel and Technical Advancement on 28th Sept. 2018

- Dr. Ranjit Mahanty, Professor in Dept. of EE, IIT-BHU delivered invited talk on Reactive Power Compensation and Harmonic Filtering on 12th July 2018

- Dr. Peter Hooda and Dr. Rosa Busquets, Kingston University, London, UK visited the Department of Civil and Environmental Engineering□
- Prof. Ramjee Prasad visited the ECE department and delivered an Invited talk on the theme of CTIF Global Capsule (CGC) and its Global impact on 12 Dec 2018. He is our alumni, and presently he is a Professor of Future Technologies for Business Ecosystem Innovation (FT4BI) chair, Aarhus University, Denmark

- Lt. Gen. (Dr.) V. J. Sundaram, PVSM, AVSM, VSM (Retd.), Advisor, Micro and Nano Systems, National Design & Research Forum, Bangalore on Sep. 15, 2018

- Shri S. Somanath, Director VSSC visited on Oct. 27, 2018

- Dr. S. K. Mishra, Director Brahmos visited on Oct. 28, 2018

- Shri. S. Pandian, Director Satish Dhawan Space Center visited on Oct. 27, 2018

- Dr. (Mrs.) Tessy Thomas, DG-Aero DRDO visited on Oct. 27, 2018
- Padmashri R. M. Vasagam, Retired Scientist VSSC visited on Oct. 27-28, 2018
- Prof. Jacob Cohen, Faculty of Aerospace Engineering, Technion-Israel Institute of Technology Haifa visited on Aug. 14, 2018
- A delegation team of Expert Members of National Board of Accreditation (NBA) visited on April 20-22, 2018.
- Dr. Mohammad Jawaid Professor, Laboratory of Biocomposite Technology, Institute of Tropical Forestry & Forest Products (INTROP), University Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia visited on 27th September 2018
- Ms.Mridula Shekhar (Chief Marketing Officer, TATA AIA Life Insurance) visited on 16.02.2019
- Mr. Ravi Pandey, Presales Consultant at Kronos Incorporated visited on 16.02.2019
- Mr. Gyanendra Niraj AGM and Office In-charge, SEBI Ranchi visited on 07.02.2019
- Ms. Smita Chakraborty, Zonal Head Marketing (East), ICICI Securities visited on 17.01.2019
- Dr. Mohan Narayan, Assoc. Professor,Dept. of Physics, ICT, Mumbai visited on 28.01.2019□
- Dr. Paresh Salame, Dept. of Physics ICT, Mumbai visited on 28.01.2019
- Prof. K. Niranjan, Professor, Department of Physics-Andhra University, Visakhapatnam visited on 26.02.2018
- Dr. (Mrs.) Rita Paikaray, Associate Professor, Dept. of Physics, Ravenshaw University Cuttack-753003, Odisha visited on 06.03.2018
- Dr. Subroto Mukherjee, Professor, Associate Dean – Academic Institute for Plasma Research, Bhatt, Gandhinagar Gujarat, visited on 01.05.2018
- Prof. Ramaswami Srinivasan, Fellow, Indian Academy of Sciences, Bangalore visited on 14.06.2018
- Prof. G. Umesh NITK, Surathkal visited on 15.06.2018.
- Prof. Ram Anjore Yadav, Professor, Dept. of Physics, Institute of Science, Banaras Hindu University, Varanasi – 221005 visited on 19.06.2018.
- Prof. S. K. Samdarshi CUJ, Brambe, Jharkhand visited on 25.06.2018

- Prof. P. K. Datta, IIT, Kharagpur (WB) visited on 27.06.2018

- Dr. Japes Bera, Professor & Dean (PD), Dept. of Ceramics Engineering National Institute of Technology, Rourkela, Odisha-769008 visited on 20.07.2018

- Prof. R. K. Mall, Professor, Institute of Environment and Sustainable Development, Banaras Hindu University, Varanasi – 221005 visited on 18.08.2018

- Dr. G.N. Singh Director Indian Pharmacopeia Commission Ghaziabad, Dr. Ramakrishna, Dy Drugs Controller, Govt of India and Dr. Kalaiselven Coordinator Pharmacovigilance Programme, Govt of India were the part of CEP program of Pharmacy Council of India in The Department of Pharmaceutical Sciences & Technology.

## 11.0 AWARDS/DISTINCTION RECEIVED AND VISITS IN INDIA & ABROAD

- Dr. Anand Kumar Srivastava, Assistant Professor, Physics department presented an Invited lecture entitled "Stationary and Moving Pattern formation in Surface Dielectric Barrier Discharge Plasma" at 106th Indian Science Congress, LPU, Panjab on 5th January 2019.

- Dr. Roopali Sharma, Professor, Management Department received best paper award for research Paper titled "Water Security in India: Linking Role of Institutions, Human Resources & Policy for Sustainability of Operation

& Maintenance", presented in International Conference on Innovations in

Technology & Management for Achieving Sustainable Development Goals

(GDGs) organized by J.K. Laxmipat University, Jaipur on February 1-3, 2019

- Mr. Snehanshu Shekhar, Assistant Professor, ECE Department elected as an executive committee member of IETE Jaipur Center (2018 - 2020).

- Dr. Danbahadur Pal (TEQIP Faculty) got Research Ratna Award 2019, as "Outstanding Researcher in Performance of catalytic Water Gas Shift

Reaction by" Rula Awards

- Prof. Sudip Das received an award of Eminent Engineer 2018 from ASDB,

IEI

- Prof. Mohan Varma has been awarded outstanding contribution in reviewing for Propulsion & Power Elsevier Journal

- Dr. Shelly Biswas has been awarded outstanding contribution in reviewing for Fuel Elsevier Journal

- Dr.Sraboni Dutta, Associate Professor, was selected for the AICTE-UKIERI Technical Leadership Programme 2018

- Dr. Anupam Ghosh, Assistant Professor, was elected as Joint Secretary of

IIT Alumni Association: Ranchi Chapter (2018-2020)

- Dr. R. N. Gupta received Pharmaceutical Scientist of the Year Award 2018, Prof ML Khorana Best Paper Award, IPA President Oration Award 2018. He has been also elected as National Vice President of Indian Pharmaceutical Association by Indian Pharmacopeia Commission

- Dr. Manik received all India 2nd Rank in Mentoring Educators in Educational Technology – FDP301x (MOOC) conducted by IIT Bombay under Pandit Madan Mohan Malaviya National Mission for Teachers and Teaching (PMMMNMTT), MHRD, GoI from May 17th, 2018 to June 27th, 2018

- Dr. C. Jeganathan was selected as one of the Indian Delegates to visit Lancaster University, UK to participate in the International workshop. He has delivered lectures and has been the keynote speaker in several national and international conferences. Dr. Jeganathan's proposal was selected under the DAAD-RISE program,and the fellowship was awarded to one German student Mr. Dominik Weckmuller from Heidelberg University.

- Dr. N. Patel received an outstanding reviewer award from a reputed journal called "Remote Sensing of Environment." He is also the associate editor of so many other journals.

- Dr. P. R. Thakura has been working as Vice-Chairman of IETE Ranchi Chapter from Nov.2018. & been invited as Guest Editor for International Journal of Power & Energy System, Acta Press in Special Issue on "Green Energy Conversion Systems Based on Advanced Modelling and Simulations

Techniques," Feb.2019.

- Dr. D. K. Mohanta has been appointed as Associate Editor of IEEE Access, Subject Editor of IET Generation, Transmission and Distribution, Guest Editor-in-Chief of Special Issue on Emerging Trends in System Integrity Protection Schemes (SIPS) for Improving the Performance of Smart Grid, IET Proceedings of Generation, Transmission, and Distribution, Editor of Electric Power Components & Systems, Taylor & Francis Publications

- Dr. Chinmay Chakraborty received the Young Research Excellence Award, Global Peer Review Award, Young Faculty Award, Venus International Faculty Awards. He was one of the speakers for AICTE sponsored FDP and CEP Short Term Course

- Dr. V.S. Rathore from Department of Remote Sensing was conferred with the "Samaj Bandu Award" in the category of RS,GIS and Sace Sciences by "Prantik Care The Earth" a non-Governmental organization, Birbhum,
West Bengal on 2nd August 2018

- Department of Remote Sensing organized "One Day Workshop on National Information System for Climate and Environment Studies (NICES) Data
Products" fully sponsored by National Remote Sensing Center (NRSC,

ISRO, Hyderabad) and around 200 participants attended the programme. Dr. Mili Ghosh coordinated the workshop, and Dr. C. Jeganathan and Dr. A.P. Krishna were the conveners

## 11.0 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.

### 11.1 NSS

Birla Institute of Technology, Mesra offers NSS as a co-curricular subject in all undergraduate programs for 1st and 2nd year students. NSS, BIT Mesra organizes regular and special activities in the ten adopted villages namely, Rudia, Panchauli, Kenduatoli, Humbai, Mesra East, Mesra West, Neori, Chuttu, Kedal, and Navatoli.

NSS provides opportunities to the students to play their role in planning and executing development projects which would not only help in creating durable community assets in rural areas but also result in the improvement of the quality of life of the economically and socially weaker sections of the community. It encourages youth to participate enthusiastically in the process of national development and promote national integration, through corporate living and cooperative actions. Looking at the dedication and dimension of work, the Ministry of Youth Affairs and Sports, Govt. of India has allocated ten units of NSS to the University.

During the period NSS has notable achievements which are as follows:

- NSS President Shalini Lala was selected for the International Youth Delegation Exchange Program 2018 and represented India in China

- A delegation of volunteers was selected from NSS BIT Mesra to represent Jharkhand in the National Integration Camp 2018 held in Ranchi

- A delegation of volunteers was selected from NSS BIT Mesra to represent Jharkhand in the Cultural Exchange Program held under Ek Bharat Shresht Bharat

Besides these, NSS organised National Youth Day, Clothes and Books collection drives, Cashless Awareness program, Swachh Bharat Abhiyan, Blood Donation Camps, Eye check-up Camps, Plantation Drives, Disease Awareness Campaigns, NSS Day, Literacy Program, Awareness program, Rallies, International Yoga Day, Support to Old age home, Orphanage and Cheshire home and Prabhat Pheris.

### 11.2 CLUBS AND SOCIETIES ACHIEVEMENTS

Some of the achievements of clubs and societies are as follows:

- The Photographic Society of BIT Mesra conducted their annual photo-fest called Utkrisht from the 27th September 2018 to 29th September 2018, incorporating a Photo Gallery showcasing the best of clicks made by the participants.

- Ehsaas-the Dramatics Society of BIT Mesra were the Winners in Street Play Competition, Runners up in Stage Play Competition at IIM Ranchi.

- The Music Club of BIT Mesra won 3rd Position in Mantra-Eastern Battle of Bands, 2nd Position in MI's Got Talent in Mood Indigo'18- IIT Bombay.

- The Music Club of BIT Mesra won 2nd Position in Advaita- Battle of Bands, 3rd Position in Kriti- OC Competition.

- The News and Publication Society won 2nd Prize in 'Reportage' in Mood Indigo, IIT Bombay, Asia's Largest Fest, and 2nd & 3rd Prize in 'A Mighty Pen' in Springfest, IIT Kharagpur.

- Team Aveon Racing's Participated in e-BAJA SAEINDIA Competition 2019 organized by Mahindra in Pithampur, Indore Secured Overall Rank 5th Ranks in the event.

- The team of Firebolt Racing has been declared as Best Team East India in

BAJA SAE INDIA.

- The Team Srijan has been declared 11th Overall in Formula Bharat'18.

### 11.3 SPORTS ACTIVITIES

- Third Annual Sports Fest Vajra and 28th Chetan Devraj Memorial East Zone Inter Technical Institute/College Cricket Tournament was organized from 02.11.18 to 04.11.18. Twenty-six teams participated in this tournament.

    - BIT MESRA emerged the winner. BIT Mesra won the championship of 28th Chetan Devraj Memorial East Zone Inter Technical Institute/College Cricket Tournament.

    - 33rd Annual Athletic Meet commenced on 1st - 3rd February 2019. Ankit Binha of Hostel 6 was awarded as the Best Athlete in men's category while

Anupama Kachhap hailing from the 2k17 batch was declared as the Best Athlete in women's category. The award for the Best Performance was presented to Ankit Singh Chauhan for breaking the 51-year-old record in Hammer Throw. The most awaited Sports Person of the Year award was presented to Marshal Soren from the final year.

- Body Building competition 2018 – 2019 was organized on 04.09.2018. Mr. Mayank Dubey won the Championship and was declared Mr. B.I.T.

- BIT Mesra Institute Team participated in IIT Kanpur Sport's Fest – UDGHOSH from 3rd Oct 18 to 9th Oct 18. Badminton(W) team won Bronze Medal in the Finals.

11.4 **AWARDS RECEIVED BY STUDENTS**

- Chemical students Anamika Sinha and Shreya Sinha bagged 1st rank in TATA Steel Mind over Matter competition.

- Gourav Rakshit and Priyanka Chandra of M. Pharm. 2nd Year have received the second prize in IPA Convention 2018.

- Vibe, a team led by B.E. (Information Technology) student Saakshi Srivastava participated in Smart India Hackathon 2018 organized by the Government of India and stood 2nd under the Department of Post, Ministry of State (IC) of Communication. Other team members were Siddhau Jain, Sree Ashlesh Penisetty, Dhriti Kumari, Ankit Kumar Singh,and Pamireddy Suchritha.

- Aditya Singh, a pre-final year student, got the first rank in the Zonals in the

World Skills Competition, organized by the Ministry of Skill Development. He also received a cash prize of Rs. 21,000/-

- Abhayankar Joshi and Poulomi Chakraborty bagged first and third prize respectively in JAM, organized in Springfest'19 at IIT KGP

- A team of six members from Dhwani- Music Club, BIT Mesra bagged the third prize in Mantra- the eastern battle of the band's competition in Mood Indigo'18, IIT Bombay, Asia's Largest Cultural Fest. The students were Samadrito Bose, AyushKhedia, Md. Shamil Khan, Saket Anand, Nachiket Agni,and Atvik Singh

- Ehsaas Dramatics Society bagged the first position in Street Play

Competition and Second Position in Stage Play Competition in Rush, the cultural festival of IIM Ranchi.

- Toshi Priya from Dhwani- Music Club, BIT Mesra bagged the first position in Swar- the solo singing of Kashiyatra- Annual Cultural Fest of IIT BHU.

- Team Aveon Racing participated in e-BAJA SAEINDIA Competition 2019 organized by Mahindra in Pithampur, Indore and secured overall Rank 5th. Ranks in individual events were- 6th in Cost Presentation, 3rd in Sales Presentation, 5th in Design Evaluation, 3rd in Statics and 4th in Endurance.

- Team Arcade of BIT Mesra consisting of Anukriti Jha, Muskan Gupta, Amrita Singh, and Kajal Gupta was declared Runners up in Hack-a-Bit, the hackathon of BIT Mesra.

- BIT Mesra was declared overall champions of Vajra'18- Annual Sports Fest.

- Ankit Binha and Anupama Kachhap were declared best Athlete in Men's and Women's Category respectively in the 33rd Annual Athletic Meet, BIT Mesra.

- Marshal Soren received Best Sportsperson of the year award in the 33rd Annual Athletic Meet.

- Dhwani- Music Club, BIT Mesra bagged 2nd prize in Advaita- Battle of Bands and 3rd Prize in Kriti- OC Competiton in Kashiyatra, the Cultural Festival of

IIT BHU.

- News and Publication Society bagged Second Prize in Reportage in Mood Indigo, IIT Bombay, Asia's Largest Cultural Festival.

- News and Publication Society bagged second and third prize in A Mighty Pen in Springfest, IIT KGP.

- Puronjoy Sen of Music Club bagged second prize in MI's Got Talent in Mood Indigo, IIT Bombay.

- Dance Club, BIT Mesra bagged the third position in Springfest, IIT KGP.

- Priyanshu of Ehsaas Dramatics Society bagged First Prize in Pratidwand at Rendezvous, IIT Delhi.

- Puronjoy Sen, Snehil Baba and Arpan Mitra of Music Club received second, third and third prize respectively in Sanlayan, the instrumental competition of IIT BHU.

- AyushKhedia of Dhwani Music Club- BIT Mesra received the Best Bassist Award in Sargam of Springfest, IIT KGP.

- Dance Club, BIT Mesra bagged first prize in Rush, IIM Ranchi.

- Dance Club, BIT Mesra bagged Second Prize in Valhalla Ensemble, XLRI.

- Ms. Saloni Solanki, department of CSE secured 99.91 percentile in the prestigious Indian Institute of Foreign Trade (IIFT) Entrance examination

- Utkarsh Mishra, Aditya Sharma and Shreeyash Haritashya department of ECE received the best paper award in 61st IETE annual convention held at Amaravati, Maharashtra, on September 29-30, 2018

- Aditya Sharma department of ECE elected as a student representative in the executive committee of IETE Jaipur center (2018 - 2020)

- Manish Soni (Ph. D Scholar) awarded Second Best Conference Paper for the paper entitled "Application of Artificial Neural Networks for fog forecast over Delhi, at Poornima University, Jaipur in National Conference on Innovative Trends in Civil Engineering (NICTCE-2018), 13-14 April 2018.

- Chandan Singh Shekhawat, Anchal Kediyan, and Hansjeet Duggal Students of Animation & Multimedia created an animated short film "FREIHIT" which is honored in ANNECY Film Festival, France from 11th To 16th June 2018. The Film is prepared

by one existing student and two passed out students collectively from A & M Dept. BIT Jaipur Campus.

- Archit Agarwal Student of B.Sc Animation & Multimedia created the film "MAYA" which has been selected in "Best of India Short Film Festival" at Santa Monica, USA. Received award in Dheradun International Film Festival. Also won an award in Kaleidoscope-Catharsis Film Festival 18, BITS Pilani- Hyderabad Campus.

- Sweta Jha & Saket Sagar students of VI Semester secured third place in ARCHUMEN 18-19. The Eastern Interface (India's biggest quiz for the students of architecture) held on 8th February at KIIT, Bhubaneswar.

- KousumiMukherje, Roshan Kumar, Samiksha Gupta ranked First in

Technical Quiz "IDP Quiz" organized by ICT Mumbai

- Ananya Kant ranked First in Industrial Problem solving named as "Women of Mettle" organized by TATA Steel

- Anamika Sinha ranked First in Industrial Problem solving named as "Mind over matter" organized by TATA Steel

- Anurag Gupta, ME student, received the best paper award in National Conference on Renewable Energy and Environmental Challenges (NCREEC 2018), 26-27 Feb 2018, NIT Jamshedpur, Jharkhand.

- Shreya BE students secured 1st position in Mind Over Matter competition. Pre-placement offer in TATA STEEL and received 1 lakh rupees cash prize which was Organised by Tata Steel R&D Team at Jamshedpur.

- Aditya Singh BE students secured the First rank in the zone in the world skills competition Organised by National Skill Development Corporation (NSDC), Ministry of skill development and entrepreneurship, Govt. of India held at Bengaluru

- Ms. Swadhina Koley (Ph.D. Scholar of Remote Sensing Department) received the Best Paper Award for her paper "Geospatial technology: the emerging global trend towards the new horizon of sustainable agriculture". presented in the National Conference for Education in Science, Mathematics

& Technology, Organised by Taurian World School, Ranchi, 11th August 2018.

- Ms. Vamika Parmar, 4th year, ECE and Ms. Pragya Giyani, 4th year, CSE acquired 1 st Prize (Rs. 75000/-) with Incubation offers from 2 organizations in StartUp India Jharkhand -2018 (The Entrepreneurial Idea has been selected for seed money from GoJ – Department of E-Governance)

- Mr. Aman Sharma, 4th year, CSE and Mr. VedantTibrewal, 3rd Year, IT acquired 2nd Prize (Rs. 50000/-) with Incubation offers from ABVIL in StartUp India Jharkhand -2018 (The Entrepreneurial Idea has been selected for seed money from GoJ – Department of E-Governance)

- Vibhor Singh & Team of three 3rd Year students of Dept. EEE received consolation Prize with Incubation offer from Atal Innovation Lab, Noida

- Mr. Chandan Kumar Verma begins a startup named as "Green Factory" which came under 3000 out of 20000 startups in India at a competition held at IIM Kolkata on 16-02-2018. It has been selected for incubation and seed fund

from Amazon web services worth Rs. 50000/-. An amount upto Rs. 1000000/- has been sanctioned for a start-up named "GREEN FACTORY Pvt. Lt

- Ms.Suparna Roy Sarkar received best poster award at 6th International Congress of Society of Ethnopharmacology for the paper "Title Role of Probiotic in gut dysbiosis associated cognitive decline in mice."

- A group of VI-th Semester students of B. Pharm. received 12 Prizes in different categories at IIT Fest held at IIT, BHU

- Mr. Dharmik Joshi received BEST STUDENT EXCELLENCE AWARD by Indian Drug Manufacturer's Association (IDMA)

## 12. ALUMNI EVENTS

- In the Academic Year 2018-19, the institute has organized five alumni reunions so far.

- Alumni from the 1962, 1963, 1964 and 1973 batches have attended campus reunions with a total participation of 250.The Images below show the reunion of 1963 and 1964 batches.

- Further our Alumni association in the USA, BITMAA-NA has supported twelve students for ISRE 2018 (Immersive Summer Research Experience) in Carnegie Mellon University, Pittsburgh, USA and Illinois Institute of Technology, Chicago, the USA in this academic year.☐
- The Institute had also conducted "Ripple, Industry-Academia Symposium," on 31st August 2018 to discuss the significant issue of experiential education and how it can be imparted to the students. Some of our notable alumni from leading organizations had attended the same.

## 13.0 AWARD OF DEGREES

- A total of 1337 students are being awarded Degrees in various disciplines, out of which 838 are Graduate Degrees, 387 are Post Graduate Degrees, and 112 are Ph.D. Degrees.

# 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
- ❖ 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

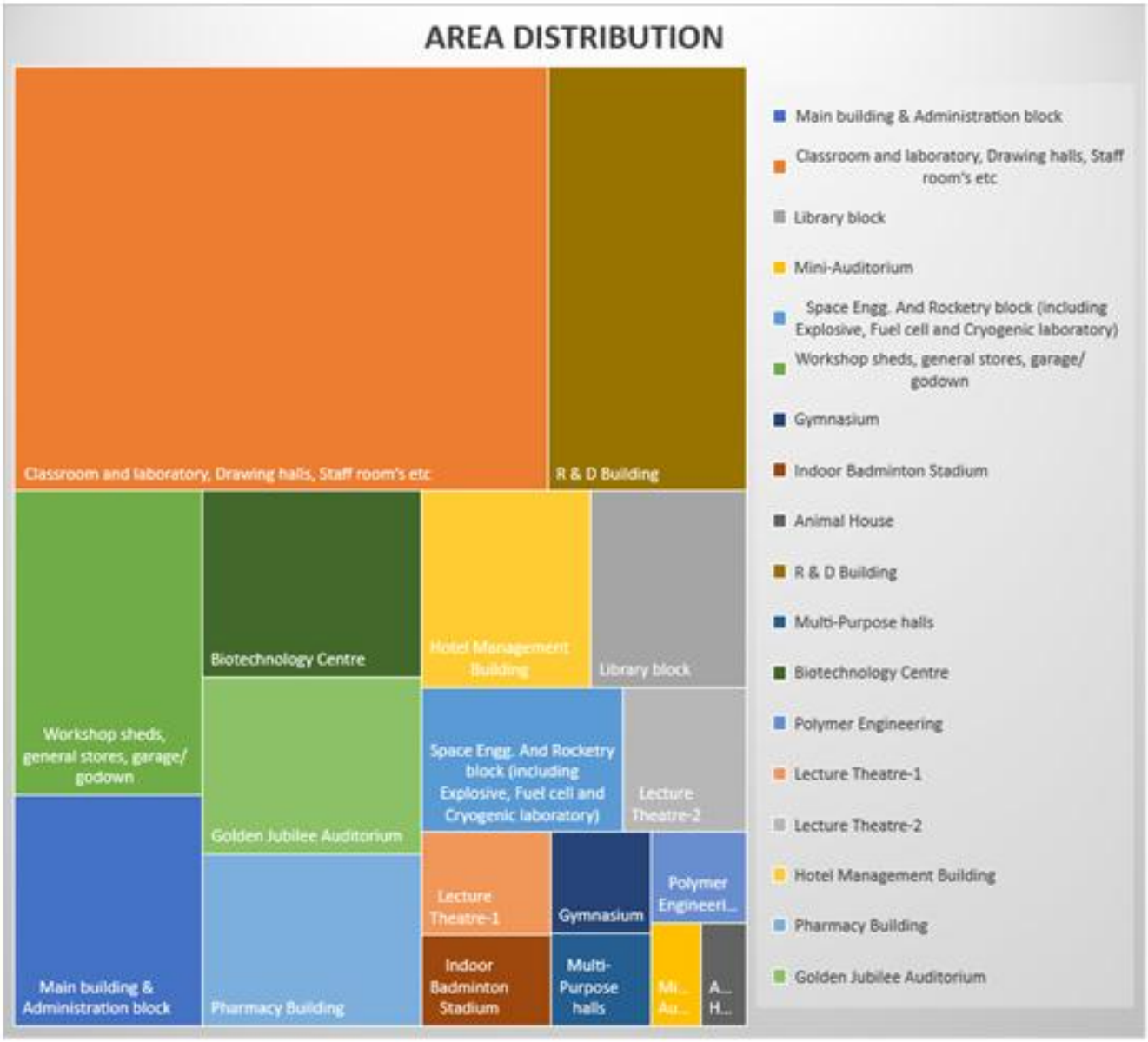
**Residential Complex**

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.



Staff Residential Block

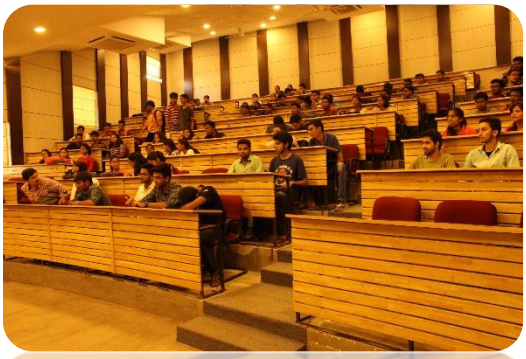
Student Hostel

The State Bank of India

The NCC Office

**Others**

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



Lecture Hall

IC Arena

**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.

**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

The Indoor Stadium

The Volley Ball Court

**Dispensary Cum Health Centre**
**Facilities available**

- OPD services — 8 A.M to 12.00 Noon, 4.00 P.M to 8.00 P.M
- Emergency services — Round the Clock
- Total number of Beds — 12 (Male-9, Female-4)
- X-Ray
- ECG
- Oxygen Facility
- Suction Machine Facility
- Ambulance Facility
- Pathological Lab Facility
- Immunization

**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**

| SL | Hostel | Total Rooms | 1 Seater | 2 Seater | 3 Seater | 4 Seater | 6 Seater | Total Beds | Occupied Beds |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Hostel-1 | 131 | 131 | | | | | 131 | 129 |
| 2 | Hostel-2 | 140 | 137 | 3 | | | | 143 | 134 |
| 3 | Hostel-3 | 153 | 153 | | | | | 153 | 149 |
| 4 | Hostel-4 | 154 | 153 | | 1 | | | 156 | 148 |
| 5 | Hostel-5 | 333 | 333 | | | | | 333 | 316 |
| 6 | Hostel-6 | 299 | 298 | 1 | | | | 300 | 288 |
| 7 | Hostel-7 | 312 | 312 | | | | | 312 | 298 |
| 8 | Hostel-8 | 353 | 8 | 326 | 14 | 1 | 4 | 730 | 643 |
| 9 | Hostel-9 | 373 | 48 | 324 | | 1 | | 700 | 653 |
| 10 | Hostel-10 | 426 | | 397 | 27 | 2 | | 883 | 821 |
| 11 | Hostel-11 | 426 | 377 | 20 | 25 | 4 | | 508 | 465 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12 | Hostel-12 | 238 | 229 | 9 | | | | 247 | 237 |
| 13 | Hostel-13 | 273 | 263 | 10 | | | | 283 | 283 |
| 14 | Hostel-14 | 112 | 112 | | | | | 112 | 88 |
| | | **3723** | **2554** | **1090** | **67** | **8** | **4** | **4991** | **4652** |

**Student Intake and Admissions**
**Admission in UG Programmes 2018-19 (Mesra Campus)**

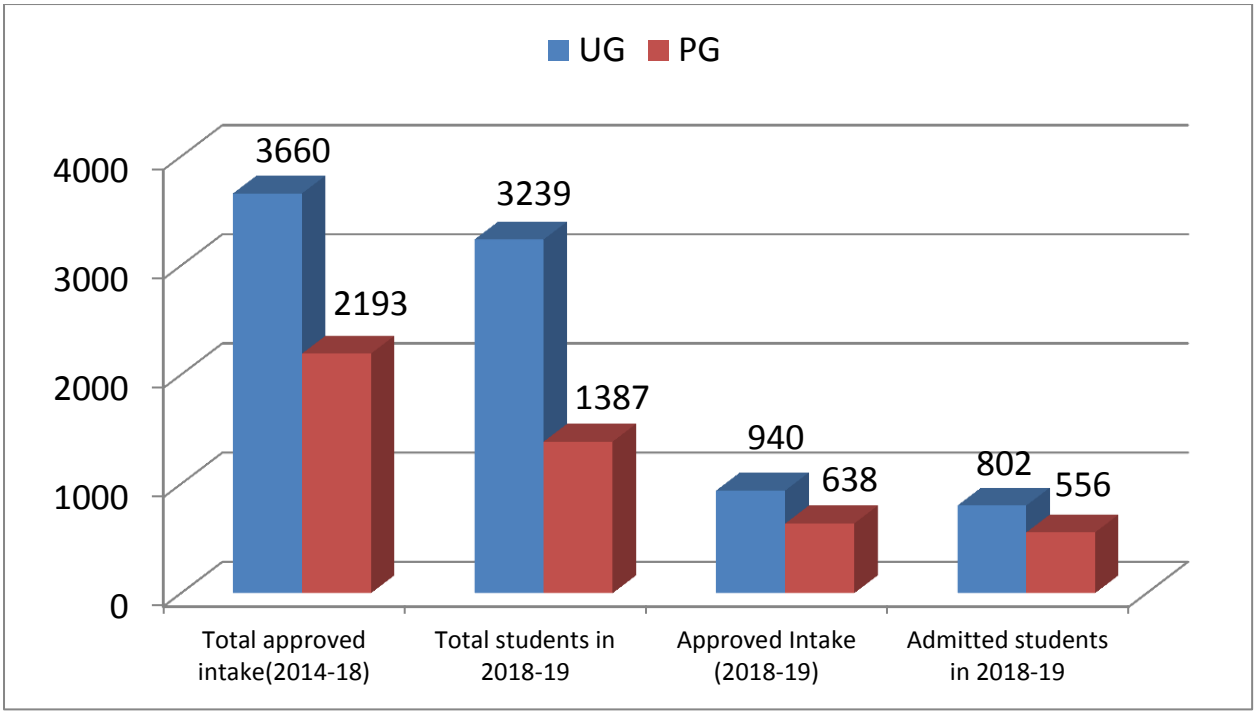
| Sl.No. | Course | | No of Seats | Received Application Form | Numbers of Admissions |
|---|---|---|---|---|---|
| 1. | B.Tech* | JOSAA | 780 | * | 684 |
| | | NRI | | | |
| | | EBC/OBC | | | |
| | | GOI (J&K) | | | |
| 2. | B.Arch* | JOSAA | 40 | * | 33 |
| | | NRI | | | |
| | | EBC/OBC | | | |
| 3. | B. Pharm. | | 60 | 472 | 56 |
| 4. | HMCT | | 40 | 119 | 29 |
| | | **Total:** | **920** | **591** | **802** |

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

| Sl.No. | Branch | Numbers of Admissions |
|---|---|---|
| 1 | Architecture | **33** |
| 2 | Biotechnology | **28** |
| 3 | Chemical Engineering | **48** |
| 4 | Chemical Engineering( P&P) | **34** |
| 5 | Civil Engineering | **54** |
| 6 | Computer Sc. & Engineering | **123** |
| 7 | Electronics& Communication Engg. | **117** |
| 8 | Electrical & Electronics Engg. | **58** |
| 9 | Mechanical Engineering | **117** |
| 10 | Information Technology | **59** |
| 11 | Production Engineering | **46** |
| 12 | B.Pharmacy | **56** |
| 13 | BHMCT | **29** |
| | **Total:** | **802** |

**Admission in PG Programmes 2018-19( Mesra Campus)**

| Sl. No. | Course | | No of Seats | Numbers of Admissions |
|---|---|---|---|---|
| 1 | MBA | | 120 | 95 |
| 2 | MCA | | 60 | 52 |
| 3 | M. Tech Automated Manufacturing Systems | | 25 | 05 |
| 4 | M. Tech Chemical Engineering | | 18 | 00 |
| 5 | M. Tech Civil Engineering | a). Soil Mech. & Found | 12 | 22 |
| | | b). Structural Engg. | 12 | |
| 6 | M. Tech CAAD | | 18 | 03 |
| 7 | M. Tech - EEE | a). Power Elect. | 18 | 19 |
| | | 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 | 14 |
| | | b). Design of Mechanical Equipment | 12 | |
| 10 | M. Tech - SER | a). Aerodynamics | 12 | 08 |
| | | b). Rocket Propulsion | 12 | |
| 11 | M.Tech Bio- Technology | | 18 | 04 |
| 12 | M.Tech Computer Science & Engineering | | 16 | 13 |
| 13 | M.Tech Information Security | | 18 | 02 |
| 14 | M.Tech Information Technology | | 18 | 07 |
| 15 | M.Tech Energy Technology | | 18 | 04 |
| 16 | M.Tech Env. Science & Engg. | | 18 | 04 |
| 17 | M.Tech Remote Sensing | | 18 | 08 |
| 18 | M.Sc. Chemistry | | 15 | 05 |
| 19 | M.Sc. Mathematics | | 15 | 06 |
| 20 | M.Sc. Physics | | 15 | 11 |
| 21 | M.Sc. Biotechnology | | 30 | 21 |
| 22 | M.Sc. Geo – Informatics | | 20 | 07 |
| 23 | M.Pharm | | 75 | 58 |
| 24 | MUP | | 12 | 12 |
| 25 | Integrated M.Sc. Chemistry | | 40 | 13 |
| 26 | Integrated M.Sc. Physics | | 60 | 46 |
| 27 | Integrated M.Sc. Mathematics | | 80 | 88 |
| 28 | Integrated M.Sc. Food Tech. | | 30 | 17 |
| **Total :** | | | **913** | **556** |




**Students Distribution for Academic Year 2018-19**

**Admission in Ph.D Programme - 2018 (MO-2018)**

| Sl.No. | Departments | No. of Seats | Numbers |
|---|---|---|---|
| 1 | Architecture | 05 | 00 |
| 2 | Bio - Engineering | 23 | 04 |
| 3 | Computer Science.& Engineering | 39 | 10 |
| 4 | Chemistry | 26 | 03 |
| 5 | Chemical Engineering | 22 | 00 |
| 6 | Civil & Environmental Engineering | 17 | 05 |
| 7 | Electrical and Electronics Engineering | 08 | 06 |
| 8 | Electronics and Communication Engineering | 27 | 05 |
| 9 | Mechanical Engineering | 16 | 06 |
| 10 | Mathematics | 17 | 01 |
| 12 | Production Engineering | 11 | 02 |
| 13 | Physics | 21 | 02 |
| 14 | Pharmaceutical Science & Technology | 104 | 08 |
| 15 | Remote Sensing | 12 | 00 |
| 16 | Space Engineering and Rocketry | 09 | 00 |
| **Total:** | | **357** | **52** |

**Admission in Ph.D Programme - 2019 (SP-2019)**

| Sl. No. | Department | Number of Seats | Number of Admitted Candidates |
|---|---|---|---|
| 1 | Architecture | 07 | 01 |
| 2 | Bio Engineering | 20 | 05 |
| 3 | Computer Science & Engineering | 24 | 03 |
| 4 | Chemistry | 10 | 01 |
| 5 | Chemical Engineering & Tech. | 25 | 03 |
| 6 | Civil & Env. Engineering | 11 | 04 |
| 7 | EEE | 07 | 03 |
| 8 | ECE | 21 | 04 |
| 9 | Mechanical Engineering | 18 | 02 |
| 10 | Mathematics | 08 | 01 |
| 11 | Management | 00 | 00 |
| 12 | Production Engineering | 12 | 01 |
| 13 | Physics | 14 | 03 |
| 14 | Pharmaceutical Sc. & Tech. | 22 | 04 |
| 15 | Remote Sensing | 08 | 02 |
| 16 | SER | 10 | 00 |
| | **Total** | **217** | **37** |

**Convocations, Results and Gold Medalist**

**Gold Medalist in Convocation – 2018 (BIT, Mesra)**

| SL.NO. | | ROLL NO. | NAME | CGPA |
|---|---|---|---|---|
| **BACHELOR OF ARCHITECTURE** | | | | |
| 1 | **R** | BARCH/10027/13 | VALLARY GUPTA | 8.85 |
| **BACHELOR OF ENGINEERING (BIOTECHNOLOGY)** | | | | |
| 2 | **R** | BE/10364/14 | MAHESHWARI CHALA | 8.41 |
| **BACHELOR OF ENGINEERING (CHEMICAL)** | | | | |
| 3 | | BE/10061/14 | SANJANA ROY | 8.69 |
| **BACHELOR OF ENGINEERING (CHEMICAL ENGINEERING, PLASTICS AND POLYMER)** | | | | |
| 4 | **R** | BE/10683/14 | VORUGANTI SINDHUJA | 8.53 |
| **BACHELOR OF ENGINEERING (CIVIL)** | | | | |
| 5 | **R** | BE/10471/14 | ABHISHEK ROY | 8.84 |
| **BACHELOR OF ENGINEERING (ELECTRICAL & ELECTRONICS)** | | | | |
| 6 | **R** | BE/10286/14 | GARIMA SHARMA | 9.27 |
| **BACHELOR OF ENGINEERING (INFORMATION TECHNOLOGY)** | | | | |
| 7 | **R** | BE/10080/14 | SHASHANK SHEKHAR | 8.89 |
| **BACHELOR OF ENGINEERING (MECHANICAL)** | | | | |
| 8 | | IR/2K14-23 | SHIVANGI CHOPRA | 9.04 |

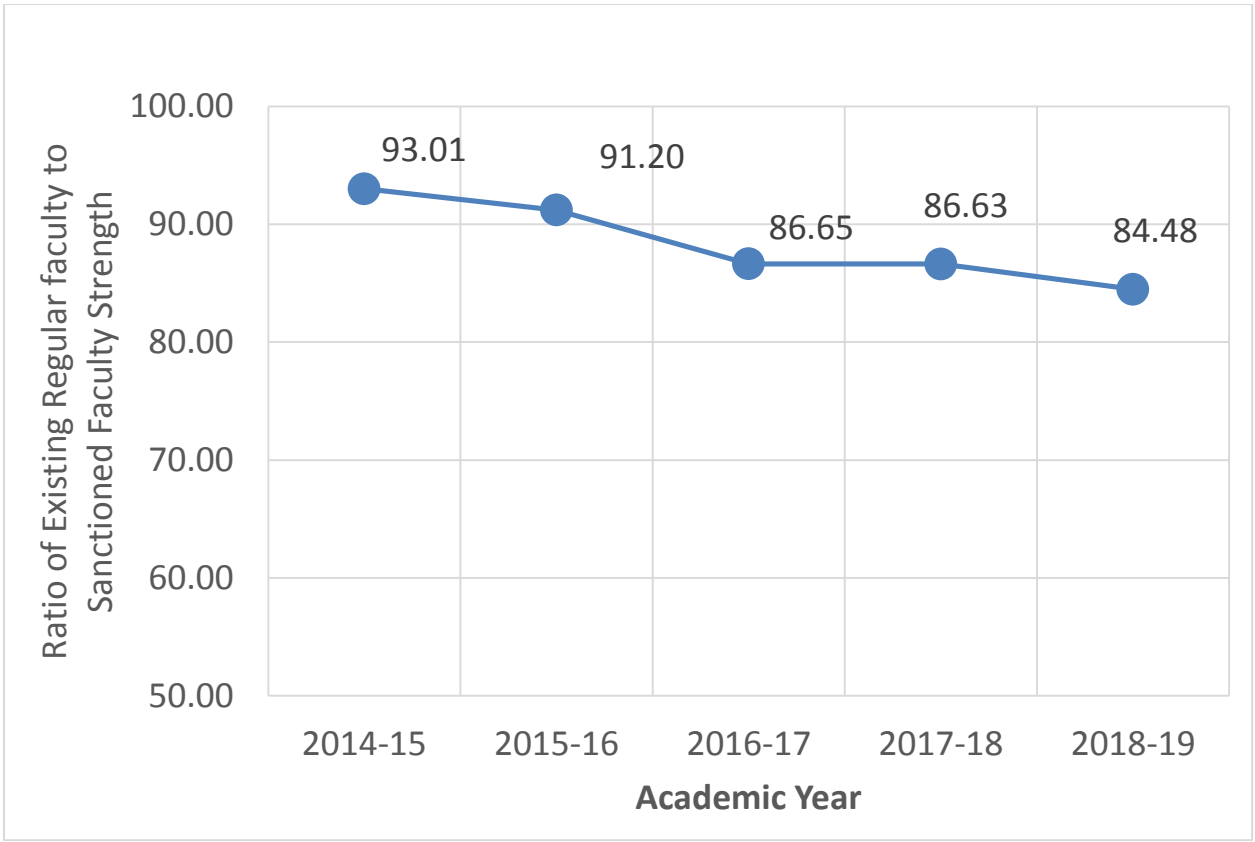
| | | | | |
|---|---|---|---|---|
| | | | | |
| **BACHELOR OF ENGINEERING (PRODUCTION)** | | | | |
| 9 | **R** | BE/10592/14 | VIKRAM RAJ AMAN | 8.62 |
| **BACHELOR OF HOTEL MANAGEMENT AND CATERING TECHNOLOGY** | | | | |
| 10 | **R** | BHMCT/10032/14 | SAMRIDHI MISHRA | 9.16 |
| **BACHELOR OF PHARMACY** | | | | |
| 11 | **R** | BPH/10001/14 | GAURAV RANJAN | 8.62 |

| | **Degree** | **Department** | | | | **Total** |
|---|---|---|---|---|---|---|
| **1** | | Architecture | | | | 1 |
| | | Engineering | | | | 39 |
| | | Management | | | | 5 |
| | | Pharmacy | | | | 22 |
| | | Science | | | | 30 |
| | | Technology | | | | 14 |
| | **Doctor of Philosophy** | | **Total** | | | **111** |
| **2** | **Post-Graduate Degrees** | | **ID** | **I** | **II** | **Total** |
| | **Integrated Master of Science** | Chemistry | 3 | 6 | 3 | 12 |
| | | Mathematics & Computing | 3 | 15 | 3 | 21 |
| | | Physics | 2 | 4 | 3 | 9 |
| | **Master of Business Administration** | | 11 | 77 | 8 | 96 |
| | **Master of Computer Applications** | | 14 | 12 | 0 | 26 |
| | **Master of Engineering** | Automated Manufacturing System | 3 | 2 | 0 | 5 |
| | | Chemical | 2 | 0 | 0 | 2 |
| | | Civil | 14 | 1 | 0 | 15 |
| | | Electrical | 16 | 10 | 1 | 27 |
| | | Electronics & Communication | 17 | 14 | 0 | 31 |
| | | Mechanical | 14 | 2 | 0 | 16 |
| | | Space Engineering & Rocketry | 7 | 1 | 0 | 8 |
| | **Master of Pharmacy** | | 23 | 6 | 0 | 29 |
| | **Master of Science** | Biotechnology | 4 | 6 | 0 | 10 |
| | | Chemistry | 4 | 1 | 3 | 8 |
| | | Geo-Informatics | 1 | 5 | 0 | 6 |
| | | Physics | 6 | 2 | 1 | 9 |
| | **Master of Technology** | Bio-Medical Instrumentation | 0 | 0 | 1 | 1 |
| | | Biotechnology | 3 | 2 | 0 | 5 |
| | | Computer Science | 7 | 8 | 0 | 15 |
| | | Energy Technology | 7 | 1 | 0 | 8 |
| | | Environmental Science & Engineering | 4 | 1 | 0 | 5 |
| | | Information Security | 4 | 1 | 0 | 5 |
| | | Information Technology | 2 | 2 | 0 | 4 |
| | | Remote Sensing | 4 | 2 | 0 | 6 |
| | **Master of Urban Planning** | | 4 | 4 | 2 | 10 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | **Total** | | | **389** |
| **3** | **Under-Graduate Degrees** | | **ID** | **I** | **II** | **Total** |
| | **Bachelor of Architecture** | | 26 | 5 | 0 | 31 |
| | **Bachelor of Engineering** | Biotechnology | 12 | 4 | 3 | 19 |
| | | Chemical | 38 | 16 | 1 | 55 |
| | | Chemical Engg. - Plastics and Polymer | 20 | 21 | 5 | 46 |
| | | Civil | 43 | 14 | 3 | 60 |
| | | Computer Science | 94 | 38 | 6 | 138 |
| | | Electrical & Electronics | 48 | 10 | 4 | 62 |
| | | Electronics & Communication | 82 | 45 | 4 | 131 |
| | | Information Technology | 47 | 6 | 3 | 56 |
| | | Mechanical | 90 | 29 | 4 | 123 |
| | | Production | 37 | 7 | 1 | 45 |
| | **Bachelor of Hotel Management & Catering Technology** | | 8 | 7 | 2 | 17 |
| | **Bachelor of Pharmacy** | | 23 | 22 | 4 | 49 |
| | **Bachelor of Science** | Chemistry | 3 | 3 | 0 | 6 |
| | | Mathematics and Computing | 1 | 0 | 0 | 1 |
| | | Physics | 10 | 2 | 0 | 12 |
| | | | **Total** | | | **851** |
| | | | | | | |
| | | | **Grand Total** | | | **1351** |

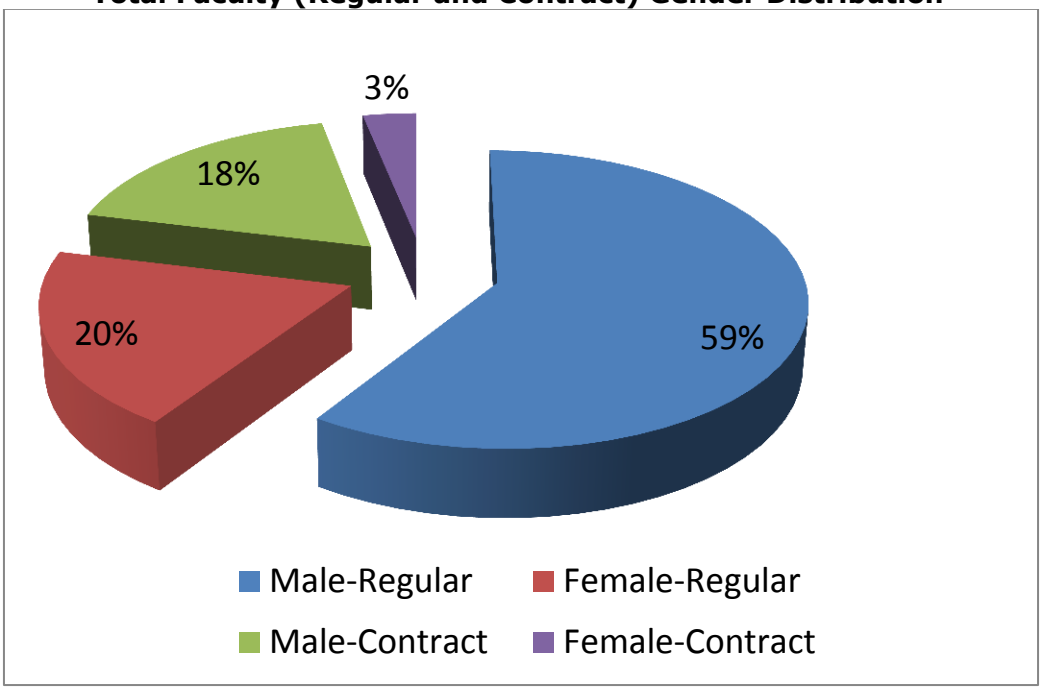
*ID:, I, II

**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

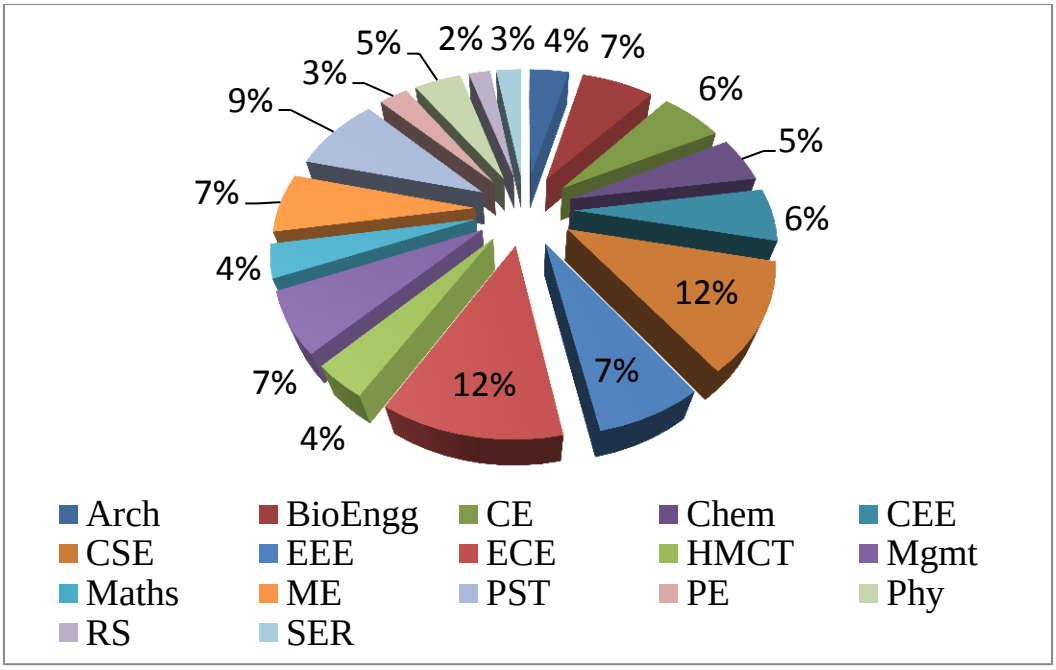



**Total Faculty Strength**

**Total Faculty (Regular and Contract) Gender Distribution**




**Regular Faculty Department Wise Distribution**


4%
7%
6%
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12%
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9%
3%
5%
2%
3%
Arch
BioEngg
CE
Chem
CEE
CSE
EEE
ECE
HMCT
Mgmt
Maths
ME
PST
PE
Phy
RS
SER

# *DEPARTMENTS*

# Department of Architecture

SECTION 1 DEPARTMENTAL PROFILE

**About the Department**:

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

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

The course structure in undergraduate and postgraduateis poised between theoretic al knowledge and itspractical 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 10 among all Architecture colleges in India as per NIRF 2019. The Department ranked 6th among all colleges of Architecture in India as per India Today 2019 survey. The Department ranked 2nd among all colleges of Architecture in India as per the survey of GHRDC in 2019.

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

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

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

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

## SECTION 2 RESEARCH PROJECTS

*1.* **Sponsored Projects (Research and Consultancy)**

*a)* Ongoing Projects

| Sr. No. | Project Title | PI / Co PI / Collaborator, if any | Funding Agency | Date of Sanction | Sanctioned Amount | Duration of the Project |
|---|---|---|---|---|---|---|
| 1. | Developing a Toolkit for Assessing Housing Needs for Scheduled Tribes in Urban Areas | PI: Dr. Smriti Mishra<br>Co PI: Amila Smriti Surin | Birla Institute of Technology, Mesra, Ranchi [under SEED Money Scheme] | July 2019 | INR 2,00,000/- | 2 years |

## SECTION 3 SEMINAR / CONFERENCE

**2. Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:**

| Sr. No. | Name of the Faculty | Title of the Conference/ Seminar | Funding Agency | Organizers | Venue | Date |
|---|---|---|---|---|---|---|
| 1. | Mrs. Ritu Agrawal | National Information System for climate and Environment Studies (NICES)Data Products | NRSC (ISRO) Hyderabad | Department of Remote Sensing, BIT, Mesra,Ranchi | BIT, Mesra,Ranchi | 31 Jan 2019 |
| 2. | Dr. Smriti Mishra | National Information System for climate and Environment Studies (NICES)Data Products | NRSC (ISRO) Hyderabad | Department of Remote Sensing, BIT, Mesra,Ranchi | BIT, Mesra,Ranchi | 31 Jan 2019 |
| 3. | Dr. Bimal Chandra Roy | National Information System for climate and Environment Studies (NICES)Data Products | NRSC (ISRO) Hyderabad | Department of Remote Sensing, BIT, Mesra,Ranchi | BIT, Mesra,Ranchi | 31 Jan 2019 |
| 4. | Mr. Rajan Chandra Sinha | National Information System for climate and Environment Studies (NICES)Data Products | NRSC (ISRO) Hyderabad | Department of Remote Sensing, BIT, Mesra,Ranchi | BIT, Mesra,Ranchi | 31 Jan 2019 |
| 5. | Prof. | "Lime Workshop- | Department | Bihar | NIT, Patna | 06 - |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Rizwan Kazmi | A Hands on Experience" | of Youth, Art & Culture, GoB | Heritage Development Society & NIT, Patna | | 10.04.2019 |
| 6. | Prof. Rizwan Kazmi | GIAN Course on "Transdisciplinary Climate Services to prepare for Climate Changes" | MHRD, GoI | NIT, Patna | NIT, Patna | 17-21.12.2018 |

## SECTION 4 RESEARCH PUBLICATIONS

**3. Publications in Journals :**(International/National)

1. Sinha Rajan Chandra, Sarkar Satyaki & Mandal Nikhil Ranjan (2018). Development of quality indicators for multi-family residential buildings in India – a Delphi analysis. International Journal of Sustainable Society. 10 (2), 96- 122.

## SECTION 5 ACTIVITIES/ FACULTY MEMBERS / BOS

***4.*** **Departmental Students' Activities**

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|
| 1. | 2-day workshop on Green Building and Sustainable Practice by GRIHA | | Dr. Manjari Chakraborty | 30 -31 October 2018 |
| 2. | 2 day Bamboo Workshop by Mr. Ghani Zaman | | Dr. Debajyoti Biswas | 31st August – 1st September 2018 |
| 3 | 2 day Hands on training workshop for construction of brick arches by Axis.edu | | Dr. Satyaki Sarkar | 30th – 31st March 2019 |

**5. List of Faculties**

| Sr. No. | Name | Designation |
|---|---|---|
| 1. | Dr. Satyaki Sarkar | Assoc. Prof & HOD |
| 2. | Dr. Manjari Chakraborty | Professor |
| 3. | Dr. Debajyoti Biswas | Professor |
| 4 | Mrs. Ritu Agrawal | Asst. Professor |
| 5 | Dr. Smriti Mishra | Asst. Professor |
| 6 | Dr. Bimal Chandra Roy | Asst. Professor |
| 7 | Mr. Rajan Chandra Sinha | Asst. Professor |
| 8 | Mr. Anuj Toppo | Asst. Professor |
| 9 | Mr. Apurv Ashish | Asst. Professor |
| 10 | Ms. Anila Surin | Asst. Professor |
| 11 | Mr. Mrinal Pathak | Asst. Professor |
| 12 | Mr. Pawan Kumar Tiwari | Asst. Professor |
| 13 | Ms. Anjali Pathak | Asst. Professor |
| 14 | Mr. Rizwan Kazmi | Asst. Professor |
| 15 | Ms. Shama Parween | Asst. Professor |

**6. List of Adjunct Faculties**

| Sr. No. | Name | Designation | Affiliation |
|---|---|---|---|
| 1. | Dr Niraj Verma | Adjunct Professor | L. Douglas Wilder School of Government and Public Affairs, Virginia Commonwealth University |

***7.*** **Board of Studies**

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | Dr. SatyakiSarkar, | Associate Professor & HOD | Chairman (Ex- Officio) |
| 2. | Dr. M. Chakraborty | Professor | Internal Member |
| 3 | Dr. D. J. Biswas | Professor | Internal Member |
| 4 | Mrs. Ritu Agrawal | Assist. Prof. | Internal Member |
| 5 | Head Dept. of CEE, BIT, Mesra | Professor | External Member |
| 6 | Head Dept. of Remote Sensing, BIT, Mesra | Professor | External Member |
| 7 | In-charge Dept. Architecture, BIT, Patna | Prof. In-charge | External Member |
| 8 | In-charge Dept. Architecture, BIT, RAK | Prof. In-charge | External Member |
| 9 | Prof. Swati Saha | Professor, IIEST Shibpur | External Member |
| 10 | Ar. Sandeep Jha | Chief Architect, AXIS Ranchi | External Member |

## SECTION 6 OTHER INFORMATION

***8.*** **Distinguished Visitors from Industry/Academia/Research organizations**

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| 1 | Prof. B.K. Sengupta, IIT Kharagpur | 07.09.2018 | |
| 2. | Ar. Saikat Roy, Gensler Bangalore | 26.10.2018 | |
| 3. | Dr. Sanghamitra Basu, IIT Kharagpur | 07.12.2018 | |

| | | | |
|---|---|---|---|
| 4. | Ar. Geeta Balakrishnan, Ethos India! | 07.12.2018 | |
| 5. | Dr. N.R. Mandal, SPA Bhopal | 03.05.2019 | |

***9.*** **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), Academic Director, Illinois Institute of Technology, USA, 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 Civil and Environmental Engineering

SECTION 1 DEPARTMENTAL PROFILE

***1.*** **About the Department:**

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

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

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

The Department has facilities for:

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

The department offers the following programs:

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

## *2.* Sponsored Projects (Research and Consultancy) Ongoing Projects.

| Sr. No. | Project Title | PI / Co PI / Collaborator, if any | Funding Agency | Date of Sanction | Sanctioned Amount | Duration of the Project |
|---|---|---|---|---|---|---|
| 1. | National Carbonaceous Aerosols Programme (NCAP): Working Group III – Emissions, sources apportionment and climate effects. | Dr. R. Naresh Kumar (PI) Dr. Jawed Iqbal (Co-PI) | MoEFCC | March, 2017 | Rs. 1.06 Crores | 5 Years |
| 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 of Coal India Limited. | Dr. Indrajit Roy (PI), Dr. Anand Kumar Sinha (Co-PI), Dr. Bindhu Lal (Co-PI), Dr. Sudeshna Chakravarty (Co-PI) | Ministry of Coal, Government of India | April, 2018 | Rs. 75.30 Lakhs | 3 Years |
| 3 | Mobility, Bio-accessibility and Source Apportionment Study of Toxic Heavy Metals in Indoor and Outdoor Dust Environment: An Isotope Fingerprinting Approach' | Dr. Tanushree Bhattacharya | Science and Engineering Research Board | July, 2017 | Rs. 41.907 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. | Top Soil Study | Dr. Kirti Avishek | Gujrat Mineral Development corporation Ltd. (GMDC) | 2018 | 4.5 Lakh | Aug 2018 |
| 2. | Slope Stability Study of PEKB coal mines | Dr. Indrajit Roy | GMDC | 2018 | 5.90 Lakh | Aug 2018 |
| 3. | Slope stability study of Neeljai | Dr. Indrajit Roy | Western Coalfield Limited (WCL) | Jan, 2019 | 2.36 Lakh | June 2019 |
| 4. | Slope stability study of Penganga | Dr. Indrajit Roy | WCL | Jan, 2019 | 2.36 Lakh | June 2019 |
| 5. | Slope stability study of Mungoli | Dr. Indrajit Roy | WCL | Jan, 2019 | 2.36 Lakh | June 2019 |
| 6. | Slope stability study of Kolgaon | Dr. Indrajit Roy | WCL | Jan, 2019 | 2.36 Lakh | June 2019 |
| 7. | Slope stability study of Umrer | Dr. Indrajit Roy | WCL | Jan, 2019 | 3.0 Lakh | June 2019 |
| 8. | Slope stability study of Gokul | Dr. Indrajit Roy | WCL | Jan, 2019 | 3.0 Lakh | June 2019 |
| 9. | Slope stability study of Makardhokra – I | Dr. Indrajit Roy | WCL | Jan, 2019 | 3.0 Lakh | June 2019 |
| 10. | Slope stability study of Ghonsa | Dr. Indrajit Roy | WCL | Jan, 2019 | 2.0 Lakh | June 2019 |
| 11. | Slope stability study of Kolarpimpri | Dr. Indrajit Roy | WCL | Jan, 2019 | 2.0 Lakh | June 2019 |
| 12. | Slope stability study of Ukni | Dr. Indrajit Roy | WCL | Jan, 2019 | 1.5 Lakh | June 2019 |
| 13. | Slope stability study of Junad | Dr. Indrajit Roy | WCL | Jan, 2019 | 1.5 Lakh | June 2019 |
| 14. | Slope stability study of Sonepur-Bazari ocm | Dr. Indrajit Roy | Eastern Coalfield Limited (ECL) | Oct, 2018 | 4.72 Lakh | June 2019 |
| 15. | Slope stability study of Satgram ocm | Dr. Indrajit Roy | ECL | Oct, 2018 | 4.72 Lakh | June 2019 |
| 16. | Slope stability study of Kenda ocm | Dr. Indrajit Roy | ECL | Oct, 2018 | 2.13 Lakh | June 2019 |
| 17. | Slope stability study of Trans- Damador pencast mine(ocm) | Dr. Indrajit Roy | West Bengal Power Development corporation ltd (WBPDC) | Feb, 2019 | 1.77 Lakh | June 2019 |
| 18. | Slope stability study of Barjora (N) | Dr. Indrajit Roy | WBPDC | Feb, 2019 | 1.77 Lakh | June 2019 |
| 19. | Slope stability study of Gangaramchak Opencast mine(ocm) | Dr. Indrajit Roy | WBPDC | Feb, 2019 | 1,77 Lakh | June 2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 20. | Slope stability study of Barjora | Dr. Indrajit Roy | WBPDC | Feb, 2019 | 1,77 Lakh | June 2019 |
| 21. | Slope stability study of Mata-no-Madh lignite opencast mine | Dr. Indrajit Roy | GMDC | July 2018 | 4 Lakh | June 2019 |
| 22. | Slope stability study of Vastan and Valia opencast mine | Dr. Indrajit Roy | GMDC | July 2018 | 5.9 Lakh | June 2019 |
| 23. | Slope stability study of Panandhro lignite opencast mine | Dr. Indrajit Roy | GMDC | July 2018 | 4 Lakh | June 2019 |
| 24. | Slope stability study of Umarsar lignite opencast mine | Dr. Indrajit Roy | GMDC | July 2018 | 4 Lakh | June 2019 |
| 25. | Slope stability study of Surkha(N) lignite opencast mine | Dr. Indrajit Roy | GMDC | July 2018 | 4.72 Lakh | June 2019 |
| 26. | Slope stability study of Ghogha-Surkha lignite opencast mine | Dr.Indrajit Roy | GMDC | July 2018 | 2.36 Lakh | June 2019 |
| 27 | Design and Renovation of Eco Friendly toilets for 50 Govt. schools of Jharkhand | Dr.Kirti Avishek | CINI-TATA TRUST | Feb, 2018 | 3.60 Lakh | July 2018 |

## SECTION 3 SEMINAR / CONFERENCE

*3.* **Seminar / Conferences / Short – Term Courses Conducted by the Department**

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| 1. | One Day Academia—Industry Interaction On Coal Mining and Sustainable Environment | Prof. Bindhu Lal and Dr. Sukalyan Chakraborty | TEQIP-III, BIT Mesra | 15 Mar 2019 |

***4.*** **Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:**

| Sr. No. | Name of the Faculty | Title of the Conference/ Seminar | Funding Agency | Organizers | Venue | Date |
|---|---|---|---|---|---|---|
| 1. | Dr. Manoj Ku. Diwakar, Mr. Vikky Masih | Training on "HPC for ANSYS" | BIT Mesra | BIT Mesra | BIT Mesra | 9-13.04.2019 |
| 2. | Dr. Siddhartha Sengupta, Dr. Manoj Ku. Diwakar, Mr. Indrajit Barua, Mr.Vikky Masih | Awareness of Fire Safety | NRB DRDO | BIT Mesra | BIT Mesra | 29.03.2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3. | Dr. Siddhartha Sengupta, Dr.Neeta Kumari Dr. Manoj Ku. Diwakar, Mr. Indrajit Barua, Mr. Vikky Masih | One day Industry-Academia Interaction on Coal mining and Sustainable Environment | TEQIP-III, BIT Mesra | BIT Mesra | BIT Mesra | 15.03.2019 |
| 4. | Dr. Neeta Kumari, Dr. Manoj Kumar Diwakar, Indrajit Barua | One day workshop on National Information system for climate and environment studies (NICES) data products | BIT Mesra | BIT Mesra | BIT Mesra | 31.01.2019 |
| 5. | Dr. Koushik Paul | One week Short Term GIAN course on "Geoinformatics and Geocomputational Modeling for Water Resources Engineering and Environmental Science" | BIT Mesra | IIT ISM Dhanbad | IIT ISM Dhanbad | 17-22.9.2018 |
| 6. | Mr. Mani Mohan | Applications of Probability and Statistics in Civil Engineering | BIT Mesra | IIT Delhi | IIT Delhi | 13-15.07.18 |
| 7 | Dr. Kirti Avishek | Design of water supply and wastewater treatment facilities | BIT Mesra | NIT Warangal | NIT Warangal | 19-23.05.19 |

## SECTION 4 RESEARCH PUBLICATIONS

**5.Publications in Journals: (International/National)**


1. Paul, K., Chattopadhyay, S., Dutta, A., Krishna, A.P., Ray, S. (2018). A comprehensive optimization model for integrated solid waste management system: A case study. Environmental Engineering Research 24, 220–237.
2. Akhoury, G., & Avishek, K. (2018). The congruity between interannual variations of rainfall, OLR and temperature maxima–minima in the context of Indian subcontinent. Advance and Innovative Research, 70.
3. Sengupta, S., Krishna, A. P., & Roy, I. (2018). Slope failure susceptibility zonation using integrated remote sensing and GIS techniques: A case study over Jhingurdah open pit coal mine, Singrauli coalfield, India. Journal of Earth System Science, 127(6), 82.
4. Mondal, N.K., Samanta, A., Chakraborty, S., and Shaikh, W.A. (2018). Enhanced chromium(VI) removal using banana peel dust: isotherms, kinetics and thermodynamics study. Sustainable Water Resources Management 4, 489–497.
5. Shaikh, W.A., Chakraborty, S., and Ul Islam, R. (2018). UV-assisted photo-catalytic degradation of anionic dye (Congo red) using biosynthesized silver nanoparticles: A green catalysis. Desalination and Water Treatment 130, 232–242.
6. Alam, Md.A., Shaikh, W.A., Alam, Md.O., Bhattacharya, T., Chakraborty, S., Show, B., and

Saha, I. (2018). Adsorption of As (III) and As (V) from aqueous solution by modified Cassia fistula (golden shower) biochar. Applied Water Science 8.

7. Prathap, A., and Chakraborty, S. (2019). Assessment of surface water quality around opencast coal mines for sustainable utilization potentials: a case study in Jharkhand, India. Environment, Development and Sustainability.
8. Akhoury, G., and Avishek, K. (2019). Climatic changes over the Arabian Peninsula and their correlation with Indian rainfall. Journal of Earth System Science 128.
9. Akhoury, G., and Avishek, K. (2019). Statistical analysis of Indian rainfall and its relationship with the Southern Oscillation Index. Arabian Journal of Geosciences 12.
10. Sengupta, S. (2019). Responses of piled raft foundations in layered soils subjected to eccentric vertical loading. International Journal of Science and Research, 8 (5), 440-445.
11. Kumari,N., Garg,S., Singhal,A., Kumar,M., Bhattacharya,M.,Jha, P.K., Chauhan, D.K., Thakur, I.S. (2019).Comparing different algorithms of Artificial neural network for optimizing chemical pretreatment process of Leucaena leucocephala wood.Bioresource Technology Reports, vol 7, pp 100289-297.

**6.Publications in Proceedings: (International/National)**

1. Bhattacharya, T., and Kumar, A., Biochar and its Application, In proceedings of Biogeochemical Cycles and Climate Change, 2018.
2. Jain, S., Bhattacharya, T., and Chakraborty, S., Comparison of Plant Tolerance Towards Air Pollution of Rural, Urban and Mine Sites of Jharkhand: A Biochemical Approach to Identify Air Pollutant Sink, In proceedings of Advances in Waste Management, 2019.
3. Pandey, S. K., and Bhattacharya, T., Biochemical Changes in Lantana camara and Ipomoea carnea Growing in the Fly Ash Amended Soil, In proceedings of Advances in Waste Management, 2019.
4. Singh, B.K. and Sengupta, S., Development of sustainable building blocks using fly ash blended with different additives: A critical review, In proceedings of 2nd National Conference on Recent Advances in Civil Engineering (RACE - II), National Institute of Technology, Patna, 2019.
5. Kumar, D. and Sengupta,S., Determination of liquefaction potential of sand-fly ash blends, In proceedings of 2nd National Conference on Recent Advances in Civil Engineering (RACE - II), National Institute of Technology, Patna, 2019.

**7. Chapter(s) in Edited Book**

1. Bhattacharya, T., & Chakraborty, S. (2019). Eco-Restoration Potential of Vegetation for Contaminated Water Bodies. Phytomanagement of Polluted Sites (pp. 425-446). Elsevier.
2. Kumari,N. and Pathak, G.(2019). Study of chemical nature of groundwater in the western parts of Jharkhand with a focus on Fluoride. Wastewater reuse and watershed management, engineering implications for agriculture, industry and the environment. Editor: Ajay Singh, Apple Academic Press, Florida, USA.

## SECTION 5 AWARD/ PATENT/ COLLABORATIONS

### 8. 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. Indrajit Roy | Selected by DAAD-RISE Internship to guide a German student | German Academic Exchange Service | International | 2019 |
| 2. | Dr. Kirti Avishek | Indo Global Excellence Award in Environmental Science | IGCCIA, Pune | National | 2018 |
| 3 | Dr. Sukalyan Chakraborty | Selected in Fulbright-Nehru Specialist Program to host a Professor from USA | United States-India Educational Foundation (USIEF) | International | 2019 |

## SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS

### 9. Departmental Students' Activities

| Sr. No. | Name of the Activity | Students' Co-Ordinator | Faculty Co-ordinator | Date / Duration |
|---|---|---|---|---|
| 1. | Kerala Flood Relief Operation | Nishant Kumar Singh | | 1/09/18-8/09/18 |

### 10. 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. Koushik Paul | Assistant Professor | No |
| 9. | Dr. Radhakrishnan Naresh Kumar | Assistant Professor | No |
| 10. | Dr. Sukalyan Chakraborty | Assistant Professor | No |
| 11. | Dr. Tanushree Bhattacharya | Assistant Professor | No |
| 12. | Dr. Jawed Iqbal | Assistant Professor | No |
| 13. | Dr. Neeta Kumari | Assistant Professor | No |
| 14. | Mr. Mani Mohan | Assistant Professor | No |
| 15. | Mr. Vikky Masih | Assistant Professor | Yes |
| 16. | Dr. Manoj Kumar Diwakar | Assistant Professor | Yes |
| 17. | Mr. Indrajit Barua | Assistant Professor | Yes |

## 11. Board of Studies

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

# SECTION 7 OTHER INFORMATION

## 12. Publication by students


1. Mondal, N.K., Samanta, A., Chakraborty, S., and Shaikh, W.A. (2018). Enhanced chromium(VI) removal using banana peel dust: isotherms, kinetics and thermodynamics study. Sustainable Water Resources Management 4, 489–497.
2. Shaikh, W.A., Chakraborty, S., and Ul Islam, R. (2018). UV-assisted photo-catalytic degradation of anionic dye (Congo red) using biosynthesized silver nanoparticles: A green catalysis. Desalination and Water Treatment 130, 232–242.
3. Alam, Md.A., Shaikh, W.A., Alam, Md.O., Bhattacharya, T., Chakraborty, S., Show, B., and Saha, I. (2018). Adsorption of As (III) and As (V) from aqueous solution by modified Cassia fistula (golden shower) biochar. Applied Water Science 8.
4. Kumar, D. and Sengupta,S., Determination of liquefaction potential of sand-fly ash blends, In proceedings of 2nd National Conference on Recent Advances in Civil Engineering (RACE - II), National Institute of Technology, Patna, 2019.

## 13. Achievements of Students

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | Nishant Kumar Singh | Excellence in Social Service Award | News and Publication Society Awards, BIT Mesra | 05/04/2019 CAT Hall, BIT Mesra |
| 2 | Nishant Kumar Singh | First Position University Level | Swachh Bharat, Summer Internship, Govt. of India | 15/04/2019 BIT Mesra |
| 3 | Nishant Kumar Singh | Research Internship | CMU, Pittsburgh, US | 03/06/2019-26/07/2019 |
| 4. | Abhishek Bhatt, Prajjwal Verma, Apurva Sinha, Ayushi Saraf | Qualified for the final round of National Award Scheme for Civil/Structural Engineering Student for best Innovative Structural Steel Design. | Institute for steel development and growth. (INSDAG) | 15/02/2019-16/02/2019, Ispat Pragati Bhawan, Kolkata |

## 14. Distinguished Visitors from Industry/Academia/Research organizations

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| 1 | Dr Biswajit Paul, Associate Professor, Department of Environmental Sc & Engineering (Centre of Mining Environment) Indian Institute of Technology (Indian School of Mines) | 15/03/2019 | |
| 2 | Mr. Zeeshan Qamer, Director of Mines, Govt. of Jharkhand | 15/03/2019 | |
| 3 | Mr. V.K. Pandey Senior Manager (Environment), CMPDI | 15/03/2019 | |

| | | | |
|---|---|---|---|
| 4 | Mr. Abhijit Sinha<br>GM (Environment),<br>CMPDI | 15/03/2019 | |
| 5 | Mr. Rakesh Dwivedi<br>Chief Manager (Environment),<br>CCL | 15/03/2019 | |

**15. Distinguished Alumni:**

| S.No | Name | Affiliation |
|---|---|---|
| 1 | | **Dr. Gopal Pathak**<br>Vice Chancellor,<br>Jharkhand Technical University. |
| 2 | | **Mr. Chandrakant Raipat,**<br>Managing Director,<br>Rameshwaram Group of Companies. Ranchi.<br>Jharkhand |
| 3 | | **Dr. Sunil K. Sinha**<br>Professor of Civil and Environmental Engineering at Virginia Tech.<br>Director of the Sustainable Water Infrastructure Management (SWIM) Center.<br>Principal Faculty of Myers-Lawson School of Construction. |

| | | |
|---|---|---|
| 4 | | **Dr. Arup Roy Choudhury**<br>Chief Commissioner,<br>Right to Public Service Commission,<br>West Bengal, India |

**16. List of Ph.D. Scholars admitted:**

| Sr. No. | Roll No. | Name |
|---|---|---|
| 1 | PHD/CEE/10001/2018 | Aditya Kr. Jha |
| 2 | PHD/CEE/10002/2018 | Arpita Roy |
| 3 | PHD/CEE/10003/2018 | Rukaiya Kausher |
| 4 | PHD/CEE/10004/2018 | Chakresh Kumar |
| 5 | PHD/CEE/10051/2018 | Kumari Anadita |
| 6 | PHD/CEE/10052/2018 | Akash Mishra |
| 7 | PHD/CEE/10053/2018 | Kanchan Lakra |
| 8 | PHD/CEE/10001/2019 | Abhiseg D. |

# Department of Bioengineering

SECTION 1 DEPARTMENTAL 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.
- Young, dynamic and learned faculty
- 1 UG, 2 PG and, Ph.D. Program
- A Center of Excellence (COE) under TEQIP, Phase II sponsored by World Bank
- BTISnet SubDIC Bioinformatics center for Jharkhand
- More than 50 externally funded projects from funding agencies like DST, DBT, UGC, AICTE, ICMR, CSIR etc.
- A mixed balanced of well recognized faculty members
- Rich academic and research profile
- All faculties with minimum Doctoral degree

**Programmes offered at a glance**

- B.Tech. Biotechnology (4 years) - **Accredited by** The National Board of Accreditation (NBA)
- M.Sc. Biotechnology (2 years)
- M.Tech. Biotechnology (2 years) - **Accredited by** The National Board of Accreditation (NBA)
- Ph.D.

**Infrastructure for Research**

- 12 well-equipped high-end research laboratories dedicated to Molecular Biology, Genetic Engineering and Cell Biology, Plant and Animal Biotechnology, Microbiology, Biochemistry, Proteomics, Molecular Plant Physiology, Bioinformatics, Bioprocess Engineering, Chemical Engineering, Environmental Biotechnology, Biomedical Instrumentation and Imaging

- The new 'state-of-the-art' instrumentation facilities include: GC-Mass Spectrophotometer, Real Time PCR, FPLC, HPLC, UPLC-QTOF,UPLC-MS/MS, Spray dryer, Rotary evaporator, Ultra water purification system, Typhoon Laser imager, Lypholizer, 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 and Pilot scale Bioreactors

**Research**

The department has a vision to develop 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. Moreover, some new areas like Proteomics and Genomics, Drug Discovery and Vaccine Development, IPR and Patenting in Biotechnology are of special interest to this department. The department has expertise in all areas of Biotechnology involved in research and teaching. It has proactively taken the lead to provide academic and scientific support to various institutions like NITs and Universities for setting up academic and research facility.

**Fields of Study/ Research:**

- Agriculture & Plant Biotechnology
- Algal Biotechnology
- Animal & Plant Tissue Culture
- Biofuel Production
- Bioinformatics
- Biomedical instrumentation
- Bioprocess Engineering
- Biosensor & Nano-biotechnology
- Down Stream Processing
- Environmental Biotechnology
- Food Biotechnology
- Industrial Biotechnology
- Medicinal Plant
- Microbial Resources
- Microbial Biotransformation
- Value Addition to Biomass & Waste Materials

## *2.* Sponsored Projects (Research and Consultancy)

*c)* Ongoing Projects

| Sr. No. | Project Title | PI / Co PI / Collaborator | Funding Agency | Date of Sanction | Sanctioned Amount (Lakh) | Duration of the Project |
|---|---|---|---|---|---|---|
| 1. | To Study the Structure and Blood Flow of Chorioretinal Complex in Human Using Optical Coherence Angiography | Dr Raju Poddar | ICMR GOI | 25/03/2017 | 37.06 | 3 years |
| 2 | Identification and molecular characterization of SNARE genes in wheat (Triticum aestivum L.) in response to leaf rust disease | Dr. Kunal Mukhopadhyay/Dr M. Kumar | DST SERB | 23-01-2017 | 14.79 | 3 Years |
| 3 | Towards development of a novel high resolution and high contrast in-vivo imaging technique based on Swept Source Optical | Dr Raju Poddar | DST-SERB | 23-02-2017 | 30.42 | 3 Years |
| 4 | Identification of the most active cocoonase of sericigenous insects through molecular characterization | Dr. D. M. Pandey | DBT New Delhi, GOI | 21-02-2018 | 22.93 | 3 Years |
| 6 | Bioprocess Development for efficient Triclosan Degradation | Dr. Shaswati Ghosh Sachan (Co-PI) | CSIR | 01/07/2016 | 17.80 | 3 Years |

*d)* Projects Completed

| Sr. No. | Project Title | PI / Co PI / Collaborator | Funding Agency | Date of Sanction | Sanctioned Amount | Date of completion of the Project |
|---|---|---|---|---|---|---|
| 1. | Process Development for the Production of UV-protective, Antioxidative and Antimicrobial Pigments from Bacterial Source Using Dairy Waste | Dr. S.K. Jha (PI), Dr. H.R. Singh (Co-PI), Dr. V.K. Nigam (Co-PI) | BIRAC, DBT, GOI | 01/04/2017 | 6.30 | 30/09/2018 |
| | Development of Android mobile Based System for Monitoring of Plant Pathogen Infection Using Foldscope (File No: BT/IN/Indo-US/Foldscope/39/2015). | PI: Dr. Santosh Kr. Jha & Co-PI: Dr. H.R. Singh | Department of Biotechnology, Gov. of India | April 2018 | 8.0 | April 2019 |

## SECTION 3 SEMINAR / CONFERENCE

**3. 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 | Workshop on Biotechnology Startup Ecosystem on March 18, 2019 | DBT Project | DBT GOI | CTR &TI, Piska, Nagari, Ranchi | |
| 2 | Dr D M Pandey | National Workshop on "NGS Analysis Pre-Conference Workshop- Genomics India 2019, The Chancery Pavilion, Bangalore, India January 23, 2019. and Genomics India 2019' (GIC 2019) conference from | DBT project | Genotype Co. Pvt. Ltd | ITC Gardenia, Bengaluru | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 24-25 January, 2019 at ITC Gardenia, Bengaluru. | | | | |
| 3. | Dr D M Pandey | 4th International Plant Physiology Congress Lucknow scheduled from Dec 2nd to 5th, 2018 | TEQIP-III | NBRI Lucknow | | Dec 2nd to 5th, 2018 |
| 4 | Dr Shubha Rani Sharma | International Conference on Microbiome Research 2018 (IC MR-2018) from 19th - 22nd November 2018 at Pune, India | TEQIP-III | | | 19th - 22nd November 2018 |
| 5 | Dr. Kunal Mukhopadhyay | International Conference on Bioinformatics (InCoB2018) at JNU, New Delhi, 25th – 28th Sept, 2018 | TEQIP-III | JNU, New Delhi | JNU, New Delhi | 25th – 28th Sept, 2018 |
| 6 | Dr. Manish Kumar | International Conference on Bioinformatics (InCoB2018) at JNU, New Delhi, 25th – 28th Sept, 2018 | TEQIP-III | JNU, New Delhi | JNU, New Delhi | 25th – 28th Sept, 2018 |
| 7 | Dr. Shubha Rani Sharma | International Conference on Bioinformatics (InCoB2018) at JNU, New Delhi, 25th – 28th Sept, 2018 | TEQIP-III | JNU, New Delhi | JNU, New Delhi | 25th – 28th Sept, 2018 |

## SECTION 4 RESEARCH PUBLICATIONS

**4. Publications in Journals :** (International/National)

1. Anjum N, **Chandra R (2018)** Endophytic bacteria of Catharanthus roseus as an alternative source of vindoline and application of response surface methodology to enhance its production. ARCHIVES OF BIOLOGICAL SCIENCES, ISSN: 1821-4339.
2. Smita S, Katiyar A, Dalal M, Lenka SK, Kumar A, Mahtha SK, Yadav G, Chinnusamy V, **Pandey DM**, Bansal KC (2019) Gene network modules associated with abiotic stress response in tolerant rice genotypes identified by transcriptome meta-analysis. **Functional & Integrative Genomics (MS. ID: FIGE-D-18-00071 – June 2019, Accepted)**

*3.* Anand P, Singh S, Prajapati GK, **Pandey DM** (2019) Computational characterization of lipoxygenase and hydroperoxide lyase enzymes and Real Time PCR-based expression analysis of their encoding genes in peanut under heat and drought stress. **Research Journal of Biotechnology. (MS ID: WRA-RJBT-2018-0092 - June 12, 2019-Accepted)**.

*4.* Pandey B, Gupta S, Rao AR, **Pandey DM,** Chatrath R (2019) Extrapolating the effect of nonsynonymous SNP in bread wheat *HSP16.9B* gene: a molecular modeling and dynamics study. **IJBRA (MS ID: IJBRA 0020-Accepted: In Press)**.

*5.* Prajapati GK, Pandey B, Mishra AK, Baek K-H, **Pandey DM** (2019) Identification of GCC-box and TCC-box motifs in the promoters of differentially expressed genes in rice (Oryza sativa L.): Experimental and computational approaches. **PLoS ONE 14(4): e0214964.** April 26, 2019

*6.* Kumar G, Ghosh M, **Pandey DM** (2019) Method development for optimized green synthesis of gold nanoparticles from *Millettia pinnata* and their activity in Non-small cell lung cancer cell lines. I**ET Nanobiotechnology.** 10.1049/iet-nbt.2018.5410. April 23, 2019-Accepted

*7.* Noopur Khare, Sheela Chandra; (2018) Stevioside mediated chemosensitization studies and cytotoxicity assay on breast cancer cell lines MDA-MB-231 and SKBR3, Saudi Journal of Biological Sciences. https://doi.org/10.1016/j.sjbs.2018.10.009. Oct 09, 2018

**8.** Annie Jessica Toppo, Sheela Chandra, Dhruv Jha, Papiya Mitra Mazumder (2019) In vitro evaluation of anti-acetylcholinesterase and free radical scavenging potential of leaf extracts of some selected medicinal plants; Asian Pacific Journal of Tropical Biomedicine, 9(2), 60-65 (2019). (Feb 1, 2019)

**9.** Sheela Chandra, Kazim Askari, Madhumita Kumari; (2018) "Optimization of indole acetic acid production by isolated bacteria from Stevia rebaudiana rhizosphere and its effects on plant growth," Journal of Genetic Engineering and Biotechnology 16, 581–586 (2018).

**10.** M Basu, R Poddar (2019) An amplitude variation Field subtraction technique for visualization of vasculature of the human eye, Biomedical Signal Processing and Control 54, 101573, 2019. (May 26, 2019-Accepted)

**11.** M Mohan, VK Nigam, R Poddar (2019) Towards characterization of bacterial colonies and biofilms: An approach based on swept source optical coherence tomography, Optik 185, 592-598, 2019. May 01, 2019

**12.** N Chawda, S Mishra, M Basu, H Chander, R Poddar, S Mahapatra, I Banerjee, (2019) Synthesis of gadolinium oxide nanocuboides for in vitro bioimaging applications, Materials Research Express, April 26, 2019.

**13.** Dutta S, JhaS, Prabhu KV, Kumar M, Mukhopadhyay K(2019) Leaf rust (Puccinia triticina) mediated RNAi in wheat (Triticum aestivum L.) prompting host susceptibility. Functional & Integrative Genomics 19(3):437-452 DOI:10.1007/s10142-019-00655-6 January 22, 2019.

**14.** Dutta S, Kumar M, **Mukhopadhyay K** (2019) Development of a rapid RNA extraction procedure from urediniospores of the leaf rust fungus, *Puccinia triticina*. **Journal of Microbiological Methods** DOI: 10.1016/j.mimet.2019.01.010. January 22, 2019

**15.** Adya R, Mohan M, **Mukhopadhyay K**, Poddar R (2019) Investigation of *Puccinia triticina* contagion on wheat leaves using swept source optical coherence tomography. **Optik** 178: 932-937 DOI: 10.1016/j.ijleo.2018.10.005. (October 2018)

**16.** Nanthakumar Arumugam, Peter Biely, Vladimir Puchart, Abe Gerrano, Koel De Mukherjee, Suren Singh, Santhosh Kumar Pillai (2019) Xylan from bambara and cowpea biomass and their structural elucidation.. International Journal of Biological Macromolecules (Accepted: IJBIOMAC_2019_710). (April 2019)

**17.** Pandey A., Nigam V. K. and Balani K. (2018) Multi-length scale tribology of hydroxyapatite reinforced with ceria and silver. Wear, 404-405, 12-21. (June 15, 2018)

**18.** Naha A., Singh H.R., Jha S.K. (2018) L-DOPA a Promising Pro-Drug against Parkinson Disease: Present and Future Perspective. Research Journal of Biotechnology, (Accepted). (September 2019)

**19.** Banerjee A., Rudra S G., Mazumder K., Nigam V K and Bandopadhyay R. (2018) Structural and functional properties of exopolysaccharide excreted by a novel Bacillus anthracis (Strain PFAB2) of hot spring origin. Indian Journal of Microbiology, 58, 39-50. (March 2018)

**20.** Akansha K, Chakraborty D, Ghosh Sachan S (2019) Decolorization and degradation of methyl orange by Bacillus stratosphericus SCA1007, Biocatalysis and Agricultural Biotechnology 18: 101044. (March 2019)

**21.** Singh A, Mukhopadhyay K, Ghosh Sachan S (2018) Biotransformation of eugenol to vanillin by a novel strain Bacillus safensis SMS1003, Biocatalysis and Biotransformation, DOI: 10.1080/10242422.2018.1544245. (Dec 20, 2018)

**22.** Kumari R, Ghosh Sachan S (2018) Bioconversion of toxic micropollutant triclosan to 2,4-dichlorophenol using a wastewater isolate Pseudomonas aeruginosa KS2002, International Journal of Environmental Science and Technology, DOI 10.1007/s13762-018-2129-5 (November 27, 2018)

**5. Book:**

- Chapter(s) in Edited Book

*1.* Jain A, Yadav S, Nigam VK, **Sharma SR** (2018), Fungal-Mediated Solid Waste Management: A Review. In: Prasad R. (eds) Mycoremediation and Environmental Sustainability. Fungal Biology. Springer, Cham, Page 153-170. ISSN 2198-7777.

*2.* **Sharma SR** (2018), Bioremediation of Polythenes and Plastics: A Microbial Approach In: Prasad R. (eds) Approaches in Bioremediation, The New Era of Environmental Microbiology and Nanobiotechnology, Springer, Cham, Page 94-114. ISSN 2523-8027

## SECTION 5 AWARD / PATENT / COLLABORATIONS

### 6. 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. Dinesh Prasad | Visiting professor under Erasmus plus program at Department, DAFNAE, from 6th Sep. to 12th Oct. 2018. | University of Padova, Italy | International | **35 days** |

### 7. MoUs / Collaborations Between:

| Sr. No. | Name of Organisation / University | Purpose / Area | Year / Duration |
|---|---|---|---|
| 1. | Department, DAFNAE, University of Padova, Italy | Bioscience and Bio-Engineering | 2017-2019 |

## SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS

### 8. List of Faculties

| Sr. No. | Name | Designation |
|---|---|---|
| *1.* | Dr. Ramesh Chandra | Professor |
| *2.* | Dr. P. Padmanabhan | Professor |
| *3.* | Dr. Kunal Mukhopadhyay | Professor |
| *4.* | Dr. Rakesh Kumar Sinha | Professor |
| *5.* | Dr. D. M. Pandey | Associate Professor |
| *6.* | Dr. V. K. Nigam | Associate Professor |
| *7.* | Dr. Manish Kumar | Associate Professor |
| *8.* | Dr. Raju Poddar | Assistant 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. Hare Ram Singh | Assistant Professor |
| *15.* | Dr. Dinesh Prasad | Assistant Professor |
| *16.* | Dr. Yogender Aggarwal | Assistant Professor |
| *17.* | Dr. Anjana Dwivedi | Assistant Professor |
| *18.* | Dr. Soham Chattopadhyay | Assistant Professor |

### 9.Board of Studies

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | Dr. Ramesh Chandra | Professor | Chairman (Ex-Officio) |
| 2. | Dr. T. R. Sharma | Director, IIAB Namukum, Ranchi, Jharkhand | External Expert |
| 3 | Dr. Sudipta Goswami | Professor | Member |
| 4 | Dr. S. Samanta | Professor | Member |
| 5 | Dr. Kunal Mukhopadhyay | Professor | Member |
| 6 | Dr. Rakesh Kumar Sinha | Professor | Member |
| 7 | Dr. Padmini Padmanabhan | Professor | Member |
| 8 | Dr. Vinod Kumar Nigam | Associate Professor | Member |
| 9 | Dr. Raju Poddar | Assistant Professor | Member |

## SECTION 7 OTHER INFORMATION

### 10. Achievements of Students

| Sr. No | Name of Student | Achievement/Position /Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | Rahul Kumar | Trainee | NUS, SIngapore | Singapore |
| 2. | Gaurav Kumar Sinha | Young Researcher | European Commission | University of Padova, Italy |
| 3 | Rashmi Kumari | Young Researcher | European Commission | University of Padova, Italy |

**11. Distinguished Visitors from Industry/Academia/Research organizations**

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| 1. | Prof. Antonio Masi, DAFNAE, University of Padova, Italy | Feb 13, 2019 to Feb 21, 2019 | |

# Department of Chemistry

SECTION 1 DEPARTMENTAL PROFILE

*1.* **About the Department**

**Overview:**

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 equipments such as AUTOLAB workstation, Electrochemical Analyzer (CHI), Microwave Reactor,UV/VIS/NIR Spectrophotometer, Solar Simulator, Rotational Viscometer, Ultra Low Immersion Chiller, Digital Osmometer, XYT Chart Recorder, Millipore, Refractometrer, 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.* **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. | Development of highly porous nano structure metal/ mixed metal oxide spheres for removal of arsenic" | Dr. Usha Jha Co PI | Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy(DAE) , Government of India | 2016 | 30.02 lakhs | 3yrs |
| 2. | One-dimensional Nanostructured Si-based Electrodes for High-Performance Energy Storage Devices | Dr. S.S. Mahapatra PI | Board of Research in Nuclear Sciences(BRNS), Department of Atomic Energy(DAE) , Government of India | 2016 | 30.02 lakhs | 3 yrs |
| 3 | 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 | 2018 | 25.00 Lakhs | 1 yr |
| 4 | Band-Gap Engineering of Lead-Free Perovskite Quantum-Dots for Optoelectronic Application | Dr. Joydeep Dhar (PI) Dr. Ashoke Sharon (Co-PI) | NPIU (MHRD) under AICTE-TEQIP Collaborative Research Scheme (CRS) | 2019 | 11.45 lakhs | 1 yr |
| 5 | Development of transition metal complexes as water oxidation catalyst | Dr. Subhendu Naskar (PI) | EMR-SERB-DST | 2017 | 28.34 Lakhs | 3 Yr |
| 6. | Synthesis and characterization of thermo sensitive nano composites based modified agar and its applications. | Dr Sumit Mishra (PI) | JCST | 2017 (Sanctioned) | 5 Lacs | 3 Yrs |

***b)*** **Projects Completed**

| Sr. No. | Project Title | PI / Co PI / Collaborator, if any | Funding Agency | Date of Sanction | Sanctioned Amount | Date of completion of the Project |
|---|---|---|---|---|---|---|
| 1. | Influence of functionalized nanomaterial on electrochemical bio-sensing of biotin-avidin couple | Sole PI: Dr. Pradip KAR | DST Nanomission | 09.06.2016 | 40.78 Lakhs | 3 years |

## SECTION 3 SEMINAR / CONFERENCE

**3. 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. Pradip KAR | Innovation and Challenges in Newer Drug Delivery System | AICTE QIP | Dept. Pharm. Sc., BIT Mesra | Ranchi | 30.11.2018 to 13.12.2018 |
| 2 | Dr. Joydeep Dhar | Advanced Pedagogies: Active Learning and Digital Tools | TEQIP, NPIU | IIT Hyderabad | Hyderabad | 10-06-2019 to 14-06-2019 |

## SECTION 4 RESEARCH PUBLICATIONS

**4. Publications in Journals:**(International/National)


1. F. Rozy and A. Sharon, ChemistrySelect 2019, 4, 6194-6197.
2. H. Chakravarty, C. Bal, M. Yadav, N. Jena, N. C. Bal and A. Sharon, ACS Omega 2019, 4, 11508-11514.
3. R. S. Pathare, V. Patil, H. Kaur, A. K. Maurya, V. K. Agnihotri, S. Khan, N. Devunuri, A. Sharon and D. M. Sawant, Org Biomol Chem 2018, 16, 6885-6888.
4. R. S. Pathare, A. J. Ansari, S. Verma, A. Maurya, A. K. Maurya, V. K. Agnihotri, A. Sharon, R. T. Pardasani and D. M. Sawant, J Org Chem 2018, 83, 9530-9537
5. S. Kundu, N. Kumari, S. R. Soni, S. Ranjan, R. Kumar, A. Sharon and A. Ghosh, ACS Omega 2018, 3, 15380-15388.
6. G. Joshi, M. Chauhan, R. Kumar, A. Thakur, S. Sharma, R. Singh, A. A. Wani, A. Sharon, P. V. Bharatam and R. Kumar, Organic Chemistry Frontiers 2018, 5, 3526-3533.
7. Nandkishore Thombare, Sumit Mishra, M.Z.Siddiqui, Usha Jha, ; Design and development of guar gum based novel, superabsorbent and moisture retaining hydrogels for agricultural applications, Carbohydrate Polymers 185 169-188 2018
8. Amulya Prasad. Sanjaya Swain Usha Jha; Core shell structured zero valent manganese,a novel nanoadsorbant for efficient removal of AsIII and

As(V)from drinking water, Journal of Material Chemistry A , RSC publications 7 9933-9947( 2019)
9. Amulya Prasad. Sanjaya Swain Usha Jha ; Exploring nano structure Zr/Cu composite oxides(NZCO) as an efficient adsorbant for removal of AsIII and As(V)from aqueous solutions. Chemistry Select ,4 1-14 (2019)
10. Pal,P.; Banerjee, A.; Haldar,U.; Pandey, J.P.; Sen,G.; Bandopadhay,R. (2018).Conferring antibacterial properties on sesbania gum via microwave-assisted graft copolymerization of DADMAC. Journal of polymer and the environment, 26, 3272.
11. Pal,P.; Pandey,J.P.; Sen,G. (2018). Sasbenia gum based hydrogel as platform for sustained drug delivery: An 'in vitro' study of 5 – FU release. International Journal of Biological Macromolecules,113, pp 1116-1124

12. Pal, P.; Pandey, J.P.; Sen,G.(2018). Grafted sesbania gum: A novel derivative for sugarcane juice clarification. International Journal of Biological Macromolecules,114,349.

13. Pal, P.; Pandey, J.P.; Sen,G. (2018). Synthesis and study of hydrolyzed polyacrylamide grafted polyvinyl pyrrolidone (Hyd. PVP-g-PAM) as flocculant for removal of nanoparticles from aqueous system. Material Science & Engineering B,236, 32.

14. Pal, P.; Banerjee,A.; Soren,K.; Chakraborty,P.; Pandey, J.P.; Sen,G.; Bandopadhay, R. (2019). Novel Biocide Based on Cationic Derivative of Psyllium: Surface Modification and Antibacterial Activity. Journal of polymer and the environment, 27, 1178.
15. Singh, A., Samanta, S., Roy, P. & Kar; P. (2019). Poly(m-aminophenol)/silver nanorod composite based paper strip for chemo-resistive picric acid sensing. Sensor Letters 17, 219-227.
16. Raj, S., Srivastava, S., Kar, P. & Roy, P. (2019). In situ growth of Co3O4 nanoflakes on reduced graphene oxide-wrapped Ni-foam as high performance asymmetric supercapacitor. Electrochimica Acta, 302, 327-337.
17. Raj, S., Kar, P. & Roy, P. (2019). Ammonia-assisted growth of CoSn(OH)6 nanostuctures and their electrochemical performances for supercapacitor. Journal of Nanoscience and Nanotechnology, 19, 2755-2761.
18. Raj, S., Kar, P. & Roy, P. (2018). Facile synthesis of flower-like morphology of Cu0.27Co2.73O4 for high performance supercapattery with extraordinary cycle stability. Chemical Communications, 54, 12400-12403.
19. Raj, S., Dong, Y., Kar, P., Mai, L., Jin, S. & Roy, (2018). P. Hybrid NiCo2O4-NiCo2S4 nanoflakes as high performance anode materiels for Li-ion batteries. Chemistry Select, 3, 2315-2320.
20. Bhuyan, M., Samanta, S. & Kar, P. (2018). Selective sensing of methanol by poly(m-aminophenol)/copper nanocomposite, Electronic Materials Letter 14, 161-172.
21. Sil, S.; Dey, A.; Datta, J.; Das, M.; Jana, R.; Halder, S.; Dhar, J.; Sanyal, D.; Ray, P. P. (2018). Analysis of interfaces in Bornite ($Cu_5FeS_4$) fabricated Schottky diode using impedance spectroscopy method and its photosensitive behavior, Materials Research Bulletin 106, 337–345.
22. Grandhe Usha Rani, Ananda Kumar Konreddy, Sumit Mishra, Novel hybrid biosorbents of agar: Swelling behaviour, heavy metal ions and dye removal efficacies International Journal of Biological Macromolecules 117, 902–910, (2018)
23. Bharti, S., Mishra S., Controlled drug release behavior of 5-aminosalicylic acid using polyacrylamide grafted oatmeal (OAT-g-PAM): a pH-sensitive drug carrier, Polymer Bulletin 76, 2, 813-824 (2018)
24. Samunuri, R., Jha, A. K., Bal, C.,Rhodium catalyzed stereospecific reductivecarbocyclization of 1, 6-enynes and synthesis of 4'-methyl-6'-substituted aristeromycins, Nucleosides, Nucleotides and Nucleic acids, 391-399, 2019.

25. A. Kumari, B Dasgupta Ghosh, La doped barium titanate/polyimide nanocomposites: A study of the effect of La doping and investigation on thermal, mechanical and high dielectric properties, Journal of Applied Polymer Science, 135, 46826 (2018)
26. A. Kumari, B Dasgupta Ghosh, A study of dielectric behavior of manganese doped barium titanate - polyimide composites, Advances in Polymer Technology, 37(6), 2270 (2018).
27. A. Kumari, B Dasgupta Ghosh, Effect of Strontium doping on structural and dielectric behavior of barium titanate nanoceramics, Advances in Applied Ceramics: Structural, Functional and Bioceramics, 117(7), 427 (2018)

**5. Book:**

- Chapter(s) in Edited Book

1. Kar, P. (2019). Chapter 3: Conjugated polymers nanocomposites. In Aliofkhazraei (Ed) Advances in Nanostructured Composites: volume 1: Carbon Nanotube and Graphene Composites, CRC Press, Boca Roton, USA.
2. Kar, P. (2019). Chapter 8: Anti Corrosion and Anti Wear. In P.N. Tri, S. Rtimi and C.A. Plamondon (Eds) Nanomaterials Based Coatings: Fundamentals and Applications, Elsevier, New Jersey, USA.
3. Mishra S., Thombare N., Ali M., Swami S. (2018) Applications of Biopolymeric Gels in Agricultural Sector. In: Thakur V., Thakur M., Voicu S. (eds) Polymer Gels. Gels Horizons: From Science to Smart Materials. Online ISBN978-981-10-6080-9 Springer, Singapore

## SECTION 5 AWARD / PATENT / COLLABORATIONS

**6. MoUs / Collaborations**

| S. No. | Name of Organisation/University | Purpose/Area | Duration |
|---|---|---|---|
| 01 | Kagoshima University, Japan | Development of Antivirals | April 18-March 19 |
| 02 | A*STAR Research Entities, Institute of Molecular and Cell Biology, Singapore | Structural and modeling studies of compounds in the target enzyme | Nov 17 to Oct 18 |

## SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS

***7.*** **Departmental Students' Activities :**

| Sr. No. | Name of the Activity | Students' Co-Ordinator | Faculty Co-ordinator | Date / Duration |
|---|---|---|---|---|
| 1. | Poster Presentation in International Society of Chemists and Biologists, | Keshav Kishor(ICH/10017/15)<br>Sneha Nayak(ICH/10013/15)<br>Harpreet Kaur(ICH/10001/15)<br>Prem Kr Kushwaha(ICH/10020/15) | Dr Ashoke Sharon<br>Dr C Bal | 12.1.19-14.1.19 |

| | | | | |
|---|---|---|---|---|
| 2. | Oral Presentation in 37th convention of Indian Council of Chemists | Mr Koustav Kundu | Dr Sumit Mishra | 12.12.19-14.12.19 |
| 3. | Student Summer Internships: | Puja Kumari (SAC/10003/2018) Anindita Mukherjee (SAC/10001/2018) (NIT Rourkela) | Dr Sumit Mishra | May 2019-July 19 |
| | | Surabhi Kumari (SAC/10002/2018) | Dr C Bal | May 2018-July 18 |
| | | Chinmaya (ICH/10015/15) Central Tasar Research and Training Institute | Dr P K Srivastava | May 2018-July 18 |
| | | Anshu Kumari(ICH/10006/15) CSIR-CIMFR | Dr P.K. Srivastava | May 2018-June 2018 |

**8. List of Faculties**

| Sr. No. | Name | Designation |
|---|---|---|
| 1. | Dr. P.K. Srivastava | Professor |
| 2 | Dr. (Mrs.) U. Jha | Professor |
| 3 | Dr. J. P. Pandey | Professor |
| 4 | Dr. B. Verma | Associate Professor |
| 5 | Dr. A. Sharon | Associate Professor |
| 6 | Dr. S. Naskar | Assistant Professor |
| 7 | Dr. (Mrs.) S. Mishra | Assistant Professor |
| 8 | Dr. (Mrs.) C. Bal | Assistant Professor |
| 9 | Dr. (Mrs.) Deep Shikha | Assistant Professor |
| 10 | Dr. P. Kar | Assistant Professor |
| 11 | Dr. S. S. Mahapatra | Assistant Professor |
| 12 | Dr. (Mrs.) B. Dasgupta Ghosh | Assistant Professor |
| 13 | Dr. G. K. Agarwal | Assistant Professor |
| 14 | Dr. G. Sen | Assistant Professor |

| | | |
|---|---|---|
| 15 | Dr. J. Dhar | Assistant Professor |

**9. Board of Studies**

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | Dr. D. Tiwary | Professor ; Department of Chemistry – IIT , B.H.U. Varanasi | External Member |
| 2. | Dr. R.K. Dey | Professor ; Department of Chemistry, Central University of Jharkhand | External Member |
| 4 | Dr. R.N. Gupta | Professor , Dept. Phar. Sc. & Tech. | Member |
| 5. | Dr. R.P. Sharma | Professor , Dept. of Mech. | Member |
| 6. | Dr. Usha Jha | Professor , Dept. of Chemistry | Member |
| 7. | Dr. J.P. Pandey | Professor , Dept. of Chemistry | Member |
| 9. | Dr. Ashoke Sharon | Associate Prof. , Dept. Of Chemistry | Member |
| 10 | Dr. Subhendu Naskar | Assistant Prof. , Dept of Chemistry | Member |
| 11 | Dr. Sumit Mishra | Assistant Prof. , Dept .of Chemistry | Member |
| 13 | Dr. Gautam Sen | Assistant Prof. , Dept .of Chemistry | Member |
| 14 | Dr. S.S. Mahapatra | Assistant Prof. , Dept .of Chemistry | Member |
| 15 | Dr. P.K. Srivastava | Professor , Dept .of Chemistry | Chairman (Ex Officio) |

## SECTION 7 OTHER INFORMATION

***10.*** **Publication by students, if any**

1. Chinmaya, T Pandiraaj, PP Srivastava, AK Sinha, Status and Variability of soil nutrients and carbon sequestration with depth in the Tasar host plants growing soils, Journal of Pharmacognosy and Phytochemistry, Vol 7, Issue 4, 2018.
2. R. S. Pathare, V. Patil, **H. Kaur**, A. K. Maurya, V. K. Agnihotri, S. Khan, N. Devunuri, A. Sharon and D. M. Sawant, Iodine-Catalyzed Cross-Coupling of Isocyanides and Thiols for the synthesis of S-Thiocarbamates Org Biomol Chem 2018, 16, 6885-6888

***11.*** **Distinguished Visitors from Industry/Academia/Research organizations:**

| **Sr. No.** | **Name of visitor with affiliation** | **Date of visit** | **Picture** |
|---|---|---|---|
| 1. | Prof Alok K Ray,<br>IIT Delhi | 25.7.18 | |

| | | | |
|---|---|---|---|
| | | | |
| 2. | Dr Rosa Busquets,<br>Prof Peter Hooda | July 2018 | |

***12.*** **List of Distinguished Alumni**

| S. No. | Batch and Affiliation | Short Description |
|---|---|---|
| 1. | Vinita Arora, PhD, 2008 | Working as Senior Manager in Environmental Division, CMPDI, Ranchi |
| 2. | Manoj Kr Saini, PhD 2018 | Working as Principal Scientist , CIMFR, Ranchi |
| 3. | Nandkishore Thombare, PhD 2018 | Working as Senior Scientist, Indian Institute of Natural gums and Resins, Ranchi |

***13.*** **Any other relevant information**

*1.* Implementation of CBCS syllabus at IMSC and MSc level from 2018 batch.

# Department of Mathematics

## SECTION 1 DEPARTMENTAL PROFILE

### *1.* About the Department

Mathematics is one of the major foundation subjects in sciences, which leads to the 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 8 other 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 highly impact journals. They are also skilled in writing books on 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. 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. Ankur Kanaujiya | Advanced Pedagogies: Active learning and Digital Tools | TEQIP-III | IIT Hydrabad | IIT Hydrabad | June 10-14,2019 |
| 2. | Dhriti Sundar Patra | Summer Training Program on Advanced Pedagogy | TEQIP | IIT Hyderabad | IIT Hyderabad | 10th to 14th June, 2019 |
| 3. | Dhriti Sundar Patra | National Seminar on Mathematical and | Calcutta Mathematical Society | Calcutta Mathematical Society | Calcutta Mathematical Society | 16th February, 2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | Theoretical Physics, Number Theory and Related Topics | | | | |
| 4. | Dhriti Sundar Patra | National Conference on Mathematical Analysis and Mathematical Modelling | Calcutta Mathematical Society | Calcutta Mathematical Society | Calcutta Mathematical Society | 7th to 8th December, 2018 |
| 5. | Dhriti Sundar Patra | Workshop on Algebraic Topology, Stochastic Modelling, Analytical and Computational Methods | Calcutta Mathematical Society | Calcutta Mathematical Society | Calcutta Mathematical Society | 5th to 6th December, 2018 |
| 6 | Dr. Abhinav Tandon | Training Programme on Dynamical Systems: Theory and Applications | INSTITUTE FUNDED | Department of Applied Mathematics, IIT (ISM), Dhanbad | IIT (ISM), Dhanbad | 4th Sept. 2018 – 8th Sept.,2018 |
| 7. | Randhir Singh | Workshop on Mathematical Modeling and Research Methodology | | Dept. of Mathematics, HBTU, Kanpur, India | Seminar Room, Dept. of Mathematics, HBTU, Kanpur | 08-08-18 to 12-08-2018 |
| 8 | Tanmay Choudhury | Summer Training Programme on Advanced Digital Pedagogy. | TEQIP | IIT Hyderabad | IIT Hyderabad | 10-14 June, 2019. |
| 9 | Dr. D. V. V. P. R. V. B. Suresh | Advanced Pedagogies: Active learning and Digital Tools | TEQIP-III | IIT Hydrabad | IIT Hydrabad | June 10-14,2019 |
| 10 | Dr. D. V. V. P. R. V. B. Suresh | Real World Applications of Mathematics and Statistics | Amity University | Amity University, Ranchi | Amity University, Ranchi | 02 May 2019 (Invited Speaker) |
| 11 | S. D. Jabeen | 91st Orientation programme at Ranchi University | BIT | Ranchi University | Ranchi University | 04.06.2018 to 01.07.2018 |
| 12 | S. D. Jabeen | 51st Annual Convention and International | BIT | IIT Bombay | IIT Bombay | 14-22, December 2018. |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | Conference of ORSI | | | | |
| 13 | S. D. Jabeen | ICIAM | DST and BIT | University of Valencia, Spain | University of Valencia, Spain | 15-19 July 2019 |
| 14 | Seshadev Padhi | National Conference on Green technology and Sustainable Agriculture | Amity University | Amity University, Ranchi | Amity University, Ranchi | 10 May 2019 (Invited Speaker) |
| 15 | Seshadev Padhi | Real World Applications of Mathematics and Statistics | Amity University | Amity University, Ranchi | Amity University, Ranchi | 02 May 2019 (Invited Speaker) |
| 16 | Seshadev Padhi | Faculty Development Programme on Research Methodology and Documentation | Amity University | Amity University, Ranchi | Amity University, Ranchi | 08 August 2018 (Invited Speaker) |
| 17 | Dr. Soubhik Chakraborty | 2nd International Conference on Computational Intelligence | TEQIP | BIT Mesra/Springer | Deptt of CSE, BIT Mesra | Dec 10-11, 2018 |
| 18 | Dr. Soubhik Chakraborty | Faculty Development Programme on Research Methodology and Documentation | -------- | Amity University, Jharkhand | Amity University, Jharkhand | Aug 3-9, 2018 (Invited Speaker) |

## SECTION 3 RESEARCH PUBLICATIONS

***3.*** **Publications in Journals:** (International/National)

1. Seshadev Padhi, John R. Graef and Ankur Kanaujiya. (2019). Positive Solutions to Nonlinear Elliptic Equations Depending on a Parameter with Dirichlet Boundary Conditions, Differential Equations and Dynamical Systems: doi.org/10.1007/s12591-019-00481-z.
2. D. S. Patra, solitons and Ricci almost solitons on para-Kenmotsu manifold, Bulletin of the Korean Mathematical Society, published online, doi.org/10.4134/BKMS.b181175.
3. D. S. Patra and A. Ghosh, *-Ricci soliton within the frame-work of Sasakian and (k; μ)-contact manifolds, International Journal of Geometric Methods in Modern Physics, 15(7)(2018), pp-1850120.
4. Jangirala Srinivas, Dheerendra Mishra, Sourav Mukhopadhyay, Saru Kumari and **Vandana Guleria,** An Authentication Framework for Roaming Service in Global Mobility Networks, Information Technology

and Control (SCIE, Impact Factor 0.8000), 48(1), 129-145, 2019.

5. Randhir Singh, Himanshu Garg and **Vandana Guleria,** Haar wavelet collocation method for Lane-Emden equations with Dirichlet, Neumann and Neumann-Robin boundary conditions, Journal of Computation and Applied Mathematics (SCI, Impact Factor 1.632), 340, 150-161, 2019.
6. R. Singh: Analytical approach for computation of exact and analytic approximate solutions to the system of Lane-Emden-Fowler types equations arising in astrophysics, The European Physical Journal Plus, 133(8), (2018) 320.
7. R. Singh: Optimal homotopy analysis method for the non-isothermal reaction-diffusion model equations in a spherical catalyst, Journal of Mathematical Chemistry, Vol. 56, No. 9, (2018) 2579–2590.
8. R. Singh, A.M. Wazwaz: Optimal Homotopy Analysis Method for Oxygen Diffusion in a Spherical Cell with Nonlinear Oxygen Uptake Kinetics, MATCH Communications in Mathematical and in Computer Chemistry, 80(2), (2018) 369-382
9. R. Singh, A. M. Wazwaz: An Efficient Algorithm for Solving Coupled Lane-Emden Boundary Value Problems in Catalytic Diffusion Reactions: The Homotopy Analysis Method, MATCH Communications in Mathematical and in Computer Chemistry 81(3), (2019), 785--800
10. R. Singh, H. Garg, V. Guleria: Haar wavelet collocation method for Lane-Emden equations with Dirichlet, Neumann and Neumann-Robin boundary conditions, Journal of Computational and Applied Mathematics, 346, (2019) 151-160.
11. R. Singh, A.M. Wazwaz: Steady-State Concentrations of Carbon Dioxide Absorbed into Phenyl Glycidyl Ether: An Optimal Homotopy Analysis Method, MATCH Communications in Mathematical and in Computer Chemistry, 81(3), (2019), 800--812.
12. G. Kaur; R. Singh; M. Singh; J. Kumar; T. Matsoukas, Analytical approach for solving population balances: a homotopy perturbation method, Journal of Physics A: Mathematical and Theoretical, (2019) Accepted
13. R. Singh, J. Shahni, H. Garg, A. Garg, Haar wavelet collocation approach for Lane-Emden equations arising in mathematical physics and astrophysics, The European Physical Journal Plus, (2019) Accepted
14. M. Singh, H. Y. Ismail, R. Singh, A.B. Albadarin, G. Walker: Finite volume approximation of nonlinear agglomeration population balance equation on triangular grid, Journal of Aerosol Science, 147, (2019), 105430.
15. Seshadev Padhi, John R. Graef and Smita Pati, Multiple positive solutions for a boundary value problem with nonlinear nonlocal Riemann-Stieltjes integral boundary conditions, Frac. Calc. Appl. Anal. 21(3)(2018), 716-745.
16. Jaffar Ali and Seshadev Padhi, Existence of multiple positive radial solutions to elliptic equations in an annulus, Communications in Applied Analysis, 22(4)(2018), 695-710.
17. Seshadev Padhi, B.S.R.V. Prasad, Satyam Narayan Srivastava and Shasanka Dev Bhuyan, Monotone iterative method for solutions of fractional differential equations, Memoires on Differential Equations and Mathematical Physics, 77(2019), 59-69.
18. Smita Pati, John R.Graef and Seshadev Padhi, Positive periodic solutions to a system of nonlinear differential equations with applications to Lotka-Volterra-type Ecological models with discrete and distrubuted delays, J. Fixed Point Theory and Applications, (2019), 21:80, https://doi.org/10.1007/s11784-019-0715-x.
19. Seshadev Padhi, B.S.R.V.Prasad and Divya Mahendru, System of Riemann-Liouville fractional differential equations with nonlocal boundary conditions - Existence, uniqueness and multiplicity of

solutions, Mathematical Methods in the Applied Sciences, (2019), https://doi.org/10.1002/mma.5812.

20. Pranav, P., Chakraborty S. & Dutta, S., (2019) A new cipher system using semi-natural composition in Indian raga, Soft Computing (2019), https://doi.org/10.1007/s00500-019-03983-8
21. Rahman A. and Chakraborty, S., (Dec 2018) Statistical analysis of melody lengths with a new formula for computing melodic weight of a note in a song: a case study, Research Journal of Mathematical and Statistical Sciences, Vol. 6(8), p.1-6
22. Gupta, Rand Chakraborty, S., (May 2019) An efficient method of generation of a random sample using random numbers significantly less than the sample size, Research Journal of Mathematical and Statistical Sciences Vol. 7(2), p.27-29

**4**. **Publications in Proceedings:** (International/National)

1. S. D. Choudhury, S. Chakraborty and N. Chatterjee, 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.245-253, Proceedings of Second International Conference on Computational Intelligence, BIT Mesra, Dec 10-11, 2018, [**Springer**]
2. S. Tewari and S. Chakraborty, 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_21, p. 255-264, Proceedings of Second International Conference on Computational Intelligence, BIT Mesra, Dec 10-11, 2018, [**Springer**]
3. A.B. Bal and S. Chakraborty, 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, Proceedings of Second International Conference on Computational Intelligence, BIT Mesra, Dec 10-11, 2018, [**Springer]**
4. S. Priyanka, Sandip Dutta and S. Chakraborty, 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, 2020. https://doi.org/10.1007/978-3-030-24643-3_61**[Springer]**

**5. Book:**

- Co-Authored

1. N. Saha and S. Chakraborty, Probabilistic Analysis of a Random Determinant, GRIN Verlag, 2019, ISBN 9783668965096

2. A. Singh and S. Chakraborty, The Influence of Hindustani Classical Music on Bollywood Songs: A Statistical Outlook, GRIN Verlag, 2019, ISBN 9783668984356

## SECTION 4 ACTIVITIES/ FACULTY MEMBERS / BOS

### 6. List of Faculties

| Sr. No. | Name | Designation | TEQIP Sponsored |
|---|---|---|---|
| 1 | Dr. S. K. Jain | Professor | No |
| 2 | Dr. S. Chakraborty | Professor | No |
| 3 | Dr. Seshadev padhi | Professor | No |
| 4 | Dr. A. P. Ghorai | Associate Professor | No |
| 5 | Dr. Abhinav Tandon | Assistant Professor | No |
| 6 | Dr. P. Kaur | Assistant Professor | No |
| 7 | Dr. Randhir Singh | Assistant Professor | No |
| 8 | Dr. Vandana | Assistant Professor | No |
| 9 | Dr. S. D. Jabeen | Assistant Professor | No |
| 10 | Dr. Ankur Kanaujiya | Assistant Professor | Yes |
| 11 | Dr. Dhriti Sundar Patra | Assistant Professor | Yes |
| 12 | Tanmay Choudhury | Assistant Professor | Yes |
| 13 | Dr. D.V.V. P. R. V. B. Suresh | Assistant Professor | Yes |
| 14 | Pawan Kumar Shaw | Assistant Professor | Yes |

### *7.* Board of Studies

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | Prof. S. Chakraborty | Ex-Officio, Prof. and Head | Chairman |
| 2. | Prof. S. K. Jain | Professor | Member |
| 3 | Prof. S. Padhi | Professor | Member |
| 4 | Dr (Mrs.) A. P. Ghorai | Associate Professor | Member |
| 5 | Dr. A. Tandon | Assistant Professor | Member |
| 6 | Dr. Vandana | Assistant Professor | Member |
| 7 | Prof. S. Konar | Professor, Dept. Of Physics | Member |
| 8 | Dr. Abhijit Mustafi | Associate Professor, Dept. Of C.Sc. Engg. | Member |
| 9 | Dr. D. K. Gupta | Prof. Dept. Of Math., IIT Kharagpur | External Member |
| 10 | Dr. D. Kundu | Prof. Dept. Of Stat., IIT Kanpur | External Member |
| 11 | Dr. K. C. Prasad | Retd. Prof. Dept. Of Math. Ranchi University, ranchi | External Member |
| 12 | Dr. S. Chakraborty | Prof. Dept. Of math., NIT, Rourkela | External Member |
| 13 | Dr. S. B. Singh | Associate prof. PSM Dept. RIMS, Ranchi | External Member (Alumni) |

## SECTION 5 OTHER INFORMATION

### *8.* Publication by students

1. Seshadev Padhi, B.S.R.V. Prasad, **Satyam Narayan Srivastava and Shasanka Dev Bhuyan**, Monotone iterative method for solutions of fractional differential equations, Memoires on Differential Equations and Mathematical Physics, 77(2019), 59-69.

2. Seshadev Padhi, B.S.R.V.Prasad and Divya Mahendru, System of Riemann-Liouville fractional differential equations with nonlocal boundary conditions - Existence, uniqueness and multiplicity of solutions, Mathematical Methods in the Applied Sciences, (2019), https://doi.org/10.1002/mma.5812

# Department of Physics

SECTION 1 DEPARTMENTAL PROFILE

## 1. About the Department

The Department of Physics (previously known as Department of Applied Physics) since its inception in 1955 has played a pivotal role in the institute. The Department has a strong pool of highly qualified and motivated faculty members. The Department is well supported financially through "Fund for Improvement in Science & Technology Infrastructure" (FIST) programme of the Department of Science and Technology, New Delhi twice and under Special Assistance Programme (SAP) of the UGC. The Department has also received significant funds under TEQIP–I & II phases. The Department has been funded by agencies, viz. UGC, DST, BRNS, ARDB, ISRO, DRDO and CSIR for pursuing different research projects. Recently the Department has completed several international (Indo-German, Indo-Russian, Indo-Israel) projects aswell. The Department of Physics has procured following equipments in the year 2019:

Other than BE 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 academicambience.
- To prepare students to take up challenges as a researcher in diverse areas of theoretical and experimentalphysics.
- 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: CondensedMatter Physics, Electronics, Photonics and Plasma Sciences. Exit option available after completion of three years with a B.Sc. (Honours) Degree that enables students to take admission in the Integrated M.Sc. plus Ph.D. programs of different prestigious research organizations.

**Achievements of alumni**:

Availing exit option, some of the previous students have been admitted to the

Integrated Ph.D. programs of Tata Institute of Fundamental Research, Bombay; Indian Institute of Science, Bangalore; Harish-Chandra Research Institute, Allahabad; etc.

Some students have excelled in the GRE and TOEFL for higher studies in US universities whereas some others have made their way to German and Canadian Universities.

## SECTION 2 RESEARCH PROJECTS

### 2. Sponsored Projects (Research and Consultancy)

***a)*** **Ongoing Projects**

| Sr. | 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 | S Konar PI | DRDO | 05.01.2018 | 24.60 Lakhs | 3 Years |
| 2. | Development of environment Friendly perovskite materials forself-powdered vibrational energy harvesting device applications | S K Rout PI | DST | July 2017 | 55.80 Lakhs | 3 years |
| 3. | Study of stochastic heat engines using active particles | Sourabh Lahiri PI | Science and Engineering Research Board | April 27, 2018 | 23.00 Lakhs | 3 years |
| 4. | Nonlinear rheology of dense colloidalsuspensions | Madhu Priya PI | ECR-SERB grant | 27-04-2018 | 22.41 Lakhs | 3 years |
| 5. | Development of rare earth modified Zirconate as an efficient proton conducting material at intermediate temperature. | Ela Sinha PI | DST, India | 14.03.2017 | 29.68 Lakhs | 3 years |
| 6. | Defect Engineered Fluorescence from "Nano-Diamond" for Nano-photonics and Bio-Imaging. | Dilip Kumar Singh | DST, Govt. of India | 30.01.2014 | 35.00 Lakhs | 5 Years |

## SECTION 3 SEMINAR / CONFERENCE

**3. Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:**

| Sr. No. | Name of the Faculty | Title of the Conference/ Seminar | Funding Agency | Organizers | Venue | Date |
|---|---|---|---|---|---|---|
| 1. | Dr. S. Keshri | International Conference on Nano-Structured Materials and Devices | | Delhi University | Delhi University | 17-20 December, 2018 (Invited talk) |
| 2. | Dr. Nishi Srivastava | TROPMET-2018, National Symposium on Understanding Weather and Climate Variability: Research for Society | Indian Meteorological Society | Indian Meteorological Society | Banaras Hindu University, Varanasi, Uttar Pradesh, | 24 to 27 October, 2018, |

## SECTION 4 RESEARCH PUBLICATIONS

**4. Publications in Journals:** (International/National)

1. Sonali Biswas, Sunita Keshri, (2019) Room temperature magneto impedance of manganites, 92. (https://doi.org/10.1080/01411594.2019.1566826).
2. Sarit K Ghosh, Kaushik Mallick, B Tiwari, E Sinha and S K Rout, (2018) Relaxor-ferroelectric BaLnZT (Ln=La, Nd, Sm, Eu, and Sc) ceramics for actuator and energy storage application Mater. Res. Express 5, 015509.
3. S. K. Rout, V. Chauhan, D. K. Kushvaha, E. Sinha, A. Hussain, B. Tiwari (2018) Impact of multiple phases on ferroelectric and piezoelectric performances of BNKT-BZT ceramic, J Mater Science: Materials in Electronics, 29(22), 19524-19531.
4. D. K. Kushvaha, S. K. Rout, B. Tiwari, Structural, piezoelectric and highdensity energy storage properties of lead-free BNKT-BCZT solid solution, (2019) Journal of Alloys and Compounds, 782 270-276
5. Avishek Satapathy, Ela Sinha, S.K. Rout (2019) Investigation of proton conductivity in Sc and Yb co-doped barium zirconate ceramics, Mater. Res. Express, 6 056305
6. Nalin Prasant, Poddar, S. K. Mukherjee, (2019) "Ëffect of substrate and post – deposition annealing on re-sputtered Al-doped ZNO(AZO) thin films", Journal of Materials Science: Materials in Electronics, 30, 14269-14280.
7. Nalin Prasant Poddar, S. K. Mukherjee, Investigation on preferencially oriented Al-doped ZNO films using rf magnetron sputtering, (2019) Journal of Materials Science: Materials in Electronics, 30, 537-548.
8. Nishi Srivastava, (2019) Association of Modeled PM2.5 with Aerosol Optical Depth: Model vs Satellite, Natural Hazards, DOI: 10.1007/s11069-019-03590-8.
9. Ravi Kumar, Dilip K. Singh, Prasant Kumar, , Raj Kumar, S R Dhakate (2019) Influence of degree of air oxidation and functionality on ensemble emission from nitrogen vacancy centres in nano-diamonds Diamond and Related Materials, 97, 107431.
10. Pawan Kumar Dubey Tripathi, L. N. (2019) Hybrid Metal nano-antenna 2D-material photovoltaic device Solar Energy Materials & Solar Cells, 200, 109918.
11. Nishi Srivastava (2019) Association of Modeled PM2.5 with Aerosol Optical Depth: Model vs Satellite, Natural Hazards, DOI: 10.1007/s11069-019-03590-8.

12. Chandra Sagarika, Nishi Srivastava, Manoj Kumar, (2018), Vertical structure of atmospheric boundary layer over Ranchi during the summer monsoon season Meteorology and Atmospheric Physics. https://doi.org/10.1007/s00703-018-0600-y.

**Publications in Proceedings:**

1. Nishi Srivastava, Impact of Urban Terrain on Simulation of Air-Pollutants, Conference of Indian Aerosol Science and Technology Association, 2018, "Aerosol Impacts: Human Health to Climate Change", 26-28 Nov, 2018, IIT-Delhi, Organized by: Center for Atmospheric Sciences, I.I.T-Delhi
2. Sunita Keshri, International Conference on Nano-Structured Materials and Devices, Delhi University, 17-20 December, 2018 (Invited talk).
3. Investigation of sliding wear behaviour of HVOF carbide coating, T K Mishra, A. Kumar, S. K. Sinha, S. Sharma, Materials Today Proceedings 5 (9), 19539-19546, (2018)

## SECTION 5 ACTIVITIES/ FACULTY MEMBERS / BOS

**6. List of Faculties**

| Sr. No. | Name (Please mention Dr. / Prof./ Mr./ Mrs. / Ms.as applicable) | Designation | TEQIP Sponsored (Yes / No) |
|---|---|---|---|
| 1. | Dr. S. Konar | Professor | No |
| 2. | Dr. (Mrs.) S. Keshri | Professor& Head | No |
| 3. | Dr. S. K. Sinha | Professor | No |
| 4. | Dr. R. K. Paul | Associate Professor | No |
| 5. | Dr. S. K. Rout | Associate Professor | No |
| 6. | Dr Kingshuk Bose | Assistant Professor | No |
| 7. | Dr Ela Sinha | Assistant Professor | No |
| 8. | Dr. Nishi Srivastava | Assistant Professor | No |
| 9. | Dr Sanat Kumar Mukherjee | Assistant Professor | No |
| 10. | Dr Rishi Sharma | Assistant Professor | No |
| 11. | Dr SourabhLahiri | Assistant Professor | No |
| 12. | Dr Dilip Kumar Singh | Assistant Professor | No |
| 13. | Dr Madhupriya | Assistant Professor | No |
| 14. | Dr. SourabhBarua | Assistant Professor | Yes |
| 15. | Dr Laxmi Narayan Tripathi | Assistant Professor | Yes |
| 16. | Dr Ravindra Kumar | Assistant Professor | Yes |

## 7. 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. R. K. Paul | Assoc. Prof, Dept. of Physics | Member |
| 6. | Dr. S. K. Rout | Asso. 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<br>Indian Institute of Technology<br>Kharagpur – 721302 | External Member |
| 11. | Dr. Anil Kumar Nirala | Professor, Dept. of Physics<br>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,<br>India | External Member |
| 15. | Dr. (Mrs.) S. K. Mishra | Scientist E-II, MST Division, National Metallurgical Laboratory, Jamshedpur,India-831007 | External Member |

## SECTION 7 OTHER INFORMATION

### 9. Distinguished Visitors from Industry/Academia/Research organizations

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| 1. | **Dr. Binay Kumar**<br>Professor,Department of Physics & Astrophysics, University of Delhi | 12.07.2019 | |

| | | | |
|---|---|---|---|
| 2. | **Dr. Arindam Chakraborty**<br>Associate Professor, IISc. Bangalore | 06.08.2019 | |
| 3. | **Dr. Amarendra Kumar Sarma**<br>Professor, Department of Physics, Indian Institute of Technology, Guwahati-781039, Assam, India | 02.09.2019 | |

# Department of Chemical Engineering

SECTION 1 DEPARTMENTAL PROFILE

1. **About the Department/Campus:**

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:**

- BE (Chemical Engineering)
- BE (Chemical Engineering (Plastics and Polymer)

**PG Programme:**

- M.E. (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.* **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 advanced polybenzimidazole based nanocomposite materials for potential defense applications | PI- Dr. Arup Choudhury Co-PI Dr. Gautam Sarkhel | NRB, DRDO | 24.02.15 | Rs 24.95 Lakhs | 3 Years |
| 2. | 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 | 4 Years |
| 3. | 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 Lakhs | 3 Years |
| 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 | Rs.14.60 Lakhs | 1 Year |
| 5 | Transition metal(s) containing perovskite/CNFs composite for low | PI- Y. N. Prajapati<br><br>Co-PI Dr. A. K. | NPIU, TEQIP 3 | 18.06.2019 | Rs.16.58 Lakhs | 1 Year |

| | | | | | | |
|---|---|---|---|---|---|---|
| | temperature CO2 reduction | Sen | | | | |
| 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 | Rs.15.45 Lakhs | 1 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 | Rs.16.24 Lakhs | 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 Organophosphorus flame retardant for Epoxy and Vinyl ester Resin | PI- Dr. Akhil Sen | DRDO | 27.09.2016 | Rs. 23.71 Lakhs | 31.03.2019 |

SECTION 3 SEMINAR / CONFERENCE

**3. Seminar / Conferences / Short – Term Courses Conducted by the Department/Campus:**

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| 1. | NRB, DRDO Sponsored One Day Workshop of "Awareness of Fire Safety" on 29th March 2019 | Dr. Akhil Sen | DRDO | 29.03.2019 |

**4. Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:**

| Sr. No. | Name of the Faculty | Title of the Conference/ Seminar | Funding Agency | Organizers | Venue | Date |
|---|---|---|---|---|---|---|
| 1. | Mrs. D Ghosh | National Conference on Computational Modeling of Fluid dynamics problems(CMFDP-2019) | TEQIP III | NIT Warangal, India | NIT Warangal, India | 18-20.01. 2019 |
| 2 | Dr. Anupam Roy Dr. Amit Tiwary Dr. B C Ruidas | 95th Orientation Programme (10/06/2019 to 30/06/2019) | BIT Mesra | UGC - Human Resource Development Centre | Ranchi University Morabadi | 10-30.06.2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Mrs. D Ghosh | | | | | |
| 3. | Dr. Anupam Roy | NPTEL online course "Novel Technologies for food Processing and shelf life Extension " | BIT Mesra | NPTEL | Online | Jan-April 2019 |

## SECTION 4 RESEARCH PUBLICATIONS

### *5.* Publications in Journals:

- **Published in International Journals:**

*1.* Baban Dey, Ahmad, Md. Wasi, Gautam Sarkhel, Dibyendu Sekhar Bag, and Arup Choudhury. 2019. "Exfoliated Graphene Reinforced Polybenzimidazole Nanocomposites with High Dielectric Permittivity at Low Percolation Threshold." Journal of Molecular Structure 1177:491–98.

*2.* Baban Dey,Ahmad, Md Wasi, Gautam Sarkhel, Dibyendu Sekhar Bag, and Arup Choudhury. 2019. "Exfoliated Graphene Reinforced Polybenzimidazole Nanocomposite with Improved Electrical, Mechanical and Thermal Properties." Materials Chemistry and Physics 223:426–33.

*3.* Bharti, Anand, Rupesh Verma, Prerna, Sarvesh Namdeo, Abhigyan Malviya, Tamal Banerjee, and Stanley I. Sandler. 2018. "Liquid-Liquid Equilibria and COSMO-SAC Modeling of Organic Solvent/Ionic Liquid - Hydroxyacetone - Water Mixtures." Fluid Phase Equilibria 462:73–84.

*4.* Choudhury, Arup, Baban Dey, Susanta Sinha Mahapatra, Doo-Won Kim, Kap-Seung Yang, and Duck-Joo Yang. 2018. "Flexible and Freestanding Supercapacitor Based on Nanostructured Poly(m-Aminophenol)/Carbon Nanofiber Hybrid Mats with High Energy and Power Densities." Nanotechnology 29(16):165401.

*5.* Ghosh, Debasree and Chandan Guha. 2019. "Numerical and Experimental Investigation of Paraffin Wax Melting in Spherical Cavity." Heat and Mass Transfer 55(5):1427–37.

*6.* Ghosh, Debasree, Chandan Guha, and Joyjeet Ghose. 2019. "Numerical Investigation of Paraffin Wax Solidification in Spherical and Rectangular Cavity." Heat and Mass Transfer 1–13.

*7.* Jadhav, A. S., G. T. Mohanraj, S. Mayadevi, and A. N. Gokarn. 2018. "Synthesis and Influence of Feret Diameter on Particle Morphology of Activated Carbon Derived from Agrowastes." Asian Journal of Materials Chemistry 3(1–2):28–36.

*8.* Jadhav, Abhijit, Ashok Gokarn, S. Mayadevi, and GT Mohanraj. 2018. "Synthesis of Coconut Shell Derived Activated Carbon NBR Composite for Automobile Application." Proceedings of the World Congress on Engineering and Computer Science Vol II.

*9.* Jadhav, Abhijit, Govindaraj Thangaraj Mohanraj, Ashok Gokarn, and Suseeladevi Mayadevi. 2018. "Synthesis of Biomass Waste Derived Activated Carbon-NBR Composites for Automobile Application." Chemistry & Chemical Technology 12(2):236–43.

*10.* Kumar, Rahul, Kaushik Kumar, Sumit Bhowmik, and Gautam Sarkhel. 2019. "Tailoring the Performance of Bamboo Filler Reinforced Epoxy Composite: Insights into Fracture Properties and Fracture Mechanism." Journal of Polymer Research 26(2):54.

*11.* Pal, D. B., R. Lavania, P. Srivastava, P. Singh, K. R. Srivastava, S. Madhav, and P. K. Mishra. 2018. "Photo-Catalytic Degradation of Methyl Tertiary Butyl Ether from Wastewater

Using CuO/CeO2 Composite Nanofiber Catalyst." Journal of Environmental Chemical Engineering 6(2):2577–87.

12. Pandey, Dharmendra, Koustuv Ray, Rahul Bhardwaj, Sreedhar Bojja, K. V. R. Chary, and Goutam Deo. 2018. "Promotion of Unsupported Nickel Catalyst Using Iron for CO2 Methanation." International Journal of Hydrogen Energy 43(10):4987–5000.

13. Pattanayak, Satarupa and Sumit Kumar Jana. 2018. "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(11):535–40.

14. Roy, Anupam, Onur Bulut, Sudip Some, Amit Kumar Mandal, and M. Deniz Yilmaz. 2019. "Green Synthesis of Silver Nanoparticles: Biomolecule-Nanoparticle Organizations Targeting Antimicrobial Activity." RSC Advances 9(5):2673–2702.

15. Shree, Vibha and A. K. Sen. 2018. "Study of Thermal and Flame Behavior of Phosphorus-Based Silica for Epoxy Composites." Journal of Sol-Gel Science and Technology 85(2):269–79.

16. Verma, Rupesh, Pyarimohan Dehury, Anand Bharti, and Tamal Banerjee. 2018. "Liquid-Liquid Extraction, COSMO-SAC Predictions and Process Flow Sheeting of 1-Butanol Enhancement Using Mesitylene and Oleyl Alcohol." Journal of Molecular Liquids 265:824–39.

**6. Book:**

**Chapter(s) in Edited Book:**

1. Polymer in Communication, P Datta, Sanjay Kumar, Gautam Sarkhel, 2019, Encyclopedia of Polymer Applications, ISBN9781351019415,Taylor and Francis Group

2. Anupam Roy, Sreyajit Saha, Animesh Ghosh, 2018, Development of Nanoparticles from Grafted Natural Polysaccharides for Drug Delivery, Polysaccharide based Nano-Biocarrier in Drug Delivery, Trailor and Fransis.

3. 3. Tiwari, Amit Kumar and Vinod Kumar Nigam. 2019. "Recent Bio-Processing Technologies for Value Added Horticultural Products." Applied Microbiology and Bioengineering 57–67.

## SECTION 5 ACTIVITIES/ FACULTY MEMBERS BOS

**7. Departmental Students' Activities:**

| Sr. No. | Name of the Activity | Students' Co-Ordinator | Faculty Co-ordinator | Date / Duration |
|---|---|---|---|---|
| 1. | COLESENCE 2017, National Students Technical Events organized by IIChE, BIT Mesra Students Chapter | BIT Mesra Students Chapter | Coordinator - IIChe | 31st March - 2nd April, 2019 |
| 2 | Ingenium- Q-Technical quiz | Student Chapter/IIChE | Coordinator - IIChe | 19th august 2018 |

**8. List of Faculties:**

| Sr. No. | Name | Designation |
|---|---|---|
| 1. | **Dr. Gautam Sarkhel** | Professor & Head |
| 2 | **Dr. (Mrs.) M Mukherjee** | Professor |
| 3. | **Dr. (Mrs.) Sudipta Goswami (Sharma)** | Professor |

| | | |
|---|---|---|
| 4. | **Dr. Akhil Kumar Sen** | Associate Professor |
| 5. | **Dr. G.T. Mohanraj** | Assistant Professor |
| 6. | **Dr. Arup Chaudhury** | Assistant Professor |
| 7. | **Dr. Pulak Datta** | Assistant Professor |
| 8. | **Dr. Sumit Kumar Jana** | Assistant Professor |
| 9. | **Dr. Sudeepan.J** | Assistant Professor |
| 10. | **Mrs. Debasree Ghosh** | Assistant Professor |
| 11. | **Dr. Amar Nath Mishra** | Assistant Professor |
| 12. | **Dr. Dharmendra Pandey** | Assistant Professor |
| 13. | **Dr. Arnab Karmakar** | Assistant Professor |
| 14. | **Dr. Bidhan Chandra Ruidas** | Assistant Professor |
| 15. | **Dr. Anupam Roy** | Assistant Professor |
| 16. | **Dr. Chandan Kumar Das** | Assistant Professor |
| 17. | **Dr. Amit Kumar Tiwari** | Assistant Professor |
| | **TEQIP Sponsored** | |
| 18. | **Dr. Ashok Kumar Baranwal** | Assistant Professor |
| 19. | **Dr. Jay Mant Jha** | Assistant Professor |
| 20. | **Dr. Bikash Kumar Mondal** | Assistant Professor |
| 21. | **Dr. Yogendra Nath Prajapati** | Assistant Professor |
| 22. | **Dr. Nirupama** | Assistant Professor |
| 23. | **Dr. Anand Bharti** | Assistant Professor |
| 22. | **Dr. Dan Bahadur** | Assistant Professor |
| 23. | **Mr. G Ravi Kumar** | Assistant Professor |

***9.*** **List of Adjunct Faculties:**

| Sr. No. | Name (Please mention Dr. / Prof./ Mr./ Mrs. / Ms. , as applicable) | Designation | Affiliation |
|---|---|---|---|
| 1 | Dr. Anirudha Singh | Adjunct Assistant Professor | Department of Urology<br>Brady Urological Institute<br>Johns Hopkins University<br>School of Medicine |

***10.*** **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,<br>Dept. of Civil Engg., BIT Mesra | Professor | External Member |
| 8. | Dr.D.P. Mishra,<br>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<br>Dept. of Chemical Engineering, IIT, Guwahati | Professor | External Member |
| 12. | Dr. Siddhartha Datta<br>Dept. of Chemical | Professor | External Member |

| | | | |
|---|---|---|---|
| | Engineering, Jadavpur University | | |
| 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

***11.*** **Publication by students, if any:**

1. Prasoon Kumar, Siddha Sharma, Debasree Ghosh, Chandan Guha. Simulation of charging of phase change material in a double pipe heat exchanger. International conference, CHEMCON 2018 (Oral Presentation).
2. Prasoon Kumar, Siddha Sharma, Debasree Ghosh, Chandan Guha. Effect of Thermo-physical properties of PCM on performance of Double pipe heat exchanger for latent heat energy storage. SCHEMCOM 2018 (Oral Presentation).

***12.*** **Achievements of Students:**

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | Sreyajit Saha | AWSAR award 2018 Hundred Best Popular Science Stories under PhD Category | DST | June, 2018 |
| 2 | Ananya Kant | First prize in "Women of Mettle" competition, 2018 | TATA Steel | August, 2018 |
| 3. | Anamika Sinha | First prize in Mind over Matter Season 5, | TATA Steel | August, 2018 |

***13.*** **Distinguished Visitors from Industry/Academia/Research organizations:**

| Sr. No | Name of Visitor with Affiliation | Date of Visit |
|---|---|---|
| 1 | Dr. Mohammad Jawaid<br>Laboratory of Biocomposite Technology, Institute of Tropical Forestry & Forest Products (INTROP), University Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia | 27.09.2018 |
| 2 | Mr. Mihir Mohanta<br>GM, SCM, Mother Diary | 2.10.2018 |
| 3 | Mr. Basudeb Chakraborty<br>DGM, CCG SAIL R&D | 27.08.2018 |

***14.*** **Any other relevant information**

- NBA team visited Department of Chemical Engineering on 17th - 18th November, 2018 BE Chemical Engineering programme got NBA accreditation for the year of 2018-2021.
- Prof. Gautam Sarkhel has delivered a invited talk on " Basics of Rheology of Pharmaceutical sample, on 11th December 2018 in QIP programme in Pharmacy " during AICTE sponsored QIP-2018 on the theme " Innovations and Challenges in Newer Drug Delivery System.

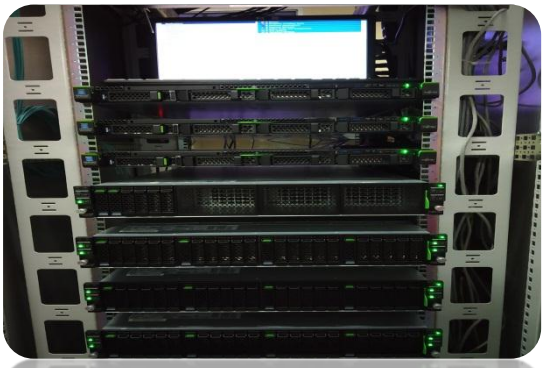
- Prof. Akhil Kumar Sen has delivered a invited talk on " Polymer and Surfactants in Drug Delivery applications on 5th December 2018 in QIP programme in Pharmacy " during AICTE sponsored QIP-2018 on the theme " Innovations and Challenges in Newer Drug Delivery System.

- Dr. Anupam Roy has delivered a invited talk on " Entrepreneurial Opportunities in Food & Agro Processing Secto " ïn MSME Financing & Strengthening MSME Linkagesby Indian Chambers of Commerce in 05th July 2019 at 10:00 A.M. , Ramada Hotel, Jamshedpur

- Dr. Anupam Roy has delivered a invited talk on " Needs and Possibilities of Food Processing Research "One day Conference on Food Processing & Kisan SAMPADA Yojana'' on Tuesday , 24th April at 10 am at Central Tasar Research & Training Institute, Ranchi.

# Department of Computer Science and Engineering

SECTION 1 DEPARTMENTAL PROFILE



*3.* **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 academic collaborations with University of New Brunswick, Canada, University of Melbourne, Australia and University of Manitoba, Canada.

**Undergraduate Programme**

B.E. in Computer Science and Engineering
B.E. in Information Technology

**Postgraduate Programmes**

M.Tech in Software Engineering
M. Tech in Computer Science
M. Tech in Information Technology
M. Tech in Information
Master of Computer Application

**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 | 9. | Prolog |
| *2.* | MATLAB (Mathworks) | 10. | Turbo C 3 |
| *3.* | JAVA(1.8) , (JAVA djk 1.7) | 11. | LDRA |
| *4.* | Eclipse 4.4 | 12. | Turbo C++ 4.5 |
| *5.* | NetBeans | 13. | Argo |
| *6.* | Code Blocks | 14. | Swi-Prolog |
| *7.* | MySQL | 15. | Oracle database 10g express ed. |
| *8.* | R Studio | 16. | Open Office |

| Sr. No. | Software | Sr. No. | Software |
|---|---|---|---|
| *1.* | MS Office | 5. | WinRAR |

| | | | |
|---|---|---|---|
| *2.* | Acrobat reader | 6. | Putty |
| *3.* | Google Chrome | 7. | Internet Explorer |
| *4.* | Mozilla Firefox | 8. | ESET Endpoint Security 5.0 (antivirus) |

## SECTION 2 RESEARCH PROJECTS

### *4.* 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 Basic Natural Language Processing Tools and Resources for Maithili. | Dr. Sujan Kumar Saha (PI) | SERB (GOI) | 02 March 2017 | Rs. 17,98,000/- | 3 years |
| 2. | Development of machine learning algorithms for the early diagnosis of delinquent behaviour of juveniles" | Dr. S. Mohapatra (PI) Dr. V. Bhattacharjee (Co-PI) | CSRI, DST | January 2019 | Rs. 22,54,800/- | 3 years |
| 3. | Automated vegetation stress detection from very high resolution multi-temporal spectral data to establish relationship using Artificial Intelligence | Dr. C. Jeganathan (PI) Dr. A.P. Krishna(Co-PI) Dr. V. Bhattacharjee(Co-PI) Dr. A.Mustafi (Co-PI) Dr. S. Mishra(Co-PI) | Sky Map Global (SMG) Pvt. Ltd., Singapore | June 2019 | Rs. 7,50,000/- | 1 year |

## SECTION 3 SEMINAR / CONFERENCE

### 3. Seminar / Conferences / Short – Term Courses Conducted by the Department

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| 1. | International Conference on Computational Intelligence (ICCI 2018) | Dr. S. K. Sahana | TEQIP III | DEC 10-12, 2018 |
| 2. | Recent Trends In Software Testing (RTST-2019) | Dr. K. Sridhar Patnaik | TEQIP III and ACM | MAY 20-24, 2019 |
| 3 | Excellence in Pedagogy and Quantitative | Dr. S. Shivani | TEQIP III | 26-30 August, |

| | | | | |
|---|---|---|---|---|
| | Research | | | 2019 |
| 4 | IoT Challenge2019 Prelims | Dr.K.Sridhar Patnaik,Dr.Itu Snigdh,Prof.S.Srivastava | I3indyatechnologies Ltd, ACM | 13-14 Oct,2018 |
| 5 | LDRA Software Testing Training | Dr.K.Sridhar Patnaik | TEQIP-III | 29-30 Sep,2018 |
| 6 | Two Days Training on Internet of Things By CDAC Bangalore | Dr.K.Sridhar Patnaik | TEQIP-III | 4-5 April,2018 |

**4. 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. | Akriti Nigam | One week training program on Biomedical Imaging and Image Processing | TEQIP III | NIT Silchar | NIT Silchar | 28th July to 1st August 2018 |
| 2. | Akriti Nigam | Training Cum Workshop on E Learning in Higher Education | TEQIP III | University of Allahabad | Ishwar Saran PG College, Allahabad | 7th Feb to 13th Feb 2019 |
| 3 | Debjani mustafi | Prevention of Harassment at Work place | TEQIP III | BIT, Mesra | R & D building, BIT, Mesra | 25th June 2019 |
| 4 | Devjani mustafi | Intellectual Property Rights and Patent Filing | TEQIP III | BIT, Mesra | R & D building, BIT, Mesra | 28th June, 2019 |
| 5 | Kalyan Samanta | Induction Training, NITTTR, Kolkata | TEQIP | NITTTR Kolkata | Kolkata | 16th July 2018-20th July 2018 |
| 6 | Kalyan Samanta | National Information System for Climate and Environment Studies (NICES) Data Products | Remote Sensing Dept, BIT, Mesra and NICES | BIT Mesra | BIT Mesra | 31 January 2019 To 4th February |
| 7 | Kalyan Samanta | 12th National Workshop on Recent Trends In Software Testing (RTST-2019) | TEQIP | CSE Dept, BIT Mesra | BIT Mesra | 20-24 May 2019 |
| 8 | Kalyan Samanta | IBM Faculty Development Program | IBM, India | IBM, India | IBM, India, Bangolore | 17-21 June 2019 |
| 9 | Shamama Anwar | National Information System for Climate and | | Department of Remote Sensing, BIT Mesra | BIT Mesra | 31st January, 2019. |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | Environment Studies (NICES) Data Products | | | | |
| 10 | Shamama Anwar | 12th National Workshop on Recent Trends in Software Testing (RTST – 2019) | | Department of Computer Science and Engineering, BIT Mesra | BIT Mesra | 20 – 24 May, 2019 |
| 11 | Shamama Anwar | 4th International Conference on Nanoelectronics Circuits & Communication Systems (NCCS), | | IETE Ranchi. | Advanced Regional Telecom Training Centre, Ranchi | 3 – 4th November, 2018 |
| 12 | Shamama Anwar | 4th International Conference on Advanced Machine Learning Technologies and Applications, AMLTA 2019 | | | Ain Shams University Conference Center, Egypt | 28-30 March, 2019 |
| 13 | Dr. V. Bhattacharjee | ICCI 2018 | TEQIP III | Deptt of CSE | Deptt of CSE, BIT Mesra | Dec. 2018 |
| 14 | Dr. V. Bhattacharjee | RTST 2019 | TEQIP III and ACM | Deptt of CSE | Deptt of CSE, BIT Mesra | May 2019 |
| 15 | Deo Dutta Ishwar | International Conference on Computational Intelligence – ICCI 2018 | TEQIP-III | BIT Mesra | BIT Mesra | $10^{th}$- $11^{th}$ Dec, 2018 |
| 16 | Deo Dutta Ishwar | Recent Trends on Software Testing – RTST 2019 | TEQIP-III | BIT Mesra | BIT Mesra | $20^{th}$- $24^{th}$ May, 2019 |
| 17 | Deo Dutta Ishwar | Advance Pedagogy Training Workshop 2019 | TEQIP-III | IIT Hyderabad | IIT Hyderabad | $10^{th}$- $14^{th}$ June, 2019 |
| 18 | Shishir Singh Chauhan | Faculty Development Program | TEQIP-III | IIT Madras | IIT Madras | $31^{st}$ Jan 2018- $4^{th}$ Feb 2018 |
| 19 | Shishir Singh Chauhan | Big Data | BIT Mesra | BIT Mesra | BIT Mesra | $27^{th}$ Mar 2019- $30^{th}$ Mar 2019 |
| 20 | Shishir Singh Chauhan | DATA ANALYTICS & MACHINE LEARNING | NIT Jamshedpur. | NIT Jamshedpur | NIT Jamshedpur | 20-$24^{th}$ May, 2019 |
| 21 | Shishir Singh Chauhan | INTERNATIOAL CONFERENCE ON DEGITAL PADAGOGIES | AICTE | AICTE | AICTE Head Quarter. | $1^{st}$ April 2019- $2^{nd}$ April 2019 |
| 22 | Shishir Singh Chauhan | MICROSOFT | Microsoft | Microsoft | AICTE Head Quarter. | $3^{rd}$ April 2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 23 | Gaurav Kumar Pandey | Faculty summer training program on advanced pedagogies: Active learning on Digital Tools | TEQIP III | IIT HYDERABAD | IIT HYDERABAD | June 10-14, 2019 |
| 24 | Gaurav Kumar Pandey | National Information System for Climate and Environment Studies(NICES) Data Products | NRSC(ISRO), HYDERABAD | BIT MESRA | BIT MESRA | 31-01-2019 |
| 25 | Gaurav Kumar Pandey | Awareness of fire safety | TEQIP III | BIT MESRA | BIT MESRA | 29-03-2019 |
| 26 | Dr.K.Sridhar Patnaik | Machine Learning Applications in Software Engg | TEQIP-III | NIT Warangal | NIT Warangal | 11-16 June,2019 |
| 27 | Dr.K.Sridhar Patnaik | Summer Training Program on Active Leraning | TEQIP-III | IIT Gandhinagar | IIT Gandhinagar | 18-22 June,2018 |
| 28 | Kumar Gaurav | Lab Safety: Pitfalls & Remedies | TEQIP-III | Birla Institute of Technology, Mesra | Birla Institute of Technology, Mesra | December 17, 2018 |
| 29 | Kumar Gaurav | Recent Trends In Software Testing | TEQIP-III | Birla Institute of Technology, Mesra | Birla Institute of Technology, Mesra | May 20-24, 2019 |
| 30 | Kumar Gaurav | Summer Training Program on Advanced Pedagogies | TEQIP-III | NPIU and IIT Hyderabad | IIT Hyderabad | June 10-14, 2019 |

## SECTION 4 RESEARCH PUBLICATIONS

***6.*** **Publications in Journals:**(International/National)

1. Kumari. D and Rajnish, K (2018)," A Systematic Approach for Investigating the Effect of OO-metric in Development of Software Fault Prediction Model", JARDCS, Vol. 10, No. 9, Elsevier (Scopus), 2018.
2. Patra, H.P. and Rajnish, K. "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.
3. Jain, V and Rajnish, K (2018), Comparative Study of Software Automation Testing Tools: Open Script and Selenium, Int. Journal of Engineering Research and Application 8(2), 29-33.
4. Puja Kumari and K. Rajnish, "Cloud Cost Management: An Empirical View", IJARIIT, Vol.5, Issue: 3, pp.486-490, 2019.
5. H. Parthasarthi patra and Kumar Rajnish, A Fuzzy based Parametric Approach for Software Effort Estimation", I.J. Modern Education and Computer Science, 2018, 3, 47-54, MECS Publisher.
6. Nigam, A., Singh, P., Singh, V.K., Tripathi, R.C., (2018), "A Multiple Feature Based Offline Handwritten Signature Verification System",

International Journal of Computer Applications in Technology, Vol 59, Issue 3, pp 214- 223. doi: 10.1504/IJCAT.2019.098602

7. Khatoon N. and Amritanjali (2019). Congestion adaptive load balanced clustering scheme for prolonging network lifetime in mobile ad-hoc network, International Journal of Wireless and Mobile Computing, 16(3), 211-221
8. B. K. Sarkar (2019): A Two-Step Knowledge Extraction Framework for Improving Disease Diagnosis Framework for Improving Disease Diagnosis. – **The Computer Journal** (ISSN: 1460-2067, **SCIE-I.F. - 0.98**), doi:10.1093/comjnl/bxz034
9. B. K. Sarkar (2019): Hybrid model for prediction of heart disease. - **Soft Computing** (1432-7643, Springer, **SCI- I.F. - 2.784**)
10. A. Kumar and B.K. Sarkar: A Hybrid Predictive Model Integrating C4.5 and Decision Table Classifiers for Medical Data Sets (180317-015223).- Journal of Information Technology Research (JITR) (**IGI Global**, **ESCI** and **Scopus indexed**), (2018) 11(2):150-167
11. Anwar, Shamama & Meghana, S. (2019). A pixel permutation based image encryption technique using chaotic map. Multimedia and Tools Application: An International Journal, Springer, Vol. 67, No. 3, pp. 1 – 22.
12. Wahi C., Bhattacharjee V**.**, Chakraverty S.(2019), "Current Taxonomy of Trust based Secure Routing in MANETs", Journal of Advanced Research in Dynamical & Control Systems, Vol. 11, 04-Special Issue
13. Atish and Bhattacharjee V. (2018), An efficient method for brain tumor detection and categorization using MRI images by K-means clustering & DWT, International Journal of Information Technology, Springer, DOI:10.1007/s41870-018-0255-4.
14. 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, Digital Object Identifier 10.1109/ACCESS.2019.2922387.June,2019
15. Priyanka Srivastava, K.S.Patnaik,"Valuation of Facial Images likeness under different posture", MicroSystem Technologies, Spinger (SCI),2019, https://doi.org/10.1007/s00542-019-04441-z.April,2019
16. Pooja Jha, K Sridhar Patnaik, "Can Metric Judge Usability of Software: A Psychometric Walkthrough ", International Journal of Computer Applications in Technology,(Scopus-Elsevier,Inderscience) ,Vol-58(1).2018.
17. .R.Mukherjee,K.S Patnaik," A Survey on Different Approaches for Software Test Case Prioritization," Journal of King Saud University - Computer and Information Sciences, 10.1016/j.jksuci.2018.09.005.ScienceDirect(ESCI).(in Press).2018

**6**. **Publications in Proceedings:** (International/National)

1. Anjali Kumari, P. Paul and K. Rajnish, "Bots a new evolution of Roberts: A Survey", Proceedings of third international Conf. on MCC systems", springer, Lecture series in Electrical Engg., pp. 201-210, 2019.
2. Annu Priya, Keshav Sinha, Sandeep Choudhary, Sabina Priyadarshini, "Image denoising technique using various filter models: A Survey" 2018, IEEE International conference of computing, power and communication technologies, Sep-28-29, 2018

2019

*3.* Aamir Junaid Ahmad and Sabina Priyadarshini, "Searching Social Networking Sites using Semantic web and Natural Language Processing",: Proceedings of the 2nd International Conference on Recent Advancements in Interdisciplinary Research, ICRAIR 2019, Bangkok, Thailand, June 2019.

4. Mukhopadhyay, U. K., Sharma, R. N., Anwar, S., & Dutta, A. D. (2019, March). Correlating Thermal Anomaly with Earthquake Occurrences Using Remote Sensing. In International Conference on Advanced Machine Learning Technologies and Applications (pp. 863-875). Springer, Cham. [Print ISBN: 978-3-030-14117-2, Online ISBN: 978-3-030-14118-9].

5. Singh. S and Paul.S, "Dimension Analysis in No-SQL Databases"., International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering - (ICRIEECE), IEEE Xplore, July 27th & 28th 2018, School of Electrical Engineering, Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar, India.

**7. Book:**

**Co-Authored**

1.B.K. Sarkar & A. Kumar- Introduction to Theory of Computation**,** University Press, India, ISBN-978-93-86235-75-6, 2019

2. Bishnu P. S. and Bhattacherjee. V (2018), Data Analysis, PHI, ISBN 978-93-87472-65-

**Edited Books**

1. Sahana S. K. and Bhattacharjee V. (Eds). (2018) Advances in Intelligent Systems and Computing: Springer, ISBN 978-981-13-8221-5.
2. Snigdh I , Patnaik K Sridhar,(2019). Energy Management in OppNets, Eds(K.Ahmad, N.J,Udzir, G.C Deka) In Opportunistics Networks Mobility Models, Protocols, Security and Privacy,CRC Press,Taylor and Francis (159-169)
3. **K.Sridhar Patnaik, Itu Snigdh(2019), Modeling and Designing of IoT Systems using UML Diagrams: An Introduction, In Integrating the Internet of Things Into Software Engineering Practices, IGI Global(36-61)**

**Chapter(s) in Edited Book**

1. Khatoon N. & Amritanjali (2019). Mobility Aware Distributed Clustering and Routing Algorithm based on A* Search for Mobile Ad-Hoc Networks, LNEE 476 (pp. 257-261), Springer
2. Khatoon N. & Amritanjali (2019). A Node Stability based Multi-Metric Weighted Clustering Algorithm for Mobile Ad-Hoc Networks, LNEE 476 (pp. 63-71), Springer.
3. Anwar, S., Sinha, S. K., Vivek, S., & Ashank, V. (2019). Hand Gesture Recognition: A Survey. In Nanoelectronics, Circuits and Communication Systems (pp. 365-371). Springer, Singapore.
4. Bhattacharjee V. and Neogi M. S. (2018), VOSDM4S: A Framework for Sustainable Software Development Model, In A. Ekka, H. Sinha (Ed.) Leadership, Innovation and Management for a Sustainable World.

### *11.* Departmental Students' Activities

| Sr. No. | Name of the Activity | Students' Co-Ordinator | Faculty Co-ordinator | Date / Duration |
|---|---|---|---|---|
| 1. | Co-ordinator | BE (CS+IT) : Final year | CSE Department | 8.07.2019 |

### 12. List of Faculties

| Sr. No. | Name | Designation |
|---|---|---|
| 1. | Dr. G. Sahoo | Professor |
| 2. | Dr. (Mrs). V. Bhattacharjee | Professor |
| 3 | Dr. Sandip Dutta | Professor |
| 4 | Dr. D. K. Mallick | Associate Professor |
| 5 | Dr. (Mrs.) Aruna Jain | Associate Professor |
| 6 | Dr. Bhaskar Karn | Associate Professor |
| 7 | Dr. V. K. Jha | Associate Professor |
| 8 | Dr. K. S. Patnaik | Associate Professor |
| 9 | Dr. K. Rajnish | Associate Professor |
| 10 | Dr. Abhijit Mustafi | Associate Professor |
| 11 | Dr. B. K. Sarkar | Assistant Professor |
| 12 | Prof. S. K. Chatterjee | Assistant Professor |
| 13 | Dr. Partha Paul | Assistant Professor |
| 14 | Dr. I. Mukherjee | Assistant Professor |
| 15 | Dr. (Mrs.) Itu Snigdh | Assistant Professor |
| 16 | Prof. Ritesh Jha | Assistant Professor |
| 17 | Prof. I. D. Ram | Assistant Professor |
| 18 | Dr. Anup Kumar Keshri | Assistant Professor |
| 19 | Dr. K. K. Senapati | Assistant Professor |
| 20 | Dr. (Mrs.) Amritanjali | Assistant Professor |
| 21 | Dr. (Mrs.) Sanchita Paul | Assistant Professor |
| 22 | Dr. (Mrs.) Shruti Garg | Assistant Professor |
| 23 | Dr. Sudip Kumar Sahana | Assistant Professor |
| 24 | Prof. B. K. Chanda | Assistant Professor |
| 25 | Dr. S. Pushkar | Assistant Professor |
| 26 | Dr. Sujan Kumar Saha | Assistant Professor |
| 27 | Dr. S. Priyadarshini | Assistant Professor |
| 28 | Dr. (Mrs.) Shamama Anwar | Assistant Professor |
| 29 | Prof. Kalyan Samanta | Assistant Professor |
| 30 | Dr. S. Mohapatra | Assistant Professor |
| 31 | Dr. (Mrs) Akriti Nigam | Assistant Professor |
| 32 | Prof. Sumit Srivasatava | Assistant Professor |
| 33 | Dr. Niraj Kumar Singh | Assistant Professor |
| 34 | Mrs. D. Mustafi | Associate Lecturer |
| 35 | Mr. Amit Prakash | TCRF |
| | **TEQIP Sponsored** | |
| 36 | Ms. Kshitiza Vasudeva | Assistant Professor |
| 37 | Mr. Kumar Gaurav | Assistant Professor |
| 38 | Mr. Radhamadhab Dalai | Assistant Professor |
| 39 | Mr. Alok Kumar | Assistant Professor |
| 40 | Mr. Surya Narayan Mahapatra | Assistant Professor |
| 41 | Mr. Narayan Sharma | Assistant Professor |
| 42 | Mr. Arunangshu Pal | Assistant Professor |

| | | |
|---|---|---|
| 43 | Mr. Satya Prakash Patel | Assistant Professor |
| 44 | Mr. Ashish Kumar | Assistant Professor |
| 45 | Mr. Shishir Singh Chauhan | Assistant Professor |
| 46 | Ms. Najima Begum | Assistant Professor |
| 47 | Mr. Rashmi Rathi Upadhayay | Assistant Professor |
| 48 | Mr. Mayur.V. Shrirame | Assistant Professor |
| 49 | Mr. Rosamma K.S | Assistant Professor |

***13.*** **List of Adjunct Faculties**

| Sr. No. | Name | Designation | Affiliation |
|---|---|---|---|
| 1. | Dr. Rama Govind Raju | Senior staff Software Engineer | Google Inc, 3101 Silver land Drive, San Jose, CA 95135 (USA) |
| 2. | Mr. Atul Chadha | Chief Technology and Operations Officers | Affinity Solutions, Mackin Woods Lane, San Jose, CA 95135 (USA) |

***14.*** **Board of Studies**

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | Dr. V. Bhattacharya | **HOD, Ex-officio** | Chairman (Ex-Officio) |
| 2. | Dr. G. Sahoo | **Professor** | Internal Member |
| 3 | Dr. S. Dutta | **Professor** | Internal Member |
| 4 | Dr. K. Rajnish | **Associate Professor** | Internal Member |
| 5 | Dr. A. Mustafi | **Associate Professor** | Internal Member |
| 6 | Dr. B. K. Sarkar | **Assistant Professor** | Internal Member |
| 7 | Dr. I. Mukherjee | **Assistant professor** | Internal Member |
| 8 | Dr. C. Jeganathan | **Professor, Rocketry** | External Member |
| 9 | Dr. S.Pal | **Professor, ECE** | External Member |

## SECTION 7 OTHER INFORMATION

*15.* **Publication by students, if any**

1. **Masroor Farha**, Bhattacharjee Vandana, Mustafi Debjani " A Fuzzy Logic Approach for Software cost estimation", International Conference on Microelectronics Computing & Communication. 2019, Advance Regional Telecom Training Center, Ranchi.

***16.*** **Achievements of Students**

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | Saakshi Srivastava<br>Siddhau Jain<br>Sree Aslesh Penisetty<br>Dhiriti Kumari<br>Pamireddy Sucharitha<br>Ankit Kumar Singh | SMART INDIA HACKATHON (won KPIT award) | Ministry of Telecommunication | 2018 |
| 2. | Sayed Bilal bari<br>Prasant Singh<br>Abhijeet Pandey<br>Mayank Mishra<br>Atul Kumar<br>Gaurav Kumar | HACK IN THE NORTH (Developed an app Docker as Service) | IIIT Allahabad | 2018, IIIT Allahabad |

# Department of Electrical and Electronics Engineering

SECTION 1 DEPARTMENTAL PROFILE

## 1. About the Department

The Department of Electrical and Electronics (EEE) offers B.E. in Electrical and Electronics Engineering, M.E. 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. Thirty three 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), Air circuit breaker, 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 and Machine Fault Simulator are available in the key laboratories like Control System, Power System, Power Electronics, Measurement and Process Control and Machines, Power Electronic, Smart Grid, Measurement, and Drive labs. In the financial year 2018-19, Department has procured 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 software.

## SECTION 2 RESEARCH PROJECTS

*6.* **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 IoT Based Energy Management System Using Cloud Computing Platform | Dr. Aftab Alam | SERB | 21/05/2019 | 3870900 | 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. | Special Assistance for developing infrastructure on Smart Grid and Electric Drive | Dr. T. Ghose Dr. P.R.Thakura | UGC under SAP | 16.11.2012 | 51.80 lacs | 22.2.2019(Final Report sent) |

## SECTION 3 SEMINAR / CONFERENCE

**3. Seminar / Conferences / Short – Term Courses Conducted by the Department/Campus**

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| 1. | Short Term Course on Development of IoT based Power Electronic Interface for Green Energy system | Dr. Aftab Alam and Dr. S Shiva Kumar | TEQIP-III | 20th – 24th May, 2019 |

**4. 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. T. Ghose Dr. V. Laxmi Mr. Prem Prakash | Prevention of harassment of workplace | TEQIP-III | BIT, Mesra | BIT | 25th June |
| 2. | Dr. V. Laxmi | IPR Management | TEQIP-III | BIT, Mesra | BIT,Mesra | 10 June, 2019 |
| 3. | Dr. V. Laxmi Mr. Prem Prakash | Intellectual Property Rights and | TEQIP-III | BIT, Mesra | BIT,Mesra | 28th June, 2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | Filing | | | | |
| 4. | Dr. D. V. Siva Krishna Rao K. Dr. Tarkeshwar | Faculty Summer Training Program on Advance Pedagogies: Learning and Digital Tools | TEQIP | IIT, Hyderabad | IIT, Hyderabad | 10-14 June, 2019 |
| 5. | Dr. S. K. Mishra | Intellectual Property Rights | National Research Development Corporation (NRDC) | Birla Institute of Technology Mesra, Ranchi. | Birla Institute of Technology Mesra, Ranchi. | 7th Sep. 2019 |
| 9 | Dr. Deepak Kumar Mr. Gauri Shanker Gupta | 95th Orientation Program | Self | UGC-HRDC | Ranchi University | 10-30 June-2019 |

## SECTION 4 RESEARCH PUBLICATIONS

***7.*** **Publications in Journals:** (International/National)

1. Debdoot Sain, Subrat Kumar Mishra, Sudhansu Kumar Mishra (July 2018). Robust 2-DOF FOPID Controller Design for Maglev System using Jaya Algorithm. IETE Journal of Research (SCI), Taylor & Francis (SCIE), 1-13.
2. Debdoot Sain, Subrat Kumar Swain, Ayan Saha, Sudhansu Kumar Mishra & Sarbani chakraborty (Oct. 2018). Real-Time Performance Analysis of FOI-PD Controller for Twin Rotor MIMO System. IETE Technical Review, (Taylor & Francis), ISSN: 0256-4602 (Print) 0974-5971 (Online), 1-20.
3. Tarkeshwar Mahto, Hasmat Malik, M. Saad Bin Arif (Nov. 2018). Load frequency control of a solar-diesel based isolated hybrid power system by fractional order control using parial swarm optimization. Journal of Intelligent & Fuzzy Systems, vol. 35(5), 5055-5061.
4. S. Dutta, P. Sadhu, M. J. B. Reddy and D. K. Mohanta (Nov. 2018). Smart Inadverten Islanding Detection Employing P-Type μPMU for an Active Distribution Network. IET Generation Transmission and Distribution, 12(20), 4615 – 4625.
5. S. Ghosh, D. Ghosh and D. K. Mohanta, (Dec. 2018). Multilevel Reliability Allocatio of Phasor Measurement Unit Using Bayesian Networks. Electric Power Components and Systems, 46(16-17), 1-13.
6. K D V Siva Krishna Rao, V.S.N.Narasimha Raju, M. Premalatha. Constant Power Management Controller for Solar PV-Battery Hybrid System. Journal of Circuits, Systems, and Computers, World Scientific Publishing Company. Accepted.
7. K D V Siva Krishna Rao, V.S.N.Narasimha Raju, M. Premalatha. A Novel Approach for Reactive Power Compensation in Wind Energy Conversion System using DSTATCOM. Journal of Hydrogen Energy, Elsevier. Accepted.
8. B. Appasani and D. K. Mohanta (2018 [In press]). Reliability Analysis of PMU Mcrowave Communication Networks Using Generalized Stochastic Petri Nets. International Journal of Power and Energy Conversion (Inderscience Publishers).

9. P.Gopakumar, B. Mallikarjuna, M. Jaya Bharata Reddy and D.K Mohanta (Dec. 218). Remote Monitoring System for Real Time Detection and Classification of Transmission Line Faults in a Power Grid using PMU Measurements. Protection and Control of Modern Power Systems (Springer publication),3(16), 1-10.
10. B. Mallikarjuna, P. Shanmukesh, D. Anmol, M. Jaya Bharata Reddy and D.K Mohanta (Dec. 2018). PMU based adaptive zone settings of distance relays for protection of multi-terminal transmission lines. Protection and Control of Modern Power Systems (Springer publication), 3(12), 1-15.
11. Soham Dutta, P.K. Sadhu, M. Jaya Bharata Reddy and D.K. Mohanta (Dec. 2018). Shifting of Research Trends in Islanding Detection Method - A Comprehensive Survey. Protection and Control of Modern Power Systems (Springer publication), 3(1), 1-20.
12. P Rajaraman,N.A Sundaravaradan, B. Mallikarjuna, M.Jaya Bharata Reddy and D.K Mohanta (Dec. 2018). Robust Fault Analysis in Transmission Lines Using Synchrophasor Measurements. Protection and Control of Modern Power Systems (Springer publication), 3(14), 1-13.
13. Kumar, P. Sadhu, D. K. Mohanta and M. Bharata Reddy (2018). An Effective Switching Algorithm for Single Phase Matrix Converter in Induction Heating Applications. 7(8), 1-17.
14. Soumita Ghosh, Debomita Ghosh, Dusmanta Kumar Mohanta (2018). Functional uncertainty analysis of phasor measurement unit using fuzzy hidden Markov model. IETE Journal of Research– Taylor and Francis, 64(1), 100-107.
15. Praneeth Ku. Pedapati, Santanu Ku. Pradhan, Surendra Kumar (2018). Data-Driven Identification and Control of a Differential Drive Autonomous Ground Vehicle. IEEE Access, 2018 (Submitted and Under Review).
16. Sumit Kumar Jha, and Deepak Kumar (2018). Design of Decentralized Autonomous Microgrid using Coordinated Control of Energy Storage System and Hybrid Renewable Energy Sources. Electric Power Components and Systems, Taylor & Francis. (Accepted, SCI Indexed, 2018).
17. S K Jha, Deepak Kumar, I Kamwa (2018). Smart Demand Response Management of Islanded Microgrid using Voltage-Current Droop Mechanism. International Journal of Emerging Electric Power Systems, 19(1).
18. D. V. S. Krishna Rao K, M. A. Balu,and M. Premalatha (2018). Performance analysis of biomass-based absorber solar still through ANN and MLR approach, 127, 262–271.
19. Sushma Kamlu, V. Laxmi (Jan. 2019). Condition-Based Maintenance strategy for vehicles using Hidden Markov Models. Advances in Mechanical Engineering, 11(1), 1–13.
20. Tirthadip Ghose, Kumar Raja (Jan. 2019). Demand Response Program using Incentive and Dis-incentive based scheme. Energy Systems, 1–26.
21. Anmol Dwivedi, B. Mallikarjuna, Diptak Pal,M. Jaya Bharata Reddy and D. K. Mohanta (Feb. 2019). A Real-Time Synchrophasor Based Zone-3 Supervision of Distance Relays Under Load Encroachment Condition. IEEE Systems Journal, 1-9.
22. Tirthadip Ghose, Kumar Raja (March 2019). Risk assessment of Microgrid aggregators considering demand response and uncertain renewable energy sources. Journal of Modern Power Systems and Clean Energy, ISSN: 2196-5625/ (https://doi.org/10.1007/s40565-019-0513-x, 1-13.
23. Diptak Pal, B. Mallikarjuna, P.Gopakumar, M. Jaya Bharata Reddy, B.K.Panigrahi and D. K. Mohanta (April 2019). Probabilistic study of Under-Voltage Load Shedding Scheme to mitigate the impact of Protection System Hidden

Failures. IEEE Systems Journal, 1932-8184/DOI:10.1109/JSYST.2019.2901350, 1-8.

*24.* Diptak Pal, B. Mallikarjuna, M. Jaya Bharata Reddy and D.K.Mohanta (April 2019). Analysis and Modelling of Protection System Hidden Failures and its impact on Power System Cascading Events. Journal of Control, Automation and Electrical Systems (Springer publication), 30(2), 277-291.

*25.* D. K. Mohanta, M. Jaya Bharata Reddy (May 2019). Emerging Trends In System Integrity Protection Schemes (SIPS) for Improving the Performance of Smart Grid. Guest Editorial, IET Generation, Transmission & Distribution, 13(8), 1191-1193.

*26.* S. K. Shukla, E. Koley, S. Ghosh and D. K. Mohanta (May 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), https://doi.org/10.1002/2050-7038.12048, 1-21.

*27.* Tirthadip Ghose, Kumar Raja (2019). Assessment of the potential of different Demand Response Programs for reducing transformer loss of life. International Transaction on Electrical Energy Systems, ISSN:2050-7038.

*28.* 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, 233(3), 355-368.

*29.* KR Gadham, T.Ghose (2019). Demand Response Program using Incentive and Dis-incentive based scheme,international journal on Energy Systems, (Springer), https:// doi .org /10. 1007/ s12667-018-00319-7, 1-26.

*30.* T Ghose, HW Pandey, KR Gadham (2019). Risk assessment of microgrid aggregators considering demand response and uncertain renewable energy sources, journal of Modern.Power Syst. Clean Energy (Springer), https://doi.org/10.1007/s40565-019-0513-x, 1-13.

**6**. **Publications in Proceedings:** (International/National)

*1.* Mahendra Meher, Kunja Bihari Swain, Murthy Cherukuri, D K Mohanta, Wide Area Situational Enhancement Using PMUs. IEEE International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering, KIIT Bhubaneswar, July 27th – 28th 2018.

2. Shashank Shekhar, Promit Kumar Saha , P. R. Thakura, Optimal PID Tuning of BLDC Drive using LQR technique. IEEE Int. Conf. on Intelligent Systems and Green Technology [ICISGT 2019] Hyderabad, 29th June 2019.

3. 2. Shashank Shekhar, Promit Kumar Saha, Dr. Aftab Alam, Vijaya Laxmi, P.R. Thakura, The tuning of sliding mode controller for electronic commutation motor drive. Int. Conf. on Intelligent Computing and Control Systems [ICICCS 2019], 16th May 2019.

*4.* S B M Nisar, Kunja Bihari Swain, Murthy Cherukuri, D K Mohanta, Fault Analysis on Transmission Lines Using PMUs: A Brief Review. IEEE International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering, KIIT Bhubaneswar, July 27th – 28th 2018.

*5.* Praneeth Ku. Pedapati, Anantha Sai Hariharan, Santanu Ku. Pradhan, Surendra Kumar, Identification and Study of the Kinematic Parameters for an Autonomous Ground Vehicle. IEEE - International Conference on Recent Innovation in Electrical, Electronics & Communication Engineering – (ICRIEECE) – 2018, Organized by Electrical Engineering Department, KIIT Bhubaneswar, Odisha, India, July-27th & 28th, 2018.

*6.* Praneeth Ku. Pedapati, Santanu Ku. Pradhan, Surendra Kumar, Point-to-Point Motion Control of Autonomous

Ground Vehicle using Optimal PID Control. IEEE - International Conference on New Trends in Engineering and Technology – (ICNTET) – 2018, Organized by Electrical Engineering Department, GRT-IET, Chennai, Tamil Nadu, India, September-7th & 8th, 2018.

7. Deep Shekhar Acharya, Sudhansu Kumar Mishra, P. K. Ranjan, S. Misra, S. Pallavi, Design of Optimally Tuned Two Degree of Freedom Fractional Order PID Controller for Magnetic Levitation Plant. 5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON-2018) (Jointly Organized by Madan Mohan Malaviya University of Technology, Gorakpur-273010, Nov. 2-4, 2018.
8. Bhatnagar, M., Gupta, G. S. and Sinha, R. K., k-NN and LDA based motor imagery EEG classification using phase features. 5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON) at Madan Mohan Malviya University of Technology, Gorakhapur (India), 2-4 November, 2018.
9. Subham Dey, V. Laxmi, D. K. Giri, Time-Varying Non-Singular Terminal Sliding Mode Attitude Control of Reusable Launch Vehicle. 15th International Conference on Control, Automation, Robotics and Vision, ICARCV 2018, Marina Bay Sands Expo and Convention Centre, Singapore, 18-21 November, 2018.
10. Goutam Goswami and and P. R. Thakura, Torque & Current Noise Reduction of BLDC Motor using Fuzzy Logic Control Strategy. International Conference on computational intelligence, pp 23-36, 1st December, 2018.
11. Brij Mohan Prasad and P. R. Thakura, A Comparison of MATLAB and PSIM Applications in Power Electronic Courses. International Conference on Smart Technology, Electrical and Electronics Engineering (ICSTEEE), December, 2018.
12. P. Pan, M. K. Sharma, T. Ghose and D. K. Mohanta, Synchrophasor based concurrent swing and state estimation of synchronous generator. Technologies for Smart-City Energy Security and Power (ICSESP), Bhubaneswar, DOI: 10.1109/ICSESP.2018.8376701, 2018.
13. M. K. Sharma, P. Pan, D. K. Mohanta and R. C. Jha, A Window Based Threshold Technique for Improved Post Event Analysis Using SPMs. Technologies for Smart-City Energy Security and Power (ICSESP), Bhubaneswar, 2018.
14. S. K. Jha and D. Kumar, A Power saving approach to Self-Sustained Microgrid. International Conference on Power Energy, Environment and Intelligent Control (PEEIC), Greater Noida, India, pp. 430-436, doi: 10.1109/PEEIC.2018.8665666, 2018.
15. S. K. Jha and D. Kumar, Robust Decentralized control of Parallel type Autonomous Microgrid structure. IEEE International Conference on Applied Electromagnetics, Signal Processing & Communication (Accepted), 2018.
16. R. R. Kar and M. Aftab Alam, Design and Modeling of High Power DC-DC Boost Converter for Solar Photovoltaic System. International Conference on Soft-computing and Network Security (ICSNS), Coimbatore, pp. 1-5, doi: 10.1109/ICSNS.2018.8573607, 2018.
17. S. Singh, N. K. Singh and M. Aftab Alam, Design of a Closed Loop Direct Torque Control for an Induction Motor Drive International Conference on Soft-computing and Network Security (ICSNS), Coimbatore, pp 1-5, doi: 10.1109/ICSNS.2018.8573643, 2018.
18. V. Anand, A. Alam, S. Singh and A. Gautam, Hardware Implementation of Real-Time Flux, Torque, Sensorless Speed Estimation of a 3KW Three-Phase Induction Machine using LabVIEW. International Conference on Current Trends towards Converging Technologies (ICCTCT), Coimbatore, pp 1-6, doi: 10.1109/ICCTCT.2018.8550952, 2018.
19. V. Anand, S. Singh, A. Alam and A. Gautam, State-Space Stator-Flux Model of 3-phase Induction Motor using LabView. International Conference on Current Trends towards Converging Technologies (ICCTCT), Coimbatore, pp 1-5, doi: 10.1109/ICCTCT.2018.8551022, 2018.
20. Subham Dey, V. Laxmi, D. K. Giri, Time-Varying Non-Singular Terminal

Sliding Mode Attitude Control of Satellites. 5th Indian Control Conference, IIT Delhi, January 9-11, 2019.

21. Sonal, Sourav Sahu, Debomita Ghosh, Dusmanta Kumar Mohanta, Reliability Analysis of a Distribution Network in Two State Weather Condition. International Conference on Computer, Electrical & Communication Engineering, Kolkata, India, IEEE, Jan. 18-19, 2019.
22. Rani Kumari, Debomita Ghosh, Dusmanta Kumar Mohanta, Petri Net Based Reliability Evaluation Considering Distribution System Protection Coordination. International Conference on Computer, Electrical & Communication Engineering, Kolkata, India, Jan. 18-19, 2019.
23. A.K. Pandey, Soham Dutta, P.K. Sadhu, M. Jaya Bharata Reddy and D.K Mohanta, Islanding detection employing net energy meter signals in a DFIG wind turbine based microgrid. International Conference on Computer, Electrical & Communication Engineering (ICCECE), Kolkata, West Bengal, India, 18th -19th January 2019.
24. S. Verma, Soham Dutta, P.K. Sadhu, M. Jaya Bharata Reddy and D.K Mohanta, Islanding detection using bi-directional energy meter in a DFIG based active distribution network. International Conference on Computer, Electrical & Communication Engineering (ICCECE), Kolkata, West Bengal, India, 18th -19th January 2019.
25. Tamal Datta, Sudhansu Kumar Mishra, Subrat Kumar Swain, Avirup Gupta, Real Time Detection and Tracking of a Model Car using Kalman Filter. IEEE 2nd International Conference On Innovations In Electronics, Signal Processing and Communication (IESC), Shilong, India, 1-2 March, 2019.
26. Deepak Kumar, M. Lehtonen, R. J. Millar, Bolstering the Structure of Stand-alone Microgrids through Demand Side Management. IEEE PES GTD Grand International Conference and Exposition Asia (GTD Asia), Bangkok, 19-23 March 2019.
27. Tanmay Jain, Debomita Ghosh, Dusmanta Kumar Mohanta, Elevation of Distribution Network Reliability incorporating Network Reconfiguration. 5th International Conference for Convergence in Technology, Pune, India, March 29-31, 2019.
28. Amal Kumar Das, Vijaya Laxmi, Sanjeev Kumar, Hand Motion Recognition and Real-Time Classification Technique in Frequency Domain. International Conference On Vision Towards Emerging Trends In Communication And Networking (vitecon19), Vellore, Tamil Nadu, India, March 30 – 31, 2019.
29. Amal Kumar Das, Vijaya Laxmi, Sanjeev Kumar, Hand Gesture Recognition and Classification Technique in Real-Time. International Conference On Vision Towards Emerging Trends In Communication And Networking (vitecon19), Vellore, Tamil Nadu, India, March 30 – 31, 2019.
30. Saikat Gope, Sarbani Chakraborty, Stabilization & Synchronization of Rössler System using T-S Fuzzy Controller. IEEE sponsored 2019 International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Tamilnadu, 30-31st March, 2019.
31. Avirup Gupta, Subrat kumar Swain, Sudhansu kumar Mishra, Tamal Datta, Sarbani Chakraborty, Improved Turning Angle Calculation for an Unmanned Ground Vehicle. IEEE sponsored 2019 International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Tamilnadu, 30-31st March, 2019.
32. Avirup Kumar Gupta, Subrat Kumar Swain,Sudhansu Kumar Mishra, Tamal Datta, Sarbani Chakraborty, Improved Turning Angle Calculation for an Unmanned Ground Vehicle. IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Vellore, India, 30-31 March, 2019.
33. Jaya, Sarode Shiva Kumar, Subrat Kumar Swain, Stability analysis and variable frequency control of zero voltage switching buck converter. IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking

(ViTECoN'19), Vellore, India, pp. 1-6, 30-31 March 2019.

34. Sisir Kumar Yadav, S Shiva Kumar, Hemanth Kumar, Chiranjeev Mishra, Investigation on Energy Recovery Converter using Industrial Motor Drive. IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Vellore, India, pp 1-6, 30-31 March 2019.
35. Saurabh Tiwari, S Shiva Kumar, Adjustable Voltage-Sensor-Based MPPT Interfacing SEPIC with PV Including Variable Scaling Factor. IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Vellore, India, pp 1-6, 30-31 March 2019.
36. Umang Singh Patel, S Shiva Kumar, Vinay Sagar Kommukuri, Power Factor Correction using Continuous Conduction Mode based Bridgeless SEPIC Converter for Improved THD and Voltage Regulation IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Vellore, India, pp 1-6, 30-31 March 2019.
37. K.D.V.Siva Krishna Rao , Madhav Kumar, Ranju Bharti, Conventional and Hybrid Perturb & Observe based Maximum Power Point Tracking for Solar System. EEE Conference on "International Conference On Vision Towards Emerging Trends In Communication And Networking, (ViTECoN-2019), 30 - 31 MARCH 2019.
38. Shekhar Acharya, Sudhansu Kumar Mishra, A novel PID Controller using SymbioticOrganisms Search for a Second Order Unstable Magnetic Levitation Plant. Springer International Conference on Intelligent Computing and Smart Communication, Tehri, India, 19-21 April, 2019.
39. Tamal Datta, Sudhansu Kumar Mishra, Subrat Kumar Swain, Real Time Tracking and Lane Line Detection Technique for an Autonomous Ground Vehicle System. Springer International Conference on Intelligent Computing and Smart Communication, Tehri, India, 19-21 April, 2019.
40. Rudra Narayan Pandey, Sarat Mishra, Sudhansu Kumar Mishra, Teaching Learning Based FunctionalLink Artificial Neural Network forShort-term electrical load forecasting. Springer International Conference on Intelligent Computing and Smart Communication, Tehri, India, 19-21 April, 2019.
41. Tirthadip Ghose, Soumadeep Roy, Bidirectional Power Flow in DC Microgrid and its Islanding Detection Using Support Vector Machine. International Conference on Intelligent Computing and Control Systems (ICICCS 2019) Vaigai College of Engineering, Madurai, India, May 15-17, 2019.
42. P. Dubey and S. Chakraborty, Avoidance of the relapse condition of Prostate Cancer using Super-twisting Sliding Mode Control. IEEE sponsored Third International Conference on Intelligent Computing and Control Systems (ICICCS-2019), Madurai, 15-17 May, 2019.
43. Chiranjeev Mishra, Subrat Kumar Swain,Sudhansu Kumar Mishra,Sisir Kumar Yadav, Fractional order sliding mode controller for the twin rotor MIMO system. IEEE International Conference on Intelligent Computing and Control System(ICICCS), Madurai, India, 15-17 May, 2019.
44. Aman Shankar, K Vamshi Kumar, Intra And Inter Power Management Of Residential Microgrid. Third International conference on Intelligent Computing and Control System (ICICCS 2019), Vaigai College of Engineering, Madurai, May15 - May 17, 2019.
45. K.D.V.Siva Krishna Rao , Madhav Kumar, Modelling and Parameter Estimation of Solar Cell using Genetic Algorithm. International Conference on Intelligent Computing and Control Systems, [ICICCS 2019], Vaigai College of Engineering, Madurai, Tamil Nadu, India, 17th May 2019.
46. Promit Kumar Saha, Shashank Shekhar, Vijaya Laxmi, P. R. Thakura, Improved Speed Response of ECM Drive using Antiwinduo Concept. ICECA, RVS technical Campus, Coimbatore, India, 12-14 June 2019.
47. Soumodeep Roy,Sourabh Nayer, Surendra Kumar, Aftab Alam & T. Ghose, Bidirectional control And management through droop control in standalone ac Microgrid. International conference on Inteligent Controlling and

Control System (ICICCS2019) organized by Malla Reddy College of Engineering, Secunderabad, 27-28, June 2019.

48. Goutam Goswami and P. R. Thakura, A Speed and Flux Observer using Square Root Cubature Kalman Filter for Induction Motor Drive, 978-1-5386-9353-7/19, 2019.
49. Promit Kr Saha, Shashank Shekhar and Parashuram Thakura, Improved Speed Response of Ecm Drive sing Antiwindup Concept. ICIEA, 2019.
50. Kibriya, D. K. Mahto, A. M. Khalkho, T. Mahto and D. K. Mohanta, Determination of Voltage Control Area Based on Bus Coherency Using Synchronized Phasor Measurements. IEEE TECON, 2019 (Accepted).
51. Mohan Prasad, Brij & P. R. Thakura, Design and Analysis of Dedicated Power Converter for Hybrid Electric Vehicles. Proceeding of NCCS 2017, 10.1007/978-981-13-0776-8_6, 2019.
52. S. Singha, A. S. Singh, S. Prasad and A. Alam, A Study on Power Optimization Techniques in PSoC. International Conference on Communication and Signal Processing (ICCSP), Chennai, India, doi: 10.1109/ICCSP.2019.8698070, pp. 0225-0229, 2019.
53. Pandey, H.W., Gadham, K.R. and Ghose, T., Risk based Benefit analysis of RES aggregator in Restructured Energy Market. In 2018 2nd International Conference on Power, Energy and Environment: Towards Smart Technology (ICEPE) (pp. 1-6). IEEE. **DOI:** 10.1109/EPETSG.2018.8658380 , June 2018.
54. Sandhya, K., Chatterjee, K. and Ghose, T., State Estimation for DG penetrated Adaptive Distribution System during Disaster. In 2018 20th National Power Systems Conference (NPSC) (pp. 1-5). IEEE. **DOI:** 10.1109/NPSC.2018.8771796, December 2018.
55. Ghose, T. and Chatterjee, K., Droop Based Dynamic Demand Response Controller for HVAC Load. In 2018 20th National Power Systems Conference (NPSC) (pp. 1-6). IEEE. **DOI:** 10.1109/NPSC.2018.8771754, December 2018.
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57. Nayar, S. and Ghose, T., Power Sharing And Management Through Power Based Droop Control in DC microgrid. In 2019 3rd International conference on Electronics, Communication and Aerospace Technology (ICECA) (pp. 538-544). IEEE. **DOI:** 10.1109/ICECA.2019.8822030, June 2019. and Aerospace Technology (ICECA) (pp. 538-544). IEEE. **DOI:** 10.1109/ICECA.2019.8822030, June 2019.

**Publications in Proceedings:** National

Sourav Kumar Sahu, Debomita Ghosh, J.B. Reddy, R.C. Jha, Dusmanta Kumar, Mohanta, Fuzzy Reliability Analysis of Unit Commitment Problem Considering Uncertain Outage Replacement Rate and Load Representation. 20 th National Power Systems Conference (NPSC 2018), Electronic ISBN: 978-1-5386-6159-8, USB ISBN: 978-1-5386-5552-8, Tiruchirappalli, Tamilnadu, India, Dec. 14-16, 2018.

## 7. Chapter(s) in Edited Book

Mahto, T., Malik, H., & Mukherjee, V. (2018). Fractional Order Control and Simulation of Wind-Biomass Isolated Hybrid Power System Using Particle Swarm Optimization. In: H. Malik, S. Srivastava, Y.R. Sood, & A. Ahmad (Eds.), Applications of Artificial Intelligence Techniques in Engineering. Advances in Intelligent

Systems and Computing (pp. 277 – 287). vol 698. Springer, Singapore.

## SECTION 5 AWARD / PATENT / COLLABORATIONS

### 8. 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. P. R. Thakura | Appointed as an expert in Board of Study | BIT Sindri , | State | 24th June 2019. |
| 2 | Dr. P. R. Thakura | Appointed as in Board of Managent | Sainath University , Ormahji , Ranchi | International | Dec-2018. |
| 3. | Dr. P. R. Thakura | Chaired Session in Int. Conf on MCC in | BSNL, Ranchi ,Jharkhand | International | Dec 2019 , |
| 4. | Dr. P. R. Thakura | Chaired Session in Int. Conf on NCC | BSNL, Ranchi ,Jharkhand | International | Dec 2018 , |
| 5. | Dr. P. R. Thakura | Member of Board of Studies | Rai University, Jharkhand | National | Jan-2019 |
| 6. | Dr. P. R. Thakura | Vice-Chairman | IETE Ranchi Chapter from Nov.2018. | National | 2018 |
| 7. | Dr. P. R. Thakura | Guest Editor for International Journal of Power & Energy System, Acta Press in Special Issue on "Green Energy Conversion Systems Based on Advanced Modeling and Simulations Techniques" , Feb.2019. | | International | 2019 |
| 8. | Dr. D. K. Mohanta | awarded Recognized reviewer - Integration, (Elsevier) for 2018(Impact Factor: 0.906). | - | International | **2018** |
| 9. | Dr. D. K. Mohanta | Awarded Outsatnding | | International | **2018** |

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|---|---|---|---|---|---|
| | | reviewer - Integration, (Elsevier) for 2018(Impact Factor: 0.906) | | | |
| 10. | Dr. D. K. Mohanta | Working as Editor, Electric Power Components & Systems (Taylor & Francis Publications) (Impact Factor: 1.22) | | International | 2018-2019 |
| 11. | Dr. D. K. Mohanta | Working as Guest Editor-in-Chief, Special Issue on Emerging Trends in System Integrity Protection Schemes (SIPS) for Improving the Performance of Smart Grid, IET Proceedings of Generation, Transmission and Distribution. (Impact Factor: 2.213) | | International | 2018-2019 |
| 12. | Dr. D. K. Mohanta | Working as Subject Editor, IET Generation, Transmission and Distribution (Impact Factor: 2.213) | | International | 2019 |
| 13. | Dr. D. K. Mohanta | Working as Associate Editor, IEEE Access (Impact Factor: 3.244) | | International | 2019 |
| 14. | Dr. D. K. Mohanta | Appointed as Member, BOS, | MVGR College of Engineering (Autonomous), Viziznagaram. | International | 2019 |
| 15. | Dr. Debomita Ghosh | Declared winner of Main Award in Typhoon HIL' 10 for 10 award Program in Feb.2019. | | International | 12 th February 2019 |
| 16. | Dr. Surendra Kumar | Board member of electrical inspectorate, | govt. of Jharkhand | | 2019 |
| 17. | Dr. Surendra Kumar | Member of technical board for medical equipment | RIMS, Jharkhand, Ranchi | | 2019 |
| 16. | Subrat Kumar Swain | Full KINGS scholarship (100% Scholarship) for the Ph.D. program | Kyungpook National University | International Level | 2019 |

**9. MoUs / Collaborations**

| Sr. No. | Name of Organisation / University | Purpose / Area | Year / Duration |
|---|---|---|---|
| 1. | Aalto University, Finland | Research activity | Dec.2018 |
| 2. | DC Office, Ranchi | Design and implementation of low cost Solar Power Lamp for rural people. | 2018 |

## SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS

***10.*Departmental Students' Activities**

| **Sr. No.** | **Name of the Activity** | **Students' Co-Ordinator (If any)** | **Faculty Co-ordinator (if any)** | **Date / Duration** |
|---|---|---|---|---|
| *1.* | Team Aveon Racing has designed and participated in E-Baja. | Harshit Raj | Dr. Aftab Alum | Organized by Sai India conducted by Mahindra at Pitampura, Indore on 23rd -26th January 2019. 5th rank |
| *2.* | Industrial Visit | | Mr.G.S.Gupta | On 31/03/2018, 30 PG students of EEE dept., BIT Mesra went for a study tour to Tata Motors, Jamshedpur |
| *3.* | Industrial Visit | | Mr.G.S.Gupta | On 07/04/2018, 30 PG students of EEE dept., BIT Mesra went for a study tour to DVC, Bokaro Thermal |
| *4.* | Industrial Visit | | Mr.G.S.Gupta | On 12/12/2018, 30 PG students of EEE dept., BIT Mesra went for a study tour to Jindal Steel & Power, Patratu |
| *5.* | Student Internship | | | 2018-2019 Data: |
| | | | | Company/Industry \| Student |

| | | | | Name | Number |
|---|---|---|---|---|---|
| | | | | BHEL | 01 |
| | | | | IISC, BANGLORE | 01 |
| | | | | IIT KANPUR | 01 |
| | | | | Western Coal field ltd, Nagpur | 01 |
| | | | | IIT, Guwahati | 01 |
| | | | | ABB INDIA LIMITED | 03 |
| | | | | BSNL, PATNA | 01 |
| | | | | DRDO LAB, HYDERABAD | 01 |
| | | | | DVC, ANDAL | 01 |
| | | | | DVC, DHANBAD | 01 |
| | | | | HEC, RANCHI | 12 |
| | | | | HPVP-BHEL, VISHAKAPATNAAM | 01 |
| | | | | IIT, DELHI | 02 |
| | | | | IOL, BEGUSARAI | 01 |
| | | | | JSPL, PATRATU | 01 |
| | | | | JSPL, RAIGARH | 09 |
| | | | | Maithon Power Ltd., Nirsa, Dhanbad | 01 |
| | | | | NIT ROURKELA | 01 |
| | | | | NTPC ANTA, THERMAL | 01 |
| | | | | PWC KOLKATA | 02 |
| | | | | RDCIS, SAIL, RANCHI | 02 |
| | | | | SAIL, BOKARO | 01 |
| | | | | South Eastern Railway Ranchi | 01 |
| | | | | Sterling and Wilson Pvt. Ltd. | 01 |
| | | | | Super Thermal Power Plant, Kota | 01 |
| | | | | TATA RAO THERMAL POWER, VIJAYWADA | 01 |
| | | | | Ultra Tech Cement, Andhra Pradesh | 01 |
| | | | | IIT, DELHI | 02 |
| | | | | NEW ENTRANTS CELL (NEC) sail Bokaro | 01 |
| | | | | SAIL, BOKARO | 02 |
| | | | | TATA, HITACHI | 01 |
| | | | | CESC, KOLKATTA | 01 |
| | | | | HINDALCO, RENUKOOT | 01 |
| | | | | IIT, KHARAGHPUR | 01 |
| | | | | IIT, Bhubneshwar | 02 |
| | | | | JUSCO LTD | 01 |
| | | | | SAIL, BOKARO | 01 |
| | | | | NTPC KHELGAON | 01 |
| | | | | CHABRA THERMAL POWER STATION,NEAR KOTA, RAJASTHAN | 01 |
| | | | | CCL, RANCHI | 01 |

| | | | | | |
|---|---|---|---|---|---|
| | | | | ANDRITZ HYDRO | 01 |
| | | | | CROPIN TECH. Ltd. | 01 |
| | | | | IIT, KHARAGHPUR | 01 |
| | | | | POWER TRANSMISSION COMPANY LTD. RAMPUR, NAYAGAON, JABALPUR(MP) | 01 |
| | | | | CET SAIL RANCHI | 02 |
| | | | | ONGC, DELHI | 01 |
| | | | | ONGC, URAN, MUMBAI | 01 |
| | | | | OMC, APTRANSCO GUMADALA, VIJAYWADA(AP) | 01 |
| | | | | NTCEL (NTPC TAMIL NADU ENERGY COMPANY LIMITED | 01 |
| | | | | SNTI, TATA STEEL, JAMSHEDPUR | 18 |
| | | | | Cypress Semiconductor | 01 |
| | | | | BHEL, HARIDWAR | 01 |
| | | | | TATA STEEL, DHANBAD | 01 |
| | | | | CARNEGIE MELLON UNIVERSITY | 01 |
| | | | | LIPI DATA SYSTEM PVT LTD., UDAIPUR | 01 |
| | | | | PRICE WATER HOUSE | 01 |
| | | | | LALITPUR POWER COMPANY LIMITED | 01 |
| | | | | NTPC UNCHAHAR | 01 |
| | | | | uttar pradesh Rajya vidyut Utpadan nigam ,Sonebhadra | 01 |
| | | | | OFFICE OF THE DUTY COMMISIONERY, WEST BENGAL | 02 |
| | | | | IOCL, GUHAWATI | 03 |
| | | | | IIIT, BANGLORE | 01 |
| | | | | GEORGIA TECH, ATLANTA | 01 |
| | | | | PRICE WATER HOUSE COOPERS | 01 |
| | | | | HAL, BANGLORE (IMGT DIV.) | 01 |
| | | | | NTPC, NOIDA | 01 |
| | | | | GAIL, VARANASI | 01 |
| | | | | NUCLEAR POWER CORP., RAJASTHAN | 01 |
| | | | | NTPC, VINDHYANAGAR | 01 |
| | | | | POWER GRID CORPORATION, GURAGAON | 01 |

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|---|---|---|---|---|---|
| | | | | PARE HE PROJECT, NEEPCO, | 01 |
| | | | | BHEP, CHANDRAKANTA, J&K | 01 |
| | | | | TATA MOTORS, JAMSHEDPUR | 03 |
| | | | | INDIAN OIL CORPORATION LIMITED | 01 |
| | | | | J K TRANSFORMERS and Switchgears, Jammu | 01 |
| | | | | ILLINOIS INSTITUTE OF TECHNOLOGY, CHICAGO ,USA | 02 |
| | | | | UCIL | 01 |
| | | | | SAIL, BOKARO STEEL PLANT | 01 |
| | | | | PARICCHA THERMAL POWER PLANT | 01 |
| | | | | ROZA THERMAL POWER PLANT | 01 |
| | | | | ARTTC, BSNL, RANCHI | 01 |
| | | | | DVC, BANKURA | 01 |
| | | | | EASEBUZZ, PUNE | 01 |
| | | | | ISWPL (INDIAN STEEL WIRE PRODUCTS) | 01 |
| | | | | POWERGRID, CORPORATION, PATNA | 01 |
| | | | | LINUX WORLD INFORMATICS, JAIPUR | 03 |

Team Aveon Racing has designed and participated in E-Baja 2019 and achieved 5$^{th}$ Rank

**11. 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.* | Mr. Abinash Prasad | Assistant Professor | No |
| *9.* | Dr. Surendra Kumar | Assistant Professor | No |
| *10.* | Dr. Sudhanshu Kumar Mishra | Assistant Professor | No |
| *11.* | Dr. Debomita Ghosh | Assistant Professor | No |
| *12.* | Mr. Gauri Shanker Gupta | Assistant Professor | No |
| *13.* | Mr. Brij Mohan Prasad | Assistant Professor | No |
| *14.* | Mrs. Sushma Suryaprakash Kamlu | Assistant Professor | No |
| *15.* | Mr. S. K. Swain (on Study leave | Assistant Professor | No |

| | | | |
|---|---|---|---|
| | from Feb 2019) | | |
| *16.* | Dr. Deepak Kumar | Assistant Professor | No |
| *17.* | Dr. Aftab Alam | Assistant Professor | No |
| *18.* | Dr. S. Shiva Kumar | Assistant Professor | No |
| *19.* | Mr. S. K. Das | Associate Lecturer | No |
| *20.* | Dr. Tarkeshwar Mahto | Assistant Professor | Yes |
| *21.* | Mr. Vamshi Kumar | Assistant Professor | Yes |
| *22.* | Ms. Nishtha Bajoria | Assistant Professor | Yes |
| *23.* | Mr. D. V. Siva Krishna | Assistant Professor | Yes |

### *12.* 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. Mahesh Chandra | 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

### *13.* Publication by students

1. **Praneeth Ku. Pedapati,** Anantha Sai Hariharan, Santanu Ku. Pradhan, Surendra Kumar, "Identification and Study of the Kinematic Parameters for an Autonomous Ground Vehicle", IEEE - International Conference on Recent Innovation in Electrical, Electronics & Communication Engineering – (ICRIEECE) – 2018, Organized by Electrical Engineering Department, KIIT Bhubaneswar, Odisha, India, July-27th & 28th, 2018.
2. **Praneeth Ku. Pedapati,** Santanu Ku. Pradhan, Surendra Kumar, "Point-to-Point Motion Control of Autonomous Ground Vehicle using Optimal PID Control", IEEE - International Conference on New Trends in Engineering and Technology – (ICNTET) – 2018, Organized by Electrical Engineering Department, GRT-IET, Chennai, Tamil Nadu, India, September-7th & 8th, 2018.

3. **Deep Shekhar Acharya,** Sudhansu Kumar Mishra, P. K. Ranjan, S. Misra, S. Pallavi, "Design of Optimally Tuned Two Degree of Freedom Fractional Order PID Controller for Magnetic Levitation Plant", 5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON-2018) (Jointly Organized by Madan Mohan Malaviya University of Technology, Gorakpur-273010, Nov. 2-4, 2018.
4. **Bhatnagar, M.,** Gupta, G. S. and Sinha, R. K., "k-NN and LDA based motor imagery EEG classification using phase features", 5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON) at Madan Mohan Malviya University of Technology, Gorakhapur (India), 2-4 November, 2018.
5. **Subham Dey,** V. Laxmi, D. K. Giri, "Time-Varying Non-Singular Terminal Sliding Mode Attitude Control of Reusable Launch Vehicle", 15th International Conference on Control, Automation, Robotics and Vision, ICARCV 2018, Marina Bay Sands Expo and Convention Centre, Singapore, 18-21 November, 2018.
6. **Sourav Kumar Sahu,** Debomita Ghosh, J.B.Reddy, R.C. Jha, Dusmanta Kumar Mohanta, "Fuzzy Reliability Analysis of Unit Commitment Problem Considering Uncertain Outage Replacement Rate and Load Representation", 20th National Power Systems Conference (NPSC 2018), Tiruchirappalli, Tamilnadu, India, Dec. 14-16, 2018.
7. **Goutam Goswami**, P. R. Thakura, "Torque & Current Noise Reduction of BLDC Motor using Fuzzy Logic Control Strategy", International Conference on computational intelligence, pp 23-36, 1st December, 2018.
8. **Brij Mohan Prasad** and P. R. Thakura, "A Comparison of MATLAB and PSIM Applications in Power Electronic Courses", International Conference on Smart Technology, Electrical and Electronics Engineering (ICSTEEE), December, 2018.
9. **S. K. Jha** and D. Kumar, "A Power saving approach to Self-Sustained Microgrid", International Conference on Power Energy, Environment and Intelligent Control (PEEIC), Greater Noida, India, pp. 430-436, doi: 10.1109/PEEIC.2018.8665666, 2018.
10. **S. K. Jha** and D. Kumar, "Robust Decentralized control of Parallel type Autonomous Microgrid structure", IEEE International Conference on "Applied Electromagnetics, Signal Processing & Communication" (Accepted), 2018.
11. **R. R. Kar** and M. Aftab Alam, "Design and Modeling of High Power DC-DC Boost Converter for Solar Photovoltaic System", International Conference on Soft-computing and Network Security (ICSNS), Coimbatore, pp. 1-5, doi: 10.1109/ICSNS.2018.8573607, 2018.
12. **S. Singh, N. K. Singh** and M. Aftab Alam, "Design of a Closed Loop Direct Torque Control for an Induction Motor Drive", International Conference on Soft-computing and Network Security (ICSNS), Coimbatore, pp 1-5, doi: 10.1109/ICSNS.2018.8573643, 2018.
13. **V. Anand,** A. Alam, S. Singh and A. Gautam, "Hardware Implementation of Real-Time Flux, Torque, Sensorless Speed Estimation of a 3KW Three-Phase Induction Machine using LabVIEW", International Conference on Current Trends towards Converging Technologies (ICCTCT), Coimbatore, pp 1-6, doi: 10.1109/ICCTCT.2018.8550952, 2018.
14. **V. Anand,** S. Singh, A. Alam and A. Gautam, "State-Space Stator-Flux Model of 3-phase Induction Motor using LabView", International Conference on Current Trends towards Converging Technologies (ICCTCT), Coimbatore, pp 1-5, doi: 10.1109/ICCTCT.2018.8551022, 2018.
15. **Subham Dey,** V. Laxmi, D. K. Giri, "Time-Varying Non-Singular Terminal Sliding Mode Attitude Control of Satellites", 5th Indian Control Conference, IIT Delhi, January 9-11, 2019.
16. **Sonal, Sourav Sahu,** Debomita Ghosh, Dusmanta Kumar Mohanta, "Reliability Analysis of a Distribution Network in Two State Weather Condition", International Conference on Computer, Electrical & Communication Engineering, Kolkata, India, IEEE, Jan. 18-19, 2019.

17. **Rani Kumari,** Debomita Ghosh, Dusmanta Kumar Mohanta, "Petri Net Based Reliability Evaluation Considering Distribution System Protection Coordination", International Conference on Computer, Electrical & Communication Engineering, Kolkata, India, Jan. 18-19, 2019.
18. **Tamal Datta,** Sudhansu Kumar Mishra, Subrat Kumar Swain, Avirup Gupta, "Real Time Detection and Tracking of a Model Car using Kalman Filter", IEEE 2nd International Conference On Innovations In Electronics, Signal Processing and Communication (IESC), Shilong, India, 1-2 March, 2019.
19. **Tanmay Jain,** Debomita Ghosh, Dusmanta Kumar Mohanta, "Elevation of Distribution Network Reliability incorporating Network Reconfiguration", 5th International Conference for Convergence in Technology, Pune, India, March 29-31, 2019.
20. **Saikat Gope,** Sarbani Chakraborty, "Stabilization & Synchronization of Rössler System using T-S Fuzzy Controller", IEEE sponsored 2019 International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Tamilnadu, 30-31st March, 2019.
21. **Amal Kumar Das**, Vijaya Laxmi, Sanjeev Kumar, "Hand Motion Recognition and Real-Time Classification Technique in Frequency Domain", International Conference On Vision Towards Emerging Trends In Communication And Networking (vitecon19), Vellore, Tamil Nadu, India, March 30 – 31, 2019.
22. **Amal Kumar Das**, Vijaya Laxmi, Sanjeev Kumar, "Hand Gesture Recognition and Classification Technique in Real-Time", International Conference On Vision Towards Emerging Trends In Communication And Networking (vitecon19), Vellore, Tamil Nadu, India, March 30 – 31, 2019.
23. **Avirup Gupta,** Subrat kumar Swain, Sudhansu kumar Mishra, Tamal Datta, Sarbani Chakraborty, "Improved Turning Angle Calculation for an Unmanned Ground Vehicle", IEEE sponsored 2019 International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Tamilnadu, 30-31st March, 2019.
24. **Avirup Kumar Gupta,** Subrat Kumar Swain,Sudhansu Kumar Mishra, Tamal Datta, Sarbani Chakraborty, "Improved Turning Angle Calculation for an Unmanned Ground Vehicle", IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Vellore, India, 30-31 March, 2019.
25. **Jaya,** Sarode Shiva Kumar, Subrat Kumar Swain, "Stability analysis and variable frequency control of zero voltage switching buck converter", IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Vellore, India, pp. 1-6, 30-31 March 2019.
26. **Sisir Kumar Yadav,** S Shiva Kumar, Hemanth Kumar, Chiranjeev Mishra, "Investigation on Energy Recovery Converter using Industrial Motor Drive", IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Vellore, India, pp 1-6, 30-31 March 2019.
27. **Saurabh Tiwari,** S Shiva Kumar, "Adjustable Voltage-Sensor-Based MPPT Interfacing SEPIC with PV Including Variable Scaling Factor", IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Vellore, India, pp 1-6, 30-31 March 2019.
28. **Umang Singh Patel,** S Shiva Kumar, Vinay Sagar Kommukuri, "Power Factor Correction using Continuous Conduction Mode based Bridgeless SEPIC Converter for Improved THD and Voltage Regulation", IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), Vellore, India, pp 1-6, 30-31 March 2019.
29. **Deep Shekhar Acharya,** Sudhansu Kumar Mishra, "A novel PID Controller using SymbioticOrganisms Search for a Second Order Unstable Magnetic Levitation Plant", Springer International Conference on Intelligent Computing

and Smart Communication, Tehri, India, 19-21 April, 2019.

30. **Tamal Datta,** Sudhansu Kumar Mishra, Subrat Kumar Swain, "Real Time Tracking and Lane Line Detection Technique for an Autonomous Ground Vehicle System", Springer International Conference on Intelligent Computing and Smart Communication, Tehri, India, 19-21 April, 2019.
31. **Rudra Narayan Pandey, Sarat Mishra,** Sudhansu Kumar Mishra, "Teaching Learning Based FunctionalLink Artificial Neural Network forShort-term electrical load forecasting", Springer International Conference on Intelligent Computing and Smart Communication, Tehri, India, 19-21 April, 2019.
32. Tirthadip Ghose, **Soumadeep Roy**, "Bidirectional Power Flow in DC Microgrid and its Islanding Detection Using Support Vector Machine", International Conference on Intelligent Computing and Control Systems (ICICCS 2019) Vaigai College of Engineering, Madurai, India, May 15-17, 2019.
33. **P. Dubey** and S. Chakraborty, "Avoidance of the relapse condition of Prostate Cancer using Super-twisting Sliding Mode Control", IEEE sponsored Third International Conference on Intelligent Computing and Control Systems (ICICCS-2019), Madurai, 15-17 May, 2019.
34. **Chiranjeev Mishra,** Subrat Kumar Swain,Sudhansu Kumar Mishra,Sisir Kumar Yadav, "Fractional order sliding mode controller for the twin rotor MIMO system", IEEE International Conference on Intelligent Computing and Control System(ICICCS), Madurai, India, 15-17 May, 2019.
35. **Aman Shankar,** K Vamshi Kumar, "Intra And Inter Power Management Of Residential Microgrid", Third International conference on Intelligent Computing and Control System (ICICCS 2019), Vaigai College of Engineering, Madurai, May15 - May 17, 2019.
36. **Promit Kumar Saha**, **Shashank Shekhar,** Vijaya Laxmi, P. R. Thakura, "Improved Speed Response of ECM Drive using Antiwinduo Concept", ICECA, RVS technical Campus, Coimbatore, India, 12-14 June 2019.
37. **Soumodeep Roy,** Sourabh Nayer, Surendra Kumar, Aftab Alam & T. Ghose, "Bidirectional control And management through droop control in standalone ac Microgrid", International conference on Inteligent Controlling and Control System (ICICCS2019) organized by Malla Reddy College of Engineering, Secunderabad, 27-28, June 2019.
38. **Goutam Goswami** and P. R. Thakura, "A Speed and Flux Observer using Square Root Cubature Kalman Filter for Induction Motor Drive", 978-1-5386-9353-7/19, 2019.
39. **Promit Kr Saha,** Shashank Shekhar and Parashuram Thakura, "Improved Speed Response of Ecm Drive sing Antiwindup Concept", ICIEA, 2019.
40. Kibriya, D. K. Mahto, **A. M. Khalkho,** T. Mahto and D. K. Mohanta, "Determination of Voltage Control Area Based on Bus Coherency Using Synchronized Phasor Measurements", IEEE TECON, 2019 (Accepted).
41. **Mohan Prasad, Brij**& P. R. Thakura, "Design and Analysis of Dedicated Power Converter for Hybrid Electric Vehicles", Proceeding of NCCS 2017, 10.1007/978-981-13-0776-8_6, 2019.
42. **S. Singha, A. S. Singh, S. Prasad** and A. Alam, "A Study on Power Optimization Techniques in PSoC", International Conference on Communication and Signal Processing (ICCSP), Chennai, India, doi: 10.1109/ICCSP.2019.8698070, pp. 0225-0229, 2019.
43. **Pandey, H.W**., Gadham, K.R. and Ghose, T., 2018, June. Risk based Benefit analysis of RES aggregator in Restructured Energy Market. In 2018 2nd International Conference on Power, Energy and Environment: Towards Smart Technology (ICEPE) (pp. 1-6). IEEE.
**DOI:** 10.1109/EPETSG.2018.8658380

38. **Sandhya, K.,** Chatterjee, K. and Ghose, T., 2018, December. State Estimation for DG penetrated Adaptive Distribution System during Disaster. In 2018 20th National Power Systems Conference (NPSC) (pp. 1-5). IEEE. **DOI:** 10.1109/NPSC.2018.8771796.
39. Ghose, T. and **Chatterjee, K**., 2018, December. Droop Based Dynamic

Demand Response Controller for HVAC Load. In 2018 20th National Power Systems Conference (NPSC) (pp. 1-6). IEEE. **DOI:** 10.1109/NPSC.2018.8771754

40. **Pan, P.,** Sharma, M.K., Ghose, T. and Mohanta, D.K., 2018, March. Synchrophasor based concurrent swing and state estimation of synchronous generator. In 2018 Technologies for Smart-City Energy Security and Power (ICSESP) (pp. 1-5). IEEE. **DOI:** 10.1109/ICSESP.2018.8376701
41. **Nayar, S.** and Ghose, T., 2019, June. Power Sharing And Management Through Power Based Droop Control in DC microgrid. In 2019 3rd International conference on Electronics, Communication and Aerospace Technology (ICECA) (pp. 538-544). IEEE. **DOI:** 10.1109/ICECA.2019.8822030.
42. **Saurabh Tiwari**, S Shiva Kumar., Adjustable Voltage-Sensor-Based MPPT Interfacing SEPIC with PV Including Variable Scaling Factor, IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), 30-31 March 2019,Vellore, pp. 1-6.
43. **Umang Singh Patel**, S Shiva Kumar, Vinay Sagar Kommukuri.,Power Factor Correction using Continuous Conduction Mode based Bridgeless SEPIC Converter for Improved THD and Voltage Regulation, IEEE International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN'19), 30-31 March 2019, Vellore, pp. 1-6.
44. K.D.V.Siva Krishna Rao , **Madhav Kumar,** Ranju Bharti,"Conventional and Hybrid erturb & Observe based Maximum Power Point Tracking for Solar System" EEE Conference on "International Conference On Vision Towards Emerging Trends In Communication And Networking" 30 - 31 MARCH 2019 ,(ViTECoN-2019).
45. K.D.V.Siva Krishna Rao, **Madhav Kumar**, "Modelling and Parameter Estimation of SolarmCell using Genetic Algorithm" International Conference on Intelligent Computing and Control Systems, [ICICCS 2019], 17 May 2019 at Vaigai College of Engineering, Madurai,Tamil Nadu, India.

## *14.* Achievements of Students

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | Prabhat Ranjan Tripathy, Ph.D. Scholar | attended Short Term Project on PCB Design and Power Converter. | Nanyang Technological University, Singapore. | July – Aug.2018 |

## *15.* Distinguished Visitors from Industry/Academia/Research organizations

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| 1. | Dr. Bhim Singh, Professor, IIT, Delhi visited for review of **Centre of Excellence.** | 25th Jan. 2019 | |

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|---|---|---|---|
| | | | |
| **2.** | Dr. Shyama Prasad Das, Professor, IIT Kanpur, Dr. R. K. Saket, Professor, IIT-BHU, Varanasi and Mr. Sharat Kumar, Chief, Tata Steel Ltd to review **Centre of Excellence.** | 07th Jan. 2019 | |
| **3.** | Mr. Sharat Kumar, Chief, Tata Steel Ltd. delivered guest lecture in the Department of Electrical and Electronics Engineering on Electric Automation in Tata Steel and Technical Advancement | 28th Sept. 2018. | |
| 4. | Dr Atasi N Goswami, Research Coordinator, KnIDS, e-mail atasi@knids.org. Mobile – 8240228869, Landline (work) 03346014964. **DST-FIST Team** | 18th March 2019 | |
| 5. | Mr. Pradosh Nath pradoshnath@knids.org Principal Investigator, Director, Centre for Knowledge Ideas and Development Studies (KnIDS), 1/433, Gariahat Road South, Jodhpur Park, Kolkata 700068, **DST-FIST Team.** | 18th March 2019 | |

| | | | |
|---|---|---|---|
| 6. | Sudarsan Chakrabarti, CEO,PVUNL Short Term Course on Development of IOT Based Power Electronic Interface for Green Energy Management system during sponsored by TEQIP, in the department of EEE. | 20th May - 24th May 2019 | |

***16.*** **List of Distinguished Alumni**

| Sr. No | Name, Batch and Affiliation | Short Description |
|---|---|---|
| *1.* | Mr. Madhavan Nayar Founder, Infogix, Inc., USA | Member, Executive Committee Illinois Tech. |
| *2.* | Mr. Himanshu Kapania Managing Director, Idea Cellular Limited | Aditya Birla Group plans to give a bigger role to Idea Cellular Managing Director and Chief Executive Officer Himanshu Kapania, including the first-ever position of vice-chairman at Grasim Industries, after the merger of the company's telecom business with Vodafone. "Aditya Birla Group Chairman Kumar Mangalam Birla has internally announced that Himanshu Kapania will join the board of Grasim Industries as non-executive director and will be the company's vice-chairman. This will be the first time in the history of Grasim that a vice-chairman will be appointed," according to company sources. |
| *3.* | Dr. Anjan Lahiri Ex-CEO and Managing Director, Birlasoft | Lahiri is an alumnus of the Birla Institute of Technology, Mesra, where he earned a Bachelor of Technology degree in electrical and electronics engineering. Birla Institute of Technology, Mesra, is part of the CK Birla Group. He also holds an MBA from the University of Florida, Gainesville, USA. |
| *4.* | Professor Kankar Bhattacharya Professor, ECE Department University of Waterloo | ECE Department University of Waterloo |
| *5.* | Mr. Sougata Basu Founder, CashRich, India | Selected as the best start-up in 2018 by Govt. of India |

***17.*** **Any other relevant information**

**1. R&D Activities: (a)** Institute Research Fellow- MO/18- 02,SP/19-1**(b)**Ph.D. Awarded:06

**2. Infrastructure Development: (a)** Department is engaged in Augmentation of Power Distribution System by up gradation 11kV Air Insulated Substation to 33kV Gas Insulated Substation along with SCADA to meet the high power demand of BIT Mesra campus.

**(b)** Department has been involved in installing 700kW peak Roof Top Solar Power Plant and it is working from October 2018. After this installation, BIT

Mesra campus has 1MW peak Solar Power Plant.

**3.** CBCS Course Structure has been implemented for B.Tech EEE and M.Tech , EE Programme from MO/ 2018.

**4.** Dr. Deepak Kumar has successfully completed his Post-Doctoral Research from Aalto University, Finland from July-December 2018.

**5.** Mr. Subrat Kumar Swain has been selected for Ph.D. Programme with scholarship at Kyungpook National University, South Korea and will be joining in Feb.2019

**6.** NBA has accredited Two ME Programmes, ME-Power System and ME-Control System.

**7.** Department has been recognized as **Centre of Excellence** and a team of Experts visited the department for evaluation.

**8.** Dr. D. K. Mohanta has been appointed as Member, Working Group IEEE P666™ Design Guide for Electric Power Service Systems for Generating Stations.

**9.** Dr. D. K. Mohanta has been appointed as Program Committee Member forNTELLI 2017, The Sixth International Conference on Intelligent Systems and Applications, 2018, Nice, France.

**12.** Industrial Visit to Jindal Steel & Power Limited, Patratu was organized for ME Students of Department of EEE on 12$^{th}$ Dec.2018.

# Department of Electronics and Communication Engineering

SECTION 1 DEPARTMENTAL PROFILE

## *1.* About the Department

The Department of Electronics and Communication Engineering is one of the largest departments of the institute having largest student and faculty 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. COMSIM 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, Argon-ion 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 Lab View 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 selected for fabrication in SCL Chandigarh and final product going to utilize by SAC ISRO Ahmedabad. VLSI Design has 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 welfares. 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 Trainer Kit. This Laboratory also has Scalar Network Analyzer with Plotter (22

GHz), Spectrum Analyzer, Sweep Oscillators for, Pattern Generator and Sweamer 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, Fidelity, and MD Spice. The MIC Fabrication Lab has been setup with Ultra Violet exposure, Ovens, Spinners, all required for fabrication of high precision microwave integrated circuits. The laboratory is also supplemented with software Sonnet 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.

Analog & Digital Gateway Conducted by IEI(ECE) & ECE Soc

## *2.* Sponsored Projects (Research and Consultancy)

*b)* Ongoing Projects:

| Sr. No. | Project Title | PI / Co PI / Collaborator, if any | Funding Agency | Date of Sanction | Sanctioned Amount (lakhs | Duration of the Project |
|---|---|---|---|---|---|---|
| 1. | Design of Ultra Low Power CMOS Temperature Sensors for Aerospace Applications | Dr. Vijay Nath | RESPOND ISRO, Bangalore | April 2015 | 25.00 Lakhs | 2015-2019 |
| 2. | MEMS based piezoelectric energy harvester for implanted medical devices | Dr. Sudip Kundu (PI) & Dr. N. Chattoraj(Co-PI) | Science & Engineering Research Board (SERB) | March 2017 | 38.8602 | 2017-2020 |
| 3. | Study of HEMT and its performance in amplifier circuit | Dr. Sudip Kundu(CoPI) & Dr. A. Islam(PI) | DRDO | July 2018 | 23.742 | 2018-2020 |
| 4. | Computational identification and validation of genome wide protein-protein interaction network in rice and rice blast | Dr. S. S. Sahu | SERB, DST, Govt. of India | June 2017 | 21.626 | 2017-2020 |
| 5. | Development of Low Cost Cryptography Approach for Cyber Security | Dr. S. S. Sahu | JCST, Jharkhand Govt | Oct 2017 | 2.0 | 2017-2019 |
| 6. | Electroencephalogram based Sleep Stages Detection using Advance Wavelet Techniques | Dr. Rajeev Sharma(PI), Dr. S SSahu(Co-PI) | AICTE, MHRD | 18-06-2019 | 1442000/- | 2019-2020 |

SECTION 3 SEMINAR / CONFERENCE

## 3. 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. Vijay Nath | Advanced DSP Design Techniques, | TEQIP | IIT Kharagpur | IIT Kharagpur | Sept.25-29, 2018 |
| 2. | Dr. M.K. Mukul | Advanced DSP Design Techniques | TEQIP | IIT Kharagpur | IIT Kharagpur | Sept.25-29,2018 |
| 3. | Dr. S.S. Sahu | Advanced DSP Design Techniques | TEQIP | IIT Kharagpur | IIT Kharagpur | Sept.25-29,2018 |
| 4. | Dr. Aminul | Advanced | TEQIP | IIT Kharagpur | IIT | Sept.25- |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Islam | DSP Design Techniques | | | Kharagpur | 29,2018 |
| 5. | Dr. Sanjeet Kumar | Advanced DSP Design Techniques | TEQIP | IIT Kharagpur | IIT Kharagpur | Sept.25-29,2018 |
| 6. | Dr. Prajna Parimita Dash | Orientation Programme | UGC-Human Resource Development Centre | Academic Staff College, Ranchi University, Morabadi Campus, Ranchi. | Academic Staff College, Ranchi University | 20th Nov-17th Dec. 2018 |
| 7. | Dr. Soumya Sidhishwari | Recent Trends in Software Testing (RTST-2019) | Sponsored by TEQIP – III, Co-Sponsors-ACM-ISoft, LDRA, Oxford Univ. Press | Birla Institute of Technology, Mesra, Ranchi, Jharkhand. | Department of Computer Science and Engineering Birla Institute of Technology, Mesra, Ranchi, Jharkhand. | 20-24th May 2019 |
| 8. | Dr. Soumya Sidhishwari | Orientation Programme | UGC-Human Resource Development Centre | Academic Staff College, Ranchi University, MorabadiCampus, Ranchi. | Academic Staff College, Ranchi University | 10-30th June 2019 |
| 9. | Dr. Rajeev Sharma | "Advanced Pedagogies: Active Learning and Digital Tools" | NPIU, MHRD | IIT Hyderabad | IIT Hyderabad | 10/06/2019-14/06/2019 |

## SECTION 4 RESEARCH PUBLICATIONS

***4.*** **Publications in Journals :**(International/National)

1. Priyadarshi, R., Soni, S.K. & **Nath V.**(2018). Energy Efficient Cluster Head Formation in Wireless Sensor Network. Microsystem Technologies, 24(12), 4775-4784.
2. Chakraborty, S., Pandey A., Prasad D., Vedam V., **Nath V.**(2018). Linearity improvement of gain enhanced op-amp using cross-coupled architecture. Microsystem Technologies, 24(12), 4807-4815.
3. Verma, V.K., Ranjan R.K., Gupta P., Priyadarshini B., **Nath V**. (2018). A Series Expansin Method Aided Design of CCII Controller for TITO System. Microsystem Technologies, 24(9), 3843-3849.
4. **Sinha, R.K.,** Sahu, S.S. (2018). Secure Image Encryption Based on Improved Bat Optimized Piecewise Linear Chaotic Map through Integrated Permutation-Confusion and Double diffusion. Journal of Intelligent & Fuzzy Systems- Applications in Engineering and Technology, 35(2), 1567-1578.
5. Patro, K.A.K., Acharya, B., **Nath, V.** (2019). A secure multi-stage one-round bit-plane permutation operation based chaotic image encryption. Microsystem Technologies, 25(6), 2331-2338.
6. Prasaad, D., **Nath, V**., Vishwanthan, V., Mehta, M.(2019). A 0.6 V 117 nW high performance energy efficient system-on-chip (SoC) CMOS temperature sensor in 0.18 µm

CMOS for aerospace applications. Microsystem Technologies, 25 (06), 2301-2311.
7. Priyadarshi, R., Rawat, P, **Nath, V.**(2019). Energy dependent cluster formation in heterogeneous wireless sensor network. Microsystem Technologies, 25(6), 2313-2332.
8. Qadeer, S. A., Khan, M.S. Shylashree, N., **Nath.** (2019). High resolution fuel indicating and tracking system. Microsystem Technologies, 25(06), 2267-2271.
9. Shylashree, N., Venkatesh, B., Saurab, T. M., Srinivasan, T., **Nath**, **V. (**2019). Design and analysis of high-speed 8-bit ALU using 18 nm FinFET technology. Microsystem Technologies, 25(06), 2349-2359.
10. Kundu, S., Sarkar, S., Mandal, P., Islam, A. (2019). Modeling and Sizing of Non-linear CMOS Analog Circuits used in Mixed Signal Systems, Analog Integrated Circuits and Signal Processing, 99(1), 95-109
11. Chaudhuri, D., Kundu, S., Chattoraj, N. (2019). Design and analysis of MEMS based piezoelectric energy harvester for machine monitoring application, Microsystem Technologies.25(4) 1437-1446.
12. Hosain, M. M., Kumari, S. & Tiwary, A. K. (2019). Compact Filtenna for WLAN Applications. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 18(1), 70-79.
13. Tirkey, M. M.&Tiwary, A. K. (2018). A Compact Dual-Band Antenna Using Hexagonal Complementary Split Ring Resonator. Microwave Review, 24(2), 19-25.
14. Sharma, S. S., Pandey, A. K. &Tiwary, A. K. (2018). New method of analysis and design of frequency and bandwidth reconfigurable active filter. International Journal of RF and Microwave Computer-Aided Engineering, 28(9), 1-10.
15. Kumari, B. & Gupta, N. (2018). UWB active antenna using dielectric resonator. Microwave and Optical Technology Letters, 60(8), 1894-1898.
16. Bhargav, A. Prince, P., Ranjan, R. K., Gupta, N. & Verma, V. K. (2018). A Simple Multi-band Metamaterial Absorber with Combined Polarization Sensitive and Polarization Insensitive Characteristics for Terahertz Applications. Plasmonics, 1-6.
17. Tirkey, M. M. & Gupta, N. (2018). The Quest for Perfect Electromagnetic Absorber: A Review. International Journal of Microwave and Wireless Technologies, 1-17.
18. Das, S., Islam, H., Bose, T. & Gupta, N. (2019). Coplanar waveguide fed stacked dielectric resonator antenna on safety helmet for rescue workers. Microwave and Optical Technology Letters, 61(2), 1-5
19. Tirkey, M. M. & Gupta, N. (2019). Electromagnetic absorber design challenges. IEEE Electromagnetic Compatibility Magazine, 8(1), 59-65.
20. Das, S., Islam, H., Bose, T. & Gupta, N. (2019). Ultra-Wide Band CPW-Fed Circularly Polarized Microstrip Antenna for Wearable Applications. Wireless Personal Communications, 1-20.
21. Snigdh, I. & Gupta, N. (2019). Enhancing reliability by adoptive graph traversals for backbone-assisted communication in wireless sensor networks. International Journal of Sensor Networks, 30(1), 13-23.
22. Biswas, A., & Gupta, V. R. (2019). Design of Penta-Band MIMO Antenna for GPS/2G/3G/4G and 5G NR Applications. International Journal of Recent Technology and Engineering, 8 (1), 1935- 1940.
23. Chaudhuri, D., Kundu, S., &Chattoraj, N. (2019). Design and analysis of MEMS based piezoelectric energy harvesterfor machine monitoring application.

Microsystem Technologies, 25(04), 1437–1446.
24. Quarratulain&Chattoraj, N. (2018). Parametric study and Analysis of Band Stop Characteristics for a Compact UWB Antenna with Tri-band notches. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 17(04), 509-527.
25. Upadhyay, D. K. & Kumar, A. (2018). A Compact Planar Diplexer based on Via-Free CRLH TL for WiMAX and WLAN Applications. International Journal of Microwave and Wireless Technologies, 11(02), 130-138.
26. Kumar, U. &Upadhyay, D. (2018). A Highly Compact UWB Bandpass Filter using Via-less CRLH TL. Microwave review, 24(02), 26-30.
27. Upadhyay, D. (2018). Development of ZOR using via-less CRLH-TL. Microwave review, 24(01), 3-7.
28. Roy, R. B., Ghosh, A., Bhattacharyya, S., Mahto, R. P., Kumari, K., Pal, S. K., & Pal, S. (2018). Weld defect identification in friction stir welding through optimized wavelet transformation of signals and validation through X-ray micro-CT scan. The International Journal of Advanced Manufacturing Technology, 98(470), 1-11.
29. Ghazali,A., Hussain, J. &Pal, S. (2019). A Hybrid Surface-to-Surface Transition Based UWB-BPF with Multiple In-Band Interference Suppression. International Journal of Microwave and Wireless Technologies, 11(02), 1-7.
30. Ghazali, A., Sazid, M. & Pal, S. (2018). A Dual Notched Band UWB-BPF Based on Microstrip-to-Short Circuited CPW Transition. International Journal of Microwave and Wireless Technologies, 10(07),794-800.
31. Biswas, A., Sinha, S., Acharyya, A., Banerjee, A., Pal, S., Satoh, H.,&Inokawa, H. (2018). 1.0 THz GaN IMPATT Source: Effect of Parasitic Series Resistance. Journal of Infrared, Millimeter, and Terahertz Waves, 39(10),954–974.
32. Meenaketan, B. L. P., Pal, S., Chattoraj, N. (2019). Electromagnetic forward and inverse scattering analysis of a one-dimensional collision system. International Journal of RF & Microwave Computer-Aided Engineering, 29(08), e21760.
33. Kumar, V., MehraR., Islam,A. (2019). A CMOS active inductor based digital and analog dual tuned voltage-controlled oscillator. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 25(05), 1571–1583.
34. Guduri, M., Dwivedi, A. K., Majumder, S., R. Islam,A. (2019).An efficient circuit-level power reduction technique for ultralow power applications. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 25(05), 1689–1697.
35. Roy, C.Islam,A. (2019). Power-aware sourse feedback single-ended 7T SRAM cell at nanoscale regime.Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 25(05),1783–1791.
36. Guduri, M., Dokania,V., Verma,R. Islam, A. (2019). Minimum Energy Solution for Ultra-Low Power Applications. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 25(05), 1823–1831.
37. Mehra,R. IslamA. (2019). A Low Power, Temperature Compensated, Robust Design of CS Amplifier in Nanoscale Regime. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 25(05), 1841–1852.
38. Sengupta, A. IslamA. (2019). Comparative analysis of AlGaN/GaN high electron mobility transistor with sapphire and 4H-SiC substrate. Microsystem

Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 25(05), 1927–1935.

*39.* Kundu, S., Sarkar, S., Mandal, P., Islam, A. (2019). Modeling and Sizing of Non-linear CMOS Analog Circuits used in Mixed Signal Systems. Analog Integrated Circuits and Signal Processing, 99(01),95–109.

*40.* Pal, S., Gupta, V.IslamA. (2019). Design of CNFET based power- and variability-aware nonvolatile RRAM cell. Microelectronics Journal, 86,7–14.

*41.* Kumar, V., Mehra, R. IslamA. (2018). Design and Analysis of MISO Bi-quad Active Filter. International Journal of Electronics, 106(02), 287 – 304.

*42.* Mehra, R., Kumar, V.IslamA. (2018). Reliable and Q-Enhanced Floating Active Inductors and Their Application in RF Bandpass Filters. IEEE Access, 6,48181-48194.

*43.* Sidhishwari, S., Basu, M. &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.

44. Nayan, N., Sahu, S.S., & **Kumar**, S.(2019). Detecting anomalous crowd behaviour using correlation analysis of optical flow. *Signal, Image and Video Processing,* 13(06), 1233-1241.

*45.* Sidhishwari, S.,Basu, M.,Ghorai,S.K.(2019). A modal interference-based Fiber Optic Sensor for dual parameter measurement using an Artificial Neural Network, Optical Fiber Technology, 50(0), 216-224.

*46.* Kumar, A., &Ghorai, S. K. (2018). Effect of multipath reflection on BER performance of indoor MIMO-VLC system. Optical and Quantum Electronics, 50(11), 1-18.

*47.* Basu, M., &Ghorai, S. K. (2018). An optical soft-sensor based shape sensing using a bio-inspired pattern recognition technique to realise fly-by-feel capability for intelligent aircraft operation. The Aeronautical Journal, 122(1257), 1734–1752.

*48.* Kumari, S., Sahu, S. S., & Gupta, B. (2018). Efficient SSHI circuit for piezoelectric energy harvester uses one shot pulse boost converter. Analog Integrated Circuits and Signal Processing, 97(3), 545-555.

*49.* Sinha, R. K., &Sahu, S. S. (2018). Secure image encryption based on improved bat optimized piecewise linear chaotic map through integrated permutation-confusion and double diffusion. Journal of Intelligent & Fuzzy Systems,35(2), 1567-1578.

*50.* Barik, R. C.,Sahu, S. S. andChangder, S. (2018). A Novel Smooth texture based visual cryptography approach for secure communication, Journal of Electronic Security and Digital Forensic, 10(2), 109-137.

***5.*** **Publications in Proceedings:**(International/National)

*1.* Naval, S., Sinha, P.K., Anand, A., **Sunku, S.** Bandwidth Increment of Piezoelectric Energy Harvester using Multi-beam Structure. In 3rd International Conference on Devices for Integrated Circuit (DevIC), Kalyani University, West Bengal, 2019 . ISBN: 978-1-5386-6722-4.

*2.* Anand, A., **Sunku, S.**, Improvement of Output Power in Piezoelectric Energy Harvester under Magnetic Influence. In 3rd International Conference on Devices for Integrated Circuit (DevIC), Kalyani University, West Bengal, 2019 ISBN: 978-1-5386-6722-4.

*3.* Anand, A., **Sunku, S.**, Design of MEMS Based Piezoelectric Energy Harvester for Pacemaker. In 3rd International Conference on Devices for Integrated Circuit (DevIC), Kalyani University, West Bengal, 2019 ISBN: 978-1-5386-6722-4.

4. Raj, A., Divvela, S.Y., Singh, G., **Sunku, S.**, Trade-off Characteristics of Hysteresis Comparator used in Noisy Systems. In 3rd International Conference on Devices for Integrated Circuit (DevIC), Kalyani University, West Bengal, 2019 . ISBN: 978-1-5386-6722-4.
5. Konar, M., Sahu, R., **Sunku, S.**, Improvement of the Gain Accuracy of the Instrumentation Amplifier Using a Very High Gain Operational Amplifier. In 3rd International Conference on Devices for Integrated Circuit (DevIC), Kalyani University, West Bengal, 2019. ISBN: 978-1-5386-6722-4.
6. Rajak, N., Chattoraj, N. & Kumar, R., A gain and bandwidth enhanced metamaterial based surface antenna for wireless communication. In Proceedings of the URSI Asia-Pacific Radio Science Conference (URSI AP-RASC), New Delhi, India, 2019. ISBN: 978-908-25987-5-9.
7. Vasisht, P., Chattoraj, N., Chandra, R. &Rajak, N., A Novel Compact Ultra-Wide-Band MSRDRA for X- and KU-BAND Applications. In Proceedings of the URSI Asia-Pacific Radio Science Conference (URSI AP-RASC), New Delhi, India, 2019.ISBN: 978-908-25987-4-2.
8. Meenaketan, B. L. P., Pal, S. &Chattoraj, N., A Relativistic Based Computational Technique For Scattering Analysis Due To An Accelerating Target, In Proceedings of the IEEE Indian Conference On Antennas And Propagation, Hyderabad, India, 2018. ISBN: 978-981-10-4762-6.
9. Meenaketan, B. L. P., Pal, S. &Chattoraj, N., Electromagnetic Scattering Analysis Due To A Colliding System Using Quasi Stationary -Finite Difference Time Domain Method, In Proceedings of the IEEE- Asia-Pacific Radio Science Conference, New Delhi, 2019. ISBN:978-3-319-65598-7.
10. Meenaketan, B. L. P., Pal, S. &Chattoraj, N., Inverse Scattering Using Scattered Field Pattern, proceedings of the IEEE-International Symposium on Antennas and Propagation, Cochin, 2018.ISBN: 978-981-10-4762-6.
11. Ghazali, A., Pal, S., Dual-Band Notched UWB-BPF for Indoor Communication Systems, In Proceedings of the IEEE International Conference on Applied Electromagnetics, Signal Processing & Communication (AESPC-2018), KIIT University, Bhubaneswar, India. ISBN: 978-1-5386-7966-1.
12. Meenaketan, B. L. P., Pal, S. &Chattoraj, N., Electromagnetic inverse Scattering for dynamic fluid level detection, In Proceedings of the IEEE International Conference on Applied Electromagnetics, Signal Processing & Communication (AESPC-2018), KIIT University, Bhubaneswar, India. ISBN: 978-1-5386-7966-1.
13. Sinha, K., Sahu, K., P., Ranjan, R., Dubey, K., S. & Islam, A., Investigation of impact of high Al content with AlN/GaN HEMT, In Proceedings of the 7th International Conference on Computing, Communication and Sensor Network (CCSN2018), Kolkata, India, 2018.ISBN: 81-85824-46-2.
14. Bose, S., Pal, S. & Islam, A., An SRAM Cell design for Wireless Sensor NetorkIoT applications, In Proceedings of the 7th International Conference on Computing, Communication and Sensor Network (CCSN2018), Kolkata, India, 2018.ISBN: 81-85824-46-2.
15. Aishwarya, N., Nayak, A., Bose, S., Kumar, V. & Islam, A., A Memristor Emulator Circuit Using CNFET, In Proceedings of the 7th International Conference on Computing, Communication and Sensor Network (CCSN2018), Kolkata, India, 2018.ISBN: 81-85824-46-2.

16. Singha,S., Prasad, S. POS based implementation of Bluetooth low energy mesh network. Proceedings of IEEE forum International Conference, Bengaluru, India, ISBN: 978-3-030-10659-1.
17. Karan, B., Mahto, K. and Sahu, S. S., Detection of Parkinson Disease Using Variational Mode Decomposition of Speech Signal. In Proceeding of *International Conference on Communication and Signal Processing (ICCSP)*,pp. 0508-0512,Chennai,2018. ISBN 978-1-5386-3522-3.
18. Kumar, A., &Ghorai, S. K. (2018). BER performance analysis of indoor MIMO-VLC system for multipath reflection. 2018 Technologies for Smart-City Energy Security and Power (ICSESP), C.V. Raman College of Engg., Bhubaneswar, Odisha, pp. 1-5. Electronic ISBN: 978-1-5386-4581-9, DVD ISBN: 978-1-5386-4580-2
19. Prakash, S., Sharma, A., &Sahu, S. S. (2018). Soil Moisture Prediction Using Machine Learning. 2018 Second International Conference on Inventive Communication and Computational Technologies (ICICCT),Coimbatore, India.
20. Sriwastwa, A., Prakash, S., Mrinalini, Swarit, S., Kumari, K., &Sahu, S. S. (2018). Detection of Pests Using Color Based Image Segmentation. 2018 Second International Conference on Inventive Communication and Computational Technologies (ICICCT), Coimbatore, India.
21. Karan, B., Mahto, K., &Sahu, S. S. (2018). Detection of Parkinson Disease Using Variational Mode Decomposition of Speech Signal. 2018 International Conference on Communication and Signal Processing (ICCSP), Chennai, India.
22. Sinha, R. K., Asha, B., San, N., Prasad, S., Sahu, S. S. (2018). Chaotic Image Encryption Scheme Based on S-Box Substitution, IEEE International Conference on Inventive Research in Computing Applications (ICIRCA 2018), Coimbatore, India. Electronic ISBN: 978-1-5386-2456-2, Print on Demand(PoD) ISBN: 978-1-5386-2457-9
23. Sinha, R. K., San, N., Asha, B., Prasad, S., &Sahu, S. S. (2018). Chaotic Image Encryption Scheme Based on Modified Arnold Cat Map and Henon Map. 2018 International Conference on Current Trends Towards Converging Technologies (ICCTCT), Coimbatore, India.Electronic ISBN: 978-1-5386-3702-9, Print on Demand(PoD) ISBN: 978-1-5386-3703-6

**6. Book:**

- Edited Books

1. Vijay Nath & J.K. Mandal (Eds). (2019). Nano-electronics, Circuits &Communication Systems ( Proceeding of NCCS-2017), Lecture Notes in Electrical Engineering, Springer Nature Singapore Pte Ltd Springer Singapore. ISBN No.: 978-981-13-0776-8.
2. Vijay Nath & J.K. Mandal (Eds). (2019). Proceedings of the Third International Conference on Microelectronics, Computing & Communication Systems(MCCS-2018) Lecture Notes in Electrical Engineering, Springer Nature Singapore Pte Ltd Springer Singapore. ISBN No. 978-981-13-7091-5.

- Chapter(s) in Edited Book

1. Singh, S., Prasad, D., **Nath V.** (2019). A 70.8 MW Wideband CMOS Low-Noise Amplifier for WiMAX Application. In: Nath V. & Mandal J.(eds). Proceedings of the Second International Conference on

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48. Singh, P., Kumar, V., Patnaik, L.P. Islam, A. (2018). A VDIBA Based Voltage-Mode Highpass and Bandpass Filter.Mandal J., Sinha D. (eds) Social Transformation – Digital Way (pp. 83 – 89), Communications in Computer and Information Science, Springer, Singapore.

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50. Dwivedi, A.K., Guduri, M. Islam, A. (2018). Performance Enhancement of Full Adder Circuit: Current Mode Operated Majority Function Based Design. Bhateja, V., Tavares, J., Rani, B., Prasad, V., Raju, K. (eds), Proceedings of the Second International Conference on Computational Intelligence and Informatics, Part of the Advances in Intelligent Systems and Computing (AISC), (pp. 569-578), Springer, Singapore.
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52. Dash, P.P., Patra,D.(2019). Efficient visual tracking using multi-feature regularized robust sparse coding and quantum particle filter based localization, Journal of Ambient Intelligence and Humanized Computing, 10(2), 449-462.
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54. Nayak, P., Nashine, E., & *Kumar*,S. (2018). Deployment of a wireless sensor network in the presence of an obstacle and its performance evaluation. In B. S.Rawat (Eds.), The Advances in Signal Processing and Communication, Lecture Notes in Electrical Engineering (pp. 85-93), Springer Singapore.
55. Nayan, N., *Kumar, S.,* Sahu, S. S. (2018). Accidental Event Detection Based on Optical Flow Analysis. In R. Bera (Eds.), Advances in Communication, Devices and Networking, Lecture Notes in Electrical Engineering (pp. 607-614) Springer, Singapore.
56. Karan, B., Mahto, K. Sahu, S. S. (2019). Intelligent Speech Processing in the Time-Frequency Domain. In N. Dey (Eds.), Intelligent Speech Signal Processing (pp. 153-173) Academic Press.
57. Parashar, T. K. and Rajesh Kumar Lal, R. K. (2017). Analytical Modelling of Room-Temperature GaAs/InAs0.3Sb0.7 Detector for H2S Gas Detection, In: Nath V., Mandal J. (eds) Proceeding of the Second International Conference on Microelectronics, Computing & Communication Systems (MCCS), pp 451-467, 31 July 2018, Springer, Singapore.
58. Kumar, V. and Lal,R. K. (2018).Effect of Temperature on Dark Current in QWIP for Unmanned Aerial Vehicles, Proceedings of the International Conference on Microelectronics, Computing & Communication Systems: Lecture Notes in Electrical Engineering, vol. 453, Chapter 29, pp. 327-338, Springer, Singapore.
59. Nayan, N., Kumar, S., Sahu, S. S. (2018). Accidental Event Detection Based on Optical Flow Analysis" Advances in Communication, Devices and Networking, Lecture Notes in Electrical Engineering vol. 462, pp. 1-8, Springer, Singapore. (ISBN: 978-981-10-7900-9)
60. Mishra, A., Pandey, C., Sahu S.S. (2018). Detection of Atrial Arrhythmias Using AutoregessiveModeling, Innovations in Electronics and Communication Engineering. Lecture Notes in Networks and Systems, vol 7, pp. 193-200, Springer, Singapore. (ISBN: 978-981-10-3811-2)
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62. Pandey, S. & Gupta, V R. (2018). Chapter "Implantable Antenna for Blood Glucose Monitoring" in Optical and Microwave Technologies. Lecture Notes in Electrical Engineering, Vol. 468, pp 65-70, Springer, Singapore.

## SECTION 5 AWARD/ PATENT/ COLLABORATIONS

### 7. 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.Srikanta Pal | Fellow | The Institution of Engineers (India) | National | 2018 |
| 2. | Dr.Srikanta Pal | Senior Member | IEEE, USA | International | 2019 |

### *8.* Patents (Applied / Granted)

| Sr. No. | Name of the Inventor | Title of the Invention | Application / Patent No. (As applicable) | Year |
|---|---|---|---|---|
| 1. | Pal, SurjyaKanta, Roy, Rohan Basu, Singh, Ankit Kumar, Barua, Arkadeep, Kumar, Aman, Ghosh, Alekhya, Majumdar, Sananya, Riya, Mishra, Debasish, Pal, Srikanta, | Cloud based system for real- time monitoring and machine learning based controlling of friction stir welding process | 201831024813 | 2018 |
| 2. | Chirag Parikh, Aaquib Khan, Ravi Ranjan, R. Jain, R. Mahto, D. Chakraborty, S. Pal, Surjya K. Pal | Real-time surface defect analysis and correction in friction stir welding process by image processing | 201831035477 | 2018 |

## SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS

### *9.* Departmental Students' Activities

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|
| 1. | Seminar by Qyualcomm Manager By Vijay Manohar | IEI & ECE Society Dev Gupta, Prateek Kumar Dalmia, Karunesh Tripathi Nachiket Agni | Dr. Vijay Nath & Dr. S. S. Tripathy | 31.08.2018 |
| 2. | Gateway to Analog | IEI & ECE Society Dev Gupta, Prateek Kumar Dalmia, Dalmia, Karunesh Tripathi Nachiket Agni | Dr. Vijay Nath & Dr. S. S. Tripathy | 10.08.2018 to 11.08.2018 |

| | | | | |
|---|---|---|---|---|
| 3. | Digital Electronics Workshop | IEI & ECE Society<br>Dev Gupta, Prateek Kumar Dalmia, Karunesh Tripathi<br>Nachiket Agni | Dr. Vijay Nath & Dr. S. S. Tripathy | 29.09.2018 to 30.09.2018 |
| 4. | IoT Workshop by Technex IIT Varanasi | IEI & ECE Society<br>Dev Gupta, Prateek Kumar Dalmia, Karunesh Tripathi<br>Nachiket Agni | Dr. Vijay Nath & Dr. S. S. Tripathy | 27.10.18 to 28.10.18 |
| 5. | Summer Internship | IEI & ECE Society<br>Dev Gupta, Prateek Kumar Dalmia, Dalmia, Karunesh Tripathi<br>Nachiket Agni | Dr. Vijay Nath & Dr. S. S. Tripathy | 1.05.2019 to 20.05.2019 |

**10. List of Faculties**

| Sr. No. | Name | Designation | TEQIP Sponsored |
|---|---|---|---|
| 1. | Prof. Srikanta Pal | Professor | No |
| 2. | Prof. S. K. Ghorai | Professor | No |
| 3 | Prof. Mahesh Chandra | Professor | No |
| 4 | Prof. R. Sukesh Kumar | Professor | No |
| 5 | Prof. Vibha Rani Gupta | Professor | No |
| 6 | Prof. Nisha Gupta | Professor | No |
| 7 | Prof. Sandeep Singh Solanki | Professor | No |
| 8 | Dr. NeelaChattoraj | Associate Professor | No |
| 9 | Dr. Sanjay Kumar | Associate Professor | No |
| 10 | Dr. Rajesh Kumar Lal | Associate Professor | No |
| 11 | Mr. B. B. Pal | Associate Professor | No |
| 12 | Dr. S. S. Sahu | Assistant Professor | No |
| 13 | Dr. Vijay Nath | Assistant Professor | No |
| 14 | Dr. Somnath Sengupta | Assistant Professor | No |
| 15 | Dr. Priyank Kumar | Assistant Professor | No |
| 16 | Dr. Snajeet Kumar | Assistant Professor | No |
| 17 | Dr. Kartik Mahto | Assistant Professor | No |
| 18 | Dr. Aminul Islam | Assistant Professor | No |
| 19 | Dr. PrajnaParimita Dash | Assistant Professor | No |
| 20 | Dr. Sudip Kundu | Assistant Professor | No |
| 21 | Dr. Gajendra Kant Mishra | Assistant Professor | No |
| 22 | Dr. Manoj Kumar Mukul | Assistant Professor | No |
| 23 | Dr. Swati Prasad | Assistant Professor | No |
| 24 | Dr. Soumya Sidhishwari | Assistant Professor | No |
| 25 | Dr. Anjini Kumar Tiwary | Assistant Professor | No |
| 26 | **Dr. Sanjaya Shankar Tripathy** | Assistant Professor | No |
| 27 | **Dr. Dileep Kumar Upadhyay** | Assistant Professor | No |
| 28 | **Mr. Rupesh Kumar Sinha** | Assistant Professor | No |
| 29 | Mr. Janardan Sahay | Assistant Professor | No |
| 30 | Mr. Santashraya Prasad | Assistant Professor | No |
| 31 | Mr. Sukanta Kumar Dash | Assistant Professor | No |
| 32 | Mr. Vishal H Shah | Assistant Professor | No |
| 33 | Dr. Rajeev Sharma | Assistant Professor | Yes |

### *11.* Board of Studies

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | Prof. Srikanta Pal | Professor | Chairman |
| 2. | Prof. Mahesh Chandra | Professor | Internal Member |
| 3. | Prof. S. K. Ghorai | Professor | Internal Member |
| 4. | Prof. R. Sukesh Kumar | Professor | Internal Member |
| 5. | Prof. Vibha Rani Gupta | Professor | Internal Member |
| 6. | Prof. Nisha Gupta | Professor | Internal Member |
| 7. | Prof. Sandeep Singh Solanki | Professor | Internal Member |
| 8. | Dr. D. Mohanta | Professor | Internal Member |
| 9. | Dr. S. Konar | Professor | Internal Member |
| 10 | Dr. NeelaChattoraj | Associate Professor | Internal Member |
| 11. | Dr. M.K. Mukul | Assistant Professor | Internal Member |
| | **External Committee** | | |
| 1. | Prof. Debatosh Guha | Calcutta University | External Member |
| 2. | Prof. Gautam Saha | IIT, KGP | External Member |
| 3. | Prof. Iti Saha Mishra | Jadavpur University | External Member |
| 4. | Prof. Rowdra Ghatak | NIT, Durgapur | External Member |
| 5. | Prof. Sajal Kumar Paul | IIT-ISM Dhanbad | External Member |
| 6. | Mr. Atish Dipankar Mitra | Retd, AGM, BEL | External Member |
| 7. | Dr. Tapas Chakraborty | TCS, Kolkata | External Member |

## SECTION 7 OTHER INFORMATION

### *12.* Publication by students

**Publications in Journals:**

1. **Neha Nidhi, Prasad, D., Nath, V. (2018),** Internet of Things/ Everything: An Overview. International Journal of Pure and Applied Mathematics, 119(12),
2. **Chakraborty, S., Pandey A., Prasad D.,** Vedam V., **Nath V.**(2018). Linearity improvement of gain enhanced op-amp using cross-coupled architecture. Microsystem Technologies, 24(12), 4807-4815.
3. **Pras**ad, D., **Nath, V**., Vishwanthan, V., Mehta, M.(2019).. A 0.6 V 117 nW high performance energy efficient system-on-chip (SoC) CMOS temperature sensor in 0.18 µm CMOS for aerospace applications. Microsystem Technologies, 25 (06), 2301-2311.
4. **Chaudhuri, D**.,Kundu, S., &Chattoraj, N. (2019). Design and analysis of MEMS based piezoelectric energy harvesterfor machine monitoring application. Microsystem Technologies, 25(04), 1437–1446.
5. **Quarratulain**&Chattoraj, N. (2018). Parametric study and Analysis of Band Stop Characteristics for a Compact UWB Antenna with Tri-band notches. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 17(04), 509-527.
6. Upadhyay, D. K. &**Kumar, A.** (2018). A Compact Planar Diplexer based on Via-Free CRLH TL for WiMAX and WLAN Applications. International Journal of Microwave

and Wireless Technologies, 11(02), 130-138.

7. **Kumar, U.**&Upadhyay, D. (2018). A Highly Compact UWB Bandpass Filter using via-less CRLH TL. Microwave review, 24(02), 26-30.
8. **Meenaketan, B. L. P.,** Pal, S. &Chattoraj,N. (2019). Electromagnetic forward and inverse scattering analysis of a one-dimensional collision system. International Journal of RF & Microwave Computer-Aided Engineering, 29(08), e21760.
9. **Kumar, V., Mehra R**. &Islam A. (2019). A CMOS active inductor based digital and analog dual tuned voltage-controlled oscillator. Microsystem Technologies-Micro- and Nanosystems-Information Storage and Processing Systems, 25(05), 1571–1583.
10. **Guduri,M., Krishna Dwivedi, A., Majumder, Sananya, R.**&Islam A. (2019).An efficient circuit-level power reduction technique for ultralow power applications. Microsystem Technologies-Micro- and Nanosystems-Information Storage and Processing Systems, 25(05), 1689–1697.
11. **Roy, C.**&Islam A. (2019). Power-aware sourse feedback single-ended 7T SRAM cell at nanoscale regime.Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 25(05),1783–1791.
12. **Guduri, M., Dokania, V., Verma, R.**&Islam A. (2019). Minimum Energy Solution for Ultra-Low Power Applications. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 25(05), 1823–1831.
13. **Mehra, R.** &Islam A. (2019). A Low Power, Temperature Compensated, Robust Design of CS Amplifier in Nanoscale Regime. Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems, 25(05), 1841–1852.
14. **Sengupta, A.**&Islam A. (2019). Comparative analysis of AlGaN/GaN high electron mobility transistor with sapphire and 4H-SiC substrate. Microsystem Technologies-Micro- and Nanosystems-Information Storage and Processing Systems, 25(05), 1927–1935.
15. Kundu, S., **Sarkar, S., Mandal, P.**&Islam A. (2019). Modeling and Sizing of Non-linear CMOS Analog Circuits used in Mixed Signal Systems. Analog Integrated Circuits and Signal Processing, 99(01),95–109.
16. **Pal, S., Gupta, V**.&Islam A. (2019). Design of CNFET based power- and variability-aware nonvolatile RRAM cell. Microelectronics Journal, 86,7–14.
17. **Kumar, V., Mehra, R**. &Islam A. (2018). Design and Analysis of MISO Bi-quad Active Filter. International Journal of Electronics, 106(02), 287 – 304.
18. **Mehra, R.,Kumar, V**.&Islam A. (2018). Reliable and Q-Enhanced Floating Active Inductors and Their Application in RF Bandpass Filters. IEEE Access, 6,48181-48194.
19. Sidhishwari,S.,**Basu, M.**&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.

**Publications in Book Chapter:**

1. **Singh S, Prasad D., Nath V.** (2019)., A 70.8 MW Wideband CMOS Low-Noise Amplifier for WiMAX Application. In: Nath V. & Mandal J.(eds) Proceedings of the Second International Conference on Microelectronics, Computing & Communication Systems (MCCS-2017). Lecture Notes in Electrical Engineering, vol 476, pp 367-380, Springer, Singapore.
2. **Bohra V., Nidhi N.,Singh S, Prasad D. Thakur A., Kumar A., Nath V.** (2019). Design and Implementation of a Reaction Timer Using CMOS Logic. In: Nath V.,

Mandal J. (eds) Proceeding of the Second International Conference on Microelectronics, Computing & Communication Systems (MCCS 2017). Lecture Notes in Electrical Engineering, vol 476, pp-533-543, Springer, Singapore.

3. **Bohra V., Prasad D., Nidhi N., Tiwari A., Nath V.** (2019). Design Strategy for Smart Toll Gate Billing System. In: Nath V., Mandal J. (eds) Proceeding of the Second International Conference on Microelectronics, Computing & Communication Systems (MCCS 2017). Lecture Notes in Electrical Engineering, vol 476, pp 615-621, Springer, Singapore.
4. **Razi Q., Nath V.** (2019). Design of Smart Embedded System for Agricultural Update Using Internet of Things. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp372-382 Springer, Singapore.
5. **Fatma S., Nath V.** (2019). Study and Design of Smart Embedded System for Train Track Monitoring Using IoTs. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp 385-395. Springer, Singapore.
6. **Kumar A., Nath V.** (2019). Study and Design of Smart Embedded System for Smart City Using Internet of Things. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp 397-408, Springer, Singapore.
7. **Anand S., Nath V.** (2019). Study and Design of Smart Embedded System for Remote Health Monitoring Using Internet of Things. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp409-414. Springer, Singapore.
8. **Kumar C., Nath V.** (2019). Design of Smart Embedded System for Auto Toll Billing System Using IoTs. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp415-424. Springer, Singapore.
9. **Nidhi N., Prasad D., Nath V.** (2019). Different Aspects of Smart Grid: An Overview. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511,pp 451-456. Springer, Singapore.
10. **Nidhi N., Prasad D., Nath V.** (2019). A High-Performance Energy-Efficient 75.17 dB Two-Stage Operational Amplifier. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp 469-474. Springer, Singapore.
11. **Raj U., Nidhi N., Nath V.** (2019). Automated Toll Plaza Using Barcode-Laser Scanning Technology. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp 475-481. Springer, Singapore.
12. **Chaudhary S., Prava A., Nidhi N., Nath V.** (2019). Design of All-Terrain Rover Quadcopter for Military Engineering Services. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp 507-513. Springer, Singapore.
13. **Mohan R., Suraj A.K., Agarawal S., Majumdar S., Nath V.** (2019). Design of Robot Monitoring System for Aviation. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp 535-547. Springer, Singapore.
14. **Hari Charan E.V.V., Pal I., Sinha A., Baro R.K.R., Nath V.** (2019). Electronic Toll Collection System Using Barcode Technology. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical

Engineering, vol 511, pp 549-556. Springer, Singapore.

15. **Goel V., Riya, Kumari P., Shikha P., Tanushree, Prasad D., Nath V.**(2019). Design of Smartphone Controlled Robot Using Bluetooth. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp 557-563. Springer, Singapore.
16. **Sinha P.K., Saraiyan S., Ghosh M., Nath V.** (2019). Design of Earthquake Indicator System Using ATmega328p and ADXL335 for Disaster Management. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp 565-572. Springer, Singapore.
17. **Raju D., Eleswarapu L., Saiv R., Nath V.** (2019). Study and Design of Smart Embedded System for Aviation System: A Review. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp 573-590. Springer, Singapore.
18. **Maurya D.K., Kumar A., Kaunoujiya S., Prasad D., Nath V.** (2019). Study and Design of Smart Industry: A Review. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp 591-598. Springer, Singapore.
19. **Sanjay Kumar S., Khalkho A., Agarwal S., Prakash S., Prasad D., Nath V.** (2019). Design of Smart Security Systems for Home Automation. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp 599-604. Springer, Singapore.
20. **Goel V., Kumar S., Muralidharan A., Markham N., Prasad D., Nath V.** (2019). Auto-Train Track Fault Detection System. In: Nath V., Mandal J. (eds) Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering, vol 511, pp 605-610 . Springer, Singapore.
21. **Roopchandka, P., Khanam, S., Dhan, R., Kumari, N., Prasad, D., Nath, V.** (2019). Design of Password Based Door Locking System. In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol. 556, pp 605-612. Springer, Singapore.
22. **Jain, R., Ashu, A., Lal, S., Kumari, N., Prasad, D., Nath, V.**(2019). Application of Burglary Alarm System to Avoid Railway Accidents In: book: Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol.556, pp.595-604. Springer, Singapore.
23. **Tyagi, C., Verma, S., Pandey,A., Prasad, D., Nath, V.** (2019). Study and Design of Electro-Pneumatic Shifting system. In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol. 556, pp 481-488. Springer, Singapore.
24. **Jha, A., Singh, A., Kerketta, R., Kumari, N., Prasad, D., Nath, V.**(2019). Development of Autonomous Garbage Colector Robot. In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol. 556, pp 567-576. Springer, Singapore.
25. **Singh, G., Kumari, N., Minz, S., Kumari, N., Prasad, D., Nath, V.**(2019). Design of Water Overflow Indiactor Alarm and Controller. In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol.

556, pp 623-630. Springer, Singapore.

26. **Nidhi, N., Prasad, D., Kumari, M., Pandey, A., Solanki, S. S., Kumar, A., Thakur, K. K., Nath, V.** (2019). Design of Low Power 3-Bit CMOS Flash ADC for Aerospace Application. In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering vol. 556, pp 585-594. Springer, Singapore.
27. **Agarwal, R., Pandey, A., Kumari N., Prasad, D., Nath, V.** (2019). An Assessment of Advanced Transportation research Opportunities. In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol. 556, pp 631-640. Springer, Singapore.
28. **Aditya, Lakra,A., Murmu, K., Prasad, D., Nath, V.** (2019). Study and Development of Solar-Powered Water Pumping System. In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol. 556, pp. 655-660 . Springer, Singapore.
29. **Anchalia, U., Reddy, K.P., Modi, A., Kumari N., Prasad, D., Nath, V.** (2019). Study and Design of Biometric Security Systems: Fingerprint and Speech Technology. In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol. 556, pp577-584. Springer, Singapore.
30. **Sahay, S., Sharma, N. Raj, S., Kumari, N., Prasad, D., Nath, V.** (2019). Development of Wireless Power Transfer System with Internet of Things. In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol. 556, pp 613-622. Springer, Singapore.
31. **Shrivastava, A., Rawat, S., Singh, H.K., Kumari N., Prasad, D., Nath, V.** (2019). Preemption of Traffic Signal Using Global Positioning System (GPS) In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol. 556, pp 641-648. Springer, Singapore.
32. **Goyal, Y., Agarwal, S., Barman,S., Pranav,A., Prasad, D., Nath, V.** (2019). Evolution of Pacemaker: A Review. In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol. 556, pp 649-654. Springer, Singapore.
33. **Kumar, P., Kalra, A., Prakash, K.J., Prasad, D., Nath, V.** (2019). Study and Design of Obstacle Detection Mechanism. In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol. 556, pp 661-666 . Springer, Singapore.
34. **Goel, V., Raj, H., Muthigi, K., Kumar, S. S., Prasad, D., Nath, V.** (2019). Development of Human Detection System for Security and Military Applications. In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol. 556, pp 195-200. Springer, Singapore.
35. **Swaroop, A., Kumar, A., Tirkey, S., Kumari Neelam, Prasad, D., Nath, V.** (2019). Design of Light-Sensing Automatic Headlamps and Taillamps for Automobiles In: Nath V., Mandal J. (eds) Proceedings of the

Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering, vol. 556, pp 301-308. Springer, Singapore.

36. **Kumar, A., Nath,** V**.(2019).** Design of Ultra Low Power CMOS Sigma Delta ADC for Aerospace Applications . In: Nath V., Mandal J. (eds) Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering vol. 556, pp 171-178. Springer, Singapore.

**Publication in Conference:**

1. **Tirkey, M. M**. and Gupta, N., A Paper Based Perfect Electromagnetic Wave Absorber using Conducting Grid Pattern. 15th International Conference on Electromagnetic Interference & Compatibility (INCEMIC), Society of EMC Engineers, Bangalore, 2018
2. **Biswas, A.** and Gupta, V. R., Novel Compact Meandered Monopole Antenna for Smartphone Covering Fifteen LTE Bands. International Conference on Electrical, Communication, Electronics, Instrumentation and Computing, Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya, Tamil Nadu, 2019.
3. **Biswas, A.,**& Gupta, V. R., Multiband Antenna Design for Smartphone Covering 2G, 3G, 4G and 5G NR frequencies. International Conference on Trends in Electronics and Informatics, SCAD College of Engineering and Technology, Tirunelveli, 2019.
4. **Kumari, S.,** Singh, S. & Gupta, V. R., Paper Based Conformal Antenna. International Conference on Trends in Electronics and Informatics, SCAD College of Engineering and Technology, Tirunelveli, 2019.
5. **Rajak, N.**, Chattoraj, N. & Kumar, R., A gain and bandwidth enhanced metamaterial based surface antenna for wireless communication. In Proceedings of the URSI Asia-Pacific Radio Science Conference (URSI AP-RASC), New Delhi, India, 2019.
6. **Vasisht, P.,**Chattoraj, N., Chandra, R. &**Rajak, N.,**A Novel Compact Ultra-Wide-Band MSRDRA for X- and KU-BAND Applications. In Proceedings of theURSI Asia-Pacific Radio Science Conference (URSI AP-RASC), New Delhi, India, 2019.
7. **Meenaketan, B. L. P.,** Pal, S. &Chattoraj,N., A Relativistic Based Computational Technique For Scattering Analysis Due To An Accelerating Target, In Proceedings of theIEEE Indian Conference On Antennas And Propagation,Hyderabad, India, 2018.
8. **Meenaketan, B. L. P.,** Pal, S. &Chattoraj, N., Electromagnetic Scattering Analysis Due To A Colliding System Using Quasi Stationary -Finite Difference Time Domain Method, In Proceedings of the IEEE- Asia-Pacific Radio Science Conference, New Delhi, 2019.
9. **Meenaketan, B. L. P.,** Pal, S. &Chattoraj, N., Inverse Scattering Using Scattered Field Pattern, proceedings of the IEEE-International Symposium on Antennas and Propagation, Cochin, 2018.
10. **Meenaketan, B. L. P.**, Pal, S. &Chattoraj, N., Electromagnetic inverse Scattering for dynamic fluid level detection, In Proceedings of the IEEE International Conference on Applied Electromagnetics, Signal Processing & Communication

(AESPC-2018), KIIT University, Bhubaneswar, India.

11. **Sinha, K., Sahu, K., P., Ranjan, R., Dubey, K., S.**& Islam, A., Investigation of impact of high Al content with AlN/GaN HEMT, In Proceedings of the 7th International Conference on Computing, Communication and Sensor Network (CCSN2018), Kolkata, India, 2018.
12. **Bose, S., Pal, S.**& Islam, A., An SRAM Cell design for Wireless Sensor NetorkIoT applications, In Proceedings of the 7th International Conference on Computing, Communication and Sensor Network (CCSN2018), Kolkata, India, 2018.
13. **Aishwarya, N., Nayak, A., Bose, S., Kumar, V.**& Islam, A., A Memristor Emulator Circuit Using CNFET, In Proceedings of the 7th International Conference on Computing, Communication and Sensor Network (CCSN2018), Kolkata, India, 2018.

14. **List of Distinguished Alumni**

| Sr. No | Name, Batch and Affiliation | Short Description |
|---|---|---|
| 1. | Dr. Ramji Prasad | Professor Arhus University Denmark |
| 2. | Sh. Vijay Bhushan Pandey | GM, ARTTC BSNL Ranchi |
| 3. | Ms. Nancy Sahay | IAS, Govt. Of India |

**DEPARTMENT OF HOTEL MANAGEMENT & CATERING TECHNOLOGY**
**Annual Report 2018-19**

## SECTION 1 DEPARTMENTAL PROFILE

### *1.* About the Department:

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

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

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

Department has its own departmental club 'Hospitality Club' solely managed by students which hones their managerial and entrepreneurial skills required in the hospitality industry. As a regular feature department organizes various workshops, theme parties, food festivals and outdoor caterings to cultivate skill among the students.
Among the branded and luxurious hotels in India our department has gained a very good image and students go on "Industrial Exposure Training" in India and abroad for 18 weeks in various star Hotels such as Taj group of hotels, Oberoi group of hotels, ITC, The Park hotels, Specialty Restaurant Ltd. etc.

## SECTION 2 SEMINAR / CONFERENCE

**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. Praveen Srivastava | 8 weeks International MOOCs FDP on "Creating open source cloud based Gnomio Moodle of your own subject for OBE" | Self | D.Y.Patil College of Engineering, Akurdi, Pune and UKIERI (UK India Education and Research Initiative) in association with ISTE and AICTE. | Online | April 15, 2019 to June 10, 2019 |
| 2. | Dr. Praveen Srivastava | Two-week Faculty Development Program (FDP 301X) on "Mentoring Educators in Educational Technology" | Self | IIT Mumbai | Online | May – July 2018 |
| 3. | Mrs. Pratima Ekka | National Seminar-Evaluation of entrepreneurship in hospitality in current scenario | Self | DAV Post Graduate College | Varanasi | 3-4 April 2019 |
| 4. | Dr. Nishkant Kumar | 02 weeks FDP in Entrepreneurship | NSTEDB | XISS | Ranchi | 10-22 Dec'2018 |
| 5. | Dr. Abhinav Kumar Shandilya | Presented paper titled "Heritage, Tourism and Hospitality: Road ahead in and around Santiniketan" in International Conference on "Development of Cultural Tourism in and around Santiniketan &Birbhum" from organised by. | Visva-Bharti | Visva-Bharti | Shantiniketan | 16th -18th November 2018 |

## SECTION 3 RESEARCH PUBLICATIONS

***3.*** **Publications in Journals:** (International/National)

- Chatterjee, R. & Mukherjee, S.K. (2019). Sustainable development of bio-diesel production for cleaner environment. Int. J. Environmental Technology and Management, 22(01),20-39.
- Srivastava, P. & Srivastava S.K. (2018). Emotional Labour within Hotel Industry- A case study in Hotels of Ranchi, IJMS, V, 3(3), 38-43.
- Srivastava, S.K., Chandra B. & A. Sinha (2018). Effectiveness of Knowledge Management (KM) on Customer Relationship Management (CRM) in Hotel Business Performance, JEMT, IX, 6(30), 1277-1288.

- Kumar, P. & Mishra A. (2019) Implication of tourism traits on Jharkhand Tourism with special reference to perception of local residents, Purusartha, 60-73

4. **Publications in Proceedings:** (International/National)

- Sinha, A. & Srivastava S.K., Effective management of Technology and its productivity in open cast coal mining Industry with special reference to central coalfield limited, In proceeding of third International Conference on Facets of Business Excellence, FOBE, Institute of Management, Ghaziabad, Nov. 22-26. 2018

## SECTION 4 AWARD / PATENT / COLLABORATIONS

### 5. MoUs / Collaborations

| Sr. No. | Name of Organisation / University | Purpose / Area | Year / Duration |
|---|---|---|---|
| 1. | Sofitel Kuala Lumpur Damansara, Malaysia | Internship | 15 Dec'18 to 14 June'19. |
| 2. | Michel Trama, Puymirol, France | Internship | 31 Jan – 30 June'2019 |

## SECTION 5 ACTIVITIES/ FACULTY MEMBERS / BOS

### *6.* Departmental Students' Activities

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|
| 1. | Educational tour to Parasnath, Giridih | Ark Raj | Dr. Nishikant Kumar | 21.02.2019 |
| 2. | Industrial visit to hotel Radisson Blu, Ranchi | Yuvraj Kumar | Dr. Nishikant Kumar | 04.08.2018 |

### 7. 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 |
| 7. | Dr. Amit Saran | Assistant Professor | No |
| 8. | Mr. Gautam Shandilya | Assistant Professor | No |
| 9. | Ms. Pratima Ekka | Assistant Professor | No |
| 10. | Mr. Pranjal Kumar | Assistant Professor | No |

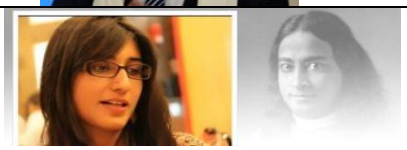
### *8.* Board of Studies

| 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 |
| 12. | Dr. Saswati Ghosh | Asst. Professor, Dept. of Bioengineering | Internal Member |
| 13. | General Manager, Hotel Radisson Blu, Ranchi | (Ex-Officio) | External Member |
| 14. | General Manager, JTDC, Ranchi | (Ex-Officio) | External Member |

## SECTION 6 OTHER INFORMATION

### *9.* Distinguished Visitors from Industry/Academia/Research organizations

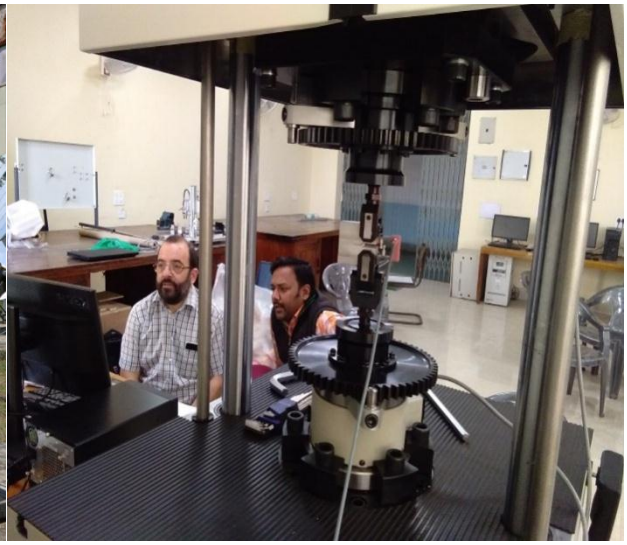
| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| 1. | Mr. Sudhir Mishra, General Manager, BNR Chanakya, Ranchi | 26.07.2019 | |
| 2. | Ms. Urvashi Sibal, Associate Editor, Cuisine Digest | 02.11.2018 |  |

### *10.* List of Distinguished Alumni

| Sr. No | Name, Batch and Affiliation | Short Description |
|---|---|---|
| 1 | Ayodhya Nath Tiwari | Revenue manager at hotel Novotel Imagica Khopoli, Maharashtra. Responsible for room rate strategy. |
| 2 | Ripudaman Singh Dadhwal | Sales manager at JW Marriott, New Delhi Aerocity. Responsible to handle corporate & Institutional sales. |
| 3 | Akash Kumar | Assistant Manager - Food & Beverage, ITC Hotels. |
| 4 | Pinki Priyadarshani | Front Office Manager – Movinpick Hotels, Doha, Qatar. |
| 5 | Gargi Roy | Sales manager at ITC Sonar, Kolkata. Responsible to handle corporate & Institutional sales. |

**Department of Mechanical Engineering**
**Annual Report 2018-19**

## SECTION 1 DEPARTMENTAL PROFILE



*2.* **About the Department/Campus**

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

**Programmes Offered**

**Under Graduate Programme (4 years):**

- B. Tech. in Mechanical Engineering

**Post Graduate Programmes:** (2 Years)

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

**PhD. Programme**:

**Laboratory Facilities**:

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

## SECTION 2 RESEARCH PROJECTS

*3.* **Sponsored Projects (Research and Consultancy)**

*c)* Ongoing Projects

| Sr. No. | Project Title | PI / Co PI / Collaborator, if | Funding Agency | Date of Sanction | Sanctioned Amount | Duration of the Project |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| | | any | | | | |
| 1. | Unnat Bharat Abhiyan project | Dr. Rajeev Kumar | MHRD Govt. of India, of Jharkhand state for technical interventions in Rural areas | 2 June 2017 | 3.50 Lacs | 3 years |
| 2. | Design and Development of Solar Collector and Concentrator for power generation through Stirling engine | Dr. Rajeev Kumar | Jharkhand council of Science and Technology | 22.04.2017 | 2.0 Lacs | 02 year |
| 3. | Design and Development of a 6 DOF Gough-Stewart Platform for Virtual Simulators with Pneumatic Actuators | ArunDayalUdai | SMC Corporation (India) Pvt. Ltd., Noida | 2018 | 2.35 | 1 |

## SECTION 3 SEMINAR / CONFERENCE

### 3.1 Seminar / Conferences / Short – Term Courses Conducted by the Department/Campus

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| 1. | One week workshop on Emerging Techniques in Mechanical Engg. And its Applications, Department of Mechanical Engineering | Dr.Richa Pandey | TEQIP III | 05/03/2019-09/03/2019 |
| 2. | National Conference on Recent Advancement in Mechanical Engineering, Dept. Of Mechanical Engineering | Dr. Om Prakash | TEQIP III | 18/02/2019-19/02/2019 |

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

| Sr. | Name of the | Title of the | Funding | Organizers | Venue | Date |
|---|---|---|---|---|---|---|

| No. | Faculty | Conference/ Seminar | Agency | | | |
|---|---|---|---|---|---|---|
| 1. | Dr.Richa Pandey | One week workshop on Emerging Techniques in Mechanical Engg. And its Applications, Department of Mechanical Engineering | TEQIP III | Department of Mechanical Engineering Bit Mesra | Bit Mesra | 05/03/2019-09/03/2019 |
| 2. | Dr. Om Prakash | One week workshop on Emerging Techniques in Mechanical Engg. And its Applications, Department of Mechanical Engineering | TEQIP III | Department of Mechanical Engineering Bit Mesra | Bit Mesra | 05/03/2019-09/03/2019 |
| 3. | Dr.Sujeet Kumar Mishra | One week workshop on Emerging Techniques in Mechanical Engg. And its Applications, Department of Mechanical Engineering | TEQIP III | Department of Mechanical Engineering Bit Mesra | Bit Mesra | 05/03/2019-09/03/2019 |
| 4. | Dr.Chandrahas Patel | One week workshop on Emerging Techniques in Mechanical Engg. And its Applications, Department of Mechanical Engineering | TEQIP III | Department of Mechanical Engineering Bit Mesra | Bit Mesra | 05/03/2019-09/03/2019 |
| 5. | Dr.Dipti Prasad Mishra | **Summer Training Program on Active Learning** Under TEQIP – III Initiative at IIT Gandhinagar | TEQIP – III | IIT Gandhinagar | IIT Gandhinagar | June 18-22, 2018 |
| 6. | Dr.Sujeet Kumar Mishra | **Summer Training Program on Active Learning** | TEQIP – III | IIT Gandhinagar | IIT Gandhinagar | June 18-22, 2018 |

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| | | Under TEQIP – III Initiative at IIT Gandhinagar | | | | |
| 7. | Dr Richa Pandey | Kumbh Conclave India Think Council at Allahabad | | Kumbh Conclave | Allahabad | 27-29 July 2018 |
| 8. | Dr.AnujBajpai | Faculty Development Programme at IIT-Madras | TEQIP – III | IIT-Madras | IIT-Madras | 31/01/2018-04/02/2018 |
| 9. | Dr.Ratnesh Kumar | Faculty Development Programmeat IIT-Madras | TEQIP – III | IIT-Madras | IIT-Madras | 31/01/2018-04/02/2018 |
| 10. | Mr.Inayath N. | Faculty Development Programme at IIT-Madras | TEQIP – III | IIT-Madras | IIT-Madras | 31/01/2018-04/02/2018 |
| 11. | Dr.FaisalRahmani | Faculty Development Programme at IIT-Madras | TEQIP – III | IIT-Madras | IIT-Madras | 31/01/2018-04/02/2018 |
| 12. | Mr.Shalin | Faculty Development Programme at IIT-Madras | TEQIP – III | IIT-Madras | IIT-Madras | 31/01/2018-04/02/2018 |
| 13. | Dr.Mukesh Sharma | Faculty Development Programme at IIT-Madras | TEQIP – III | IIT-Madras | IIT-Madras | 31/01/2018-04/02/2018 |
| 14. | Mr.ShazeeRahmani | Faculty Development Programme at IIT-Kharagpur | TEQIP – III | IIT-Kharagpur | IIT-Kharagpur | 19/02/2018-23/02/2018 |
| 15. | Dr.Richa Pandey | National Seminar EEHVACR 2017-2018 atNepal House, Ranchi | Organizers | | Nepal House, Ranchi | 10/02/2018-11/02/2018 |
| 16. | Dr.Richa Pandey | National Seminar on Transforming Communities through Sustainable Tourism In and Around Jharkhand. | Organizers | | Ranchi | 15/02/2018-16/02/2018 |
| 17. | Dr Richapandey | 18th IEEE International conference on Advanced | Organizers | IIT Mumbai | IIT Mumbai | 8-12 July 2018 |

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| | | Learning Technology at IIT Mumbai | | | | |
| 18. | Dr Richapandey | National Conference On Emerging Trends in Mechanical Engineering at NIT Warangal | Organizers | NIT Warangal | NIT Warangal | 09 – 10 JANUARY 2019, |
| 19. | Dr. Rajeev Kumar | Renewable Energy and Environmental Challenges) NCREEC 2018,NIT Jamshedpur, Jharkhand | Organizers | NIT Jamshedpur, Jharkhand | NIT Jamshedpur, Jharkhand | 26-27 Feb 2018 |
| 20. | Dr. Om Prakash | One week workshop on Industrial Process Simulation, Department of Chemical Engg., BIT Mesra, Ranchi | TEQIP | Department of Chemical Engg., BIT Mesra, Ranchi | Department of Chemical Engg., BIT Mesra, Ranchi | 16th to 20th May, 2018 |

## SECTION 4 RESEARCH PUBLICATIONS

**4.1Publications in Journals :** (International/National)

1. Jindal, P., Agarwal, S., Roy, A.K. and Sharma, R.P. (2018). Enhancement of Film Cooling Effectiveness Using Rectangular Winglet Pair, ASME Journal of Thermal Science and Engineering Applications, 10 (4).
2. Zindani, D., and Kumar, K. (2019). Graphene-Based polymeric Nano-composites: An Introspection into Functionalization, Processing Techniques and Biomedical Applications, Biointerface Research in Applied Chemistry, 9 (3), 3926 – 3933.
3. Kumar, R., Kumar, K., Bhowmik, S., &Sharkhel, G. (2019).Tailoring the performance of bamboo filler reinforced epoxy composite: Insights into fracture properties and fracture mechanism, Journal of Polymer Research, 26 (2), 1-15.
4. Roy, A. K., &Kumar, K. (2019). Sustainability in Bio-Metallic Orthopedic Implants, Biointerface Research in Applied Chemistry, 9 (1), 3825 – 3829.
5. Roy, A. K., &Kumar, K. (2018). Experimental Studies on Hydrodynamic Characteristics using an Oblique Plunging Liquid Jet, Physics of Fluids, 30, 122107.
6. Kumar, R., Kumar, K.,&Bhowmik, S. (2018). Mechanical characterization and quantification of tensile, fracture and viscoelastic characteristics of wood filler reinforced epoxy composite, Wood Science and Technology, 52 (3), 677-699.
7. Faisal, N., &Kumar, K. (2018).Optimization of Machine Process Parameters in EDM for EN 31 Using Evolutionary Optimization Techniques, Technologies, 6, 54.
8. Kumar, R., Kumar, K.,&Bhowmik, S. (2018).Assessment and Response ofFunctionalized Cocos Nucifera Reinforced Toughened Epoxy Composite Towards Fracture and Viscoelastic Properties, Journal of Polymers and the Environment, 26 (6), 2522 – 2535.

9. Dey, M., Jindal, P., Roy, A. K., &Kumar, K. (2018).Maximization of Cooling Effectiveness of Turbine Blade Surfaces Using Different Arrangement of Cooling Holes and Various Blowing Ratios, Journal of Engineering Science and Technology, 13 (4), 909-924.
10. Zindani, D., and Kumar, K. (2018). 3D Printing of Biomaterials: A Review, DivyaZindani and Kaushik Kumar, Biointerface Research in Applied Chemistry, 8 (1), 3023-3033.
11. Faisal, N., &Kumar, K. (2018). Mechanical and TribologicalBehaviour of Nano Scaled Silicon Carbide Reinforced Aluminium Composites, Journal of Experimental Nanoscience, 13 (Sup 1), S1 – S13.
12. Kumari, N., &Kumar, K. (2018). Mechanical Behavior of Graphene and Carbon fibre Reinforced Epoxy Based Hybrid Nano Composites for Orthotic Calipers, Journal of Experimental Nanoscience, 13(Sup 1), S14 – S23.
13. Zindani, D., and Kumar, K. (Accepted). An Insight into Additive Manufacturing of Fiber Reinforced Polymer Composite, International Journal of Lightweight Materials and Manufacture.
14. Roy, S., & Kumar, K. (Accepted). Strategic Planning of Optimizing Productivity: a '5S' under Lean Quality Approach**,** International Journal of Productivity and Quality Management.
15. Minj, A., Roy, A. K., & Kumar, K. (Accepted). Analysis of Film Cooling Effectiveness Using Computational Approach, AIP Conference Proceedings.
16. Chandra, S., Roy, A. K., & Kumar, K. (Accepted).Forced Convection Heat Transfer in a Twin Cylinder System under Static Condition using Computational Approach, AIP Conference Proceedings.
17. Kalita, H., & Kumar, K. (Accepted). Generation of slip line fields incorporating BUE and shear zone to model machining using MATLAB, Lecture Notes in Mechanical Engineering, Springer.
18. Minj, A., Roy, A. K., & Kumar, K. (Accepted).Modeling and Simulation of Film Cooling Effectiveness on a Flat Plate, Materials Today: Proceedings.
19. Sinha, N., & Kumar, K. (Accepted). Optimization of Volumetric Composition and Cross-Section of Carbon Reinforced Epoxy based Polymeric Composite Tubes in Space frame Chassis, Materials Today: Proceedings.
20. Sinha, N., & Kumar, K. (Accepted).Efficacy of Vehicle Chassis of Polymeric Composite, Nipun Sinha, and Kaushik Kumar, Materials Today: Proceedings.
21. Kalita, H., & Kumar, K. (Accepted).Significance of Slip Line Field Model in Accommodating All Machining Complex Behaviour, Materials Today: Proceedings.
22. Kunal, Roy, A. K., & Kumar, K. (Accepted).CFD Assisted Investigation on Adiabatic Film Cooling Effectiveness over a Flat Plate, Materials Today: Proceedings.
23. Faisal, N., & Kumar, K. (2018). Application of Heuristic Optimization towards Optimal Process Parameters in Advanced Machining Process, Journal of Manufacturing Technology Research,10(3-4), 143–163.
24. Sethi, A., Chopra, S., & Kumar, K. (2018). Design and Development of Hydraulic System for Rail-Road Breakdown Crane, Materials Today: Proceedings, 5 (9/3), 20314-20320.
25. Zindani, D., and Kumar, K. (2018). Material Selection for Turbine Seal Strips using PROMETHEE-GAIA Method, Materials Today: Proceedings, 5 (9/3), 17533-17539.
26. Kumari, N., & Kumar, K. (2018). Design and Evaluation of Adjustable Calipers Using CAD Tools, Materials Today: Proceedings, 5 (5/2), 13658 – 13663.
27. Debta, S., & Kumar, K. (2018). Static Structural Analysis of a Powered Ankle Foot Prosthesis Mechanism, Materials Today: Proceedings, 5 (5/2), 11616–11621.
28. Dash, N., A. K., & Kumar, K. (2018).Design and Optimization of Mixed Flow Pump Impeller Blades with Hydrostatic Loading and Varying Semi-cone Angle, Materials Today: Proceedings, 5 (5/2), 11608–11615.

29. Dash, N., A. K., & Kumar, K. (2018).Design and Optimization of Mixed Flow Pump Impeller Blades by varying Semi-cone Angle, Materials Science and Engineering, 330, 012095.
30. Kumari, N., Pradhan, S. K., & Kumar, K. (2018). Suitability of Composite Material for Orthotic Calipers – Tribological Study, Materials Today: Proceedings, 5, 5608–5614.
31. Srivastava, S., A. K., & Kumar, K. (2018).Design validation & stress analysis of mixed flow pump impeller blades under applied uniformly distributed and uniformly varying loads, Materials Today: Proceedings, 5, 4446–4452.
32. Dash, N., A. K., & Kumar, K. (2018). Design and Optimization of Mixed Flow Pump Impeller Blades – A Review, Materials Today: Proceedings, 5, 4460–4466.
33. Debta, S., & Kumar, K. (2018). Biomedical Design of Powered Ankle- Foot Prosthesis – A Review, Materials Today: Proceedings, 5, 3273–3282.
34. Debta, S., & Kumar, K. (2018).Design and Analysis of Powered Ankle Foot Prosthesis Mechanism Using Hydraulic System,Applied Mechanics and Materials, Trans Tech Publications, 877, 384-390.
35. Kumari, N., & Kumar, K. (2018). Application of Composites in Orthotic Calipers and its Experimental Validations, Applied Mechanics and Materials, Trans TechPublications, 877, 44-49.
36. Bhuyan, D., & Kumar, K. (2018). Static Structural Analysis of Piston Valve of Twin Tube Dampers, IEEE Explore Digital Library, 9–11.
37. Kumari, N., & Kumar, K. (2018).Mechanisms and Materials of Orthotic Calipers for Polio Infected Patients – A Review, IEEE Explore Digital Library, 12–19.
38. Faisal, N., & Kumar, K. (2018). Utilization of Particle Swarm Optimization Technique for Process Parameter Optimization in Electrical Discharge Machining, International Journal of Advanced Materials Manufacturing & Characterization, 8 (1), 58–68.
39. Agrawal,R. and Bhaduri,S. (2018), "Mathematical Modelling of a Fuzzy Logic Based Smart Structure to Minimize its Vibration",Journal of Basic and Applied Engineering Research(p-ISSN: 2350-0077; e-ISSN: 2350-0255), Vol. 5,Issue-3,pp.245-250.
40. Wasilewski, M.,& Brar L.S.(2019). Effect of the inlet duct angle on the performance of cyclone separators, Separation and Purification Technology, 213, 19-33.
41. **Brar L.S.** &Elsayed K. (2018). *Analysis and optimization of cyclone separators with eccentric vortex finders using large eddy simulation and artificial neural network*, Separation and Purification Technology, 207, 269-283.
42. Dhiman,S. K., Kumar, A., & Prasad, J.K. (2018). Heat transfer by satellite cluster of cylinders at subcritical Reynolds number, Heat and Mass Transfer. 55(3), 595-612.
43. Kumar, R., Garg, H., Dhiman, S. K.,&Kumar, B. (2019). Micro-electronics cooling devices for heat extracting using nano Ferro fluid, International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN 2019) at Vellore Inst. of Tech., Vellore.
44. Sarmah, T.,&Dhiman,S. K. (2018). Design and analysis of sloar cabinet dryer for drying of potatoes", International Conference on Future Learning Aspects of Mechanical Engineering (FLAME - 2018), Oct. 3-5, 2018, organized by Department of Mechanical Engineering, Amity School of Engineering & Technology, Amity University, Noida, UP (INDIA).
45. Dhiman, S. K.,& Bharti, T. (2018). Developing vortical sweeps over upstream of a tube at low Reynolds number. 2nd International Conf. on Multidisciplinary Research (ICMR-2018), Sept. 8-9, 2018, organized by MCCIA Pune. Proceedings.
46. Kumar, R., Bora,B.,Chattopadhyaya, S., Krolczyk, G., &Hloch, S. (2018).Experimental and mathematical evaluation of thermal and tensile properties

of friction stir welded joints, International journal of materials and product technology, (57), 204-229**.**

47. Kumar, U., Gope, D. K., Kumar, R., Chattopadhyaya,S., Das, A. K., Pramanik, A.,&Krolczyk, G. (2018).Investigation of microstructure and mechanical properties of titanium alloy sheet using loe power Nd-YAG laser welding process,KovoveMaterialy- Metallic Materials, 56, 121-129.
48. Pandey, R., Mishra, N.,&Mahajan, P. (2019).Prevention ofFall and Safer Boarding inTrains- Automatic Vehicle Based Ramp, International Journal of Science and Research (IJSR) Index Copernicus Value (2016) IIT BHU.
49. Padey, R. (2019). Application of Expert System with Fuzzy logic and Artificial Intelligence (AI) For Recognizing Alzheimer,Intelligent Decision Technologies: An International Journal, Accepted.
50. Padey, R.,Kommula, K. B., S T Laudya, S. T., Eslavath, S. & Karri, S. N. R. (2018) Digital Preservation and restoration of Old artifacts and Drawings through Reverse engineering, ICMAE 4th MARCH 2018 Ranchi International Journal of Engineering Research in Mechanical and Civil Engineering (IJERMCE),3(3).
51. Ahmad, A., & Prakash, O. (2019). Thermal analysis of north wall insulated greenhouse dryer at different bed conditions operating under natural convection mode. Environ Progress and Sustainable Energy, e13257.
52. 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, Elsevier, 102 (2019) 66–74.
53. Prakash, O. (2018). Wind Energy Potential, Development and Current Trends in India: A Review, International Journal of Ambient Energy, Taylor and Francis, 39 (5),521-532.
54. Kumar, A., Prakash, O., &Dube, A. (2018). A Review on Technology and Promotional Initiatives for Concentrated Solar Power in World, International Journal of Ambient Energy, Taylor and Francis. 39 (3), 297-316.
55. Rahmani, F., Pandey, R.K. and Dutt, J.K., 2018. Performance Studies of Powder-Lubricated Journal Bearing Having Different Pocket Shapes at Cylindrical Bore Surface. ASME Journal of Tribology, 140(3), 031704.
56. Sharma, M.(Accepted).Effect of PT/CT contact on the circumferential temperature distribution over a fully voided nuclear channel of IPHWR, Nuclear Engineering and Technology.
57. Sharma, M.(2018). Effect of eccentricity of pressure tube on circumferential temperature distribution of PHWR fuel bundle under postulated accident condition, Nuclear Engineering and design, 331, 274-281.
58. Udai,A. D.,Saha,S. K.,& A. Dayal, A.(2018). Overlaid Orthogonal Force Oscillations for Robot Assisted Localization and Assembly, ISME Journal of Mechanics and Design, 9-25.
59. Udai, A. D., Saha, S. K.(2018). Dynamic Simulation of Serial Robots under Force Control," Int. Journal of Intelligent Machines and Robotics, Inderscience Publishers, 2018, 1(1), 79-108.

**4.2**. **Publications in Proceedings:**(International/National)

**1**. Adiabatic Film Cooling Effectiveness over a Flat Plate: A Computational Approach, Proceedings of 2nd International Conference on Emerging Trends in Mechanical Engineering, March, 2018, Bhopal

2.Optimization of Forced Convection Heat Transfer in a Twin Cylinder System Under Static Condition, Proceedings of 2nd International Conference on Emerging Trends in Mechanical Engineering, March, 2018, Bhopal

**3.Anurag Gupta and Rajeev Kumar, Phase Change Materials: A Viable Energy Conserving Technique, National Conference on Renewable Energy and Environmental Challenges (NCREEC 2018), 26-27 Feb 2018, NIT Jamshedpur, Jharkhand.**

**4.Brar L.S.** Application of response surface methodology to optimize the performance of cyclone separator using mathematical models and CFD simulations, Materials Today 5(9)(3), 20426-20436, 2018, ISSN 2214-7853.

5. A. Srivastava, A.,and **Mahata**, P, Non-linear deformation of thin elastic model membrane driven by electrostatic forces, *International Conference on Differential Equations and Control Problems - Modeling, Analysis and Computations (ICDECP - 19), IIT Mandi, Accepted.*

6. Sreekanta, B. S. V., Sai Krishna, M. G. V., **Mishra, S. K., Design and Fabrication of Anti Vibration Rubber Mounts for an All-Terrain Vehicle for BAJA SAE,** International Conference on Mechanical Engineering Design at Chennai on 25-26 April 2019.

7. Mehrotra, M., Patel, S.,Sharma, A., and **Mishra, S. K.,Designing of a custom-made steering assembly for an All-Terrain Vehicle,** National Conference on Recent Advancement in Mechanical Engineering under TEQIP III at Ranchi on February 18-19, 2019, e-ISBN: 978-93-8830-572-3.

8.Pandey, R., Application of Expert System with Fuzzy logic and Artificial Intelligence (AI) For Recognizing Alzheimer, International Conference on Computational Methods in Manufacturing (ICCMM 2019)

9.Pandey, R., Fuzzy QFD For Decision Support Model In Evaluating Basic Cause Of Children Falling Into Blue Whale Game 18$^{TH}$ IEEE International Conference on Advanced Learning Technology,IIT Mumbai , 2018. ISBN:978-1-5386-6049-2.

10.Pandey, R., Design and Fabrication of Upper limb Exoskeleton, National conference on Locomotor Disability-Role of Technology, IIT Gandhinagar, 10th -11th Jan 2019.

11.Satyam, K.,Pandey, R., Integration of Reverse Engineering and Additive Manufacturing for patient specific implants, National Conference On Emerging Trends in Mechanical Engineering 09-10 JANUARY, 2019,NIT Warangal.

12.Satyam, K., Pandey, R.,Development of Patient Specific Total Hip-Joint Replacement Using Reverse Engineering And Additive Manufacturing Technology,ISMEJOURNAL, NIT Jalandhar, 22nd-24th Dec. 2018.

13.Pandey, R.,Reverse Engineering in Medical –Bio modeling and Bioengineering Ist National Conference on Advances in Mechanical Engineering (NCAME), NIT Delhi, 2019.

14.Pandey, R.,Kumbh Conclave A Fuzzy Logic Analytical Predictor of Important Weights For Safer Happening Of KUMBH MELA, Prayagraj, 27-29 July, 2018-19.

15.Pandey, R.,Mohanty, S., Design and Analysis of small Horizontal Axis wind turbine blade for low wind speed characteristics, NCREEC, NIT Jmashedpur, 26-27 Feb, 2018.

16.Gupta, U., Ankit, A.,Dubey, P., and Pandey, R., Development and Real time Simulation of All Wheel Steer on a Rear wheel Drive car, NCREEC, NIT Jamshedpur, 26-27 Feb 2018.

17.Pandey, R.,Kumar, V., Das, N., Kant, M., Kumar, S., Design and Fabrication of Solar Powered Electric Bicycle", NCREEC, NIT Jamshedpur, 26-27 Feb, 2018.

18.Pandey, R., Paul, D. S., Experimental Study of Liquid Fuel Passive Direct Methanol Fuel Cell, National Seminar EEHVACR2017-2018, Nepal House Ranchi, 10 -11 Feb, 2018.

19.Pandey, R.,Kommula, K. B.,Laudya, S. T., Eslavath, S., and Karri,S. N. R.,Digital Preservation and restoration of Old artifacts and Drawings through Reverse engineering, ICMAE,Ranchi, 4th March,2018.

20.**Prakash**, O., Salik, Md., Dogra, R., andKhanra, A., External shading: A simulation approach on thermal performance for the official building. Solris 2019. An International Conference on Renewable Energy & Sustainable Climate,JamiaMiliaIslamia, New Delhi, February 7-9, 2019.

21. Ahmad, A., and **Prakash, O.,** Energy and Embodied Analysis of Greenhouse Dryer with Insulated North Wall at Different Floor Condition operating under Passive Mode. Solris 2019. An International Conference on Renewable Energy & Sustainable Climate,Jamia Milia Islamia, New Delhi February 7-9, 2019.

22. Rajak, S. K., Ahmad, A., and **Prakash, O.,** State of Art Review of Parabolic Trough Collector. National Conference on Recent Advancement in Mechanical Engineering (NCRAME 2019) on at Department of Mechanical Engineering, Birla Institute of Technology, Mesra, India, 18-19 February, 2019.e-ISBN: 978-93-8830-572-3.

23. **Prakash, O.,**Dogra, R., Salik, Md., and Khanara, A., Daylight Factor: A Simulation Approach on daylighting of a hostel building Room. National Conference on Recent Advancement in Mechanical Engineering (NCRAME 2019) on at Department of Mechanical Engineering, Birla Institute of Technology, Mesra, India, 18-19 February, 2019.e-ISBN: 978-93-8830-572-3.
24. Sinha, V., and **Prakash, O.,** Heat Transfer Analysis of Combustion chamber of Direct Injection Engine: A Numerical Model. National Conference on Recent Advancement in Mechanical Engineering (NCRAME 2019) on at Department of Mechanical Engineering, Birla Institute of Technology, Mesra, India, 18-19 February, 2019.e-ISBN: 978-93-8830-572-3.
25. Aman, A., and **Prakash, O.,** State of Art Review on Passive Solar Heating for Residential Building. National Conference on Recent Advancement in Mechanical Engineering (NCRAME 2019) on at Department of Mechanical Engineering, Birla Institute of Technology, Mesra, India, 18-19 February, 2019.e-ISBN: 978-93-8830-572-3.
26. Ahmad, A., and **Prakash, O.,** Testing Method for Thermal Performance Based Rating of Green House Solar Dryer. National Conference on Recent Advancement in Mechanical Engineering (NCRAME 2019) on at Department of Mechanical Engineering, Birla Institute of Technology, Mesra, India, 18-19 February, 2019.e-ISBN: 978-93-8830-572-3.
27. Kumar, S.,Prakash, O., Recent Review in Solar Still. National Conference on Recent Advancement in Mechanical Engineering (NCRAME 2019) on at Department of Mechanical Engineering, Birla Institute of Technology, Mesra, India, 18-19 February, 2019.e-ISBN: 978-93-8830-572-3.
28. **Prakash, O.,**Deep, H., ANFIS Model for Prediction of Water Temperature for Scheffler Solar Reflector. National Conference on Renewable Energy and Environmental Challenges (NCREEC 2018), Department of Mechanical Engineering, National Institute of Technology, Jamshedpur, India, 26-27 February 2018.
29. Biswas, Udai, A. D., and Kumar, G., A Hardware-in-a-Loop Setup for Benchmarking Robot Controllers," International Conference on Computational Intelligence (ICCI 2018), BITMesra, Ranchi, December, 2018.

### 4.3. Book:

- Single Authored
  1. Dhiman,S.K., Effect of some design parameters: A performance test on VAWT, GRIN Verlag Publishing, Munich, Germany. ISBN (Book): 9783668798601, ISBN (Ebook): 9783668798595
- Co-Authored
  1. Kumar, K. Roy, S. and Davim, J. P., Soft Computing Techniques for Engineering Optimization, (Taylor & Francis Catalogue #K413022;) CRC Press (A Taylor & Francis Company), USA**,** ISBN 978–0–367–14861–4.
  2. Kumar, K., Zindani, D. and Davim, J. P., Industry 4.0 - Developments towards the Fourth Industrial Revolution, , Springer Nature Singapore Pte Ltd, Singapore, ISBN 978–981–13–8164–5).
  3. Kumar, K., Kalita, H., Zindani, D. and Davim, J. P., Materials and Manufacturing Processes, Springer Nature Singapore Pte Ltd, Singapore, ISBN 978–3–030–21065–6.
  4. Kumar, K., Zindani, D. and Davim, J. P., Design Thinking to Digital Thinking, Springer Nature Singapore Pte Ltd, Singapore, ISBN 978–3–030–31358–6.
  5. Kumar, K., Zindani, D. and Davim, J. P., Optimizing Engineering Problems through Heuristic Techniques, (Catalogue No. # K349318, CRC Press (A Taylor & Francis Company), USA, ISBN 978–1–138–48536–5.
  6. Kumar, K. Zindani, D. and Davim, J. P., Rapid Prototyping, Rapid Tooling and Reverse Engineering - From Biological Models to 3D Bio-Printers, Verlag Walter de Gruyter GmbH, GERMANY, ISBN 978–3–11–066324–2.

7. Kumar, K. and Kalita, H., Workshop Practices, Vikas Publishing House Private Limited, New Delhi, INDIA, ISBN 978–93–5338–741–0.
8. Kumar, K., Zindani, D., Industrial Engineering and Management, I.K. International Publishing House Pvt. Ltd., New Delhi, INDIA, ISBN 978–93–86768–50–6.
9. Kumar, K., Zindani, D. and Davim, J. P., Advanced Machining and Manufacturing Processes , Springer International Publishing AG, Switzerland, ISBN 978-3-319-76074-2.
10. Kumar, K., Roy, A.K. and Dash, N., Material Science and Engineering, I.K. International Publishing House Pvt. Ltd., New Delhi, INDIA, ISBN 978–93–85909–64–1.
11. Kumar, K., Roy, A.K. and Kumari, N., Understanding CREO Parametric Through Examples , I.K. International Publishing House Pvt. Ltd., New Delhi, INDIA, ISBN 978–93–85909–82–5.
12. Kumar, K., Roy, A. K. and Ranjan, C., Engineering Graphics and Design, Vikas Publishing House Private Limited, New Delhi, INDIA, ISBN 978–93–52718–72–6.
13. Kumar, K., Roy, A. K. and Ranjan, C., Engineering Graphics (For JNTU, Hyderabad), Vikas Publishing House Private Limited, New Delhi, INDIA. ISBN 978–93–52718–88–7
14. Kumar, A., Prakash, O. Solar Desalination Technology: Concept, Design, Testing, Modeling, Economics, and Environment that will be published by Springer Singapore in 2019, ISBN-10: 9811368864, ISBN-13: 978-9811368868.
15. Om Prakash.et al. Proceedings of National Conference on Recent Advancement in Mechanical Engineering (NCRAME 2019) publisher: BS Publication, India. e-ISBN: 978-93-8830-572-3.

- EditedBooks
  1. Kumar, K., Davim, J. P., Design, Development and Optimization of Bio-Mechatronic Engineering Products (Under book series Advances in Bioinformatics and Biomedical Engineering (ABBE), (ISBN 978–1–52–258235–9), International Publisher of Progressive Information Science and Technology Research, USA.
  2. Kumar, K. and Davim, J. P., Biodegradable Composites – Materials, Manufacturing and Engineering (Under book series Advanced Composites), (ISBN 978–3–11–060369–9), Verlag Walter de Gruyter GmbH, GERMANY.
  3. Kumar, K., Zindani, D. and Davim, J. P., Sustainable Engineering Products and Manufacturing Technologies, Elsevier Inc. USA. (Catalogue #570947; ISBN: 978–0–128–16564–5)
  4. Kumar, K., Zindani, D. and Davim, J. P., Digital Manufacturing and Assembly Systems in Industry 4.0 (Under Book Series Science, Technology, and Management), CRC Press (A Taylor & Francis Company), USA (Catalogue# K389289; ISBN: 978–1–138–61272–3)
  5. Kumar, K., Zindani, D. and Davim, J. P., Additive Manufacturing Technologies from an Optimization Perspective, (Under Book Series Advances in Logistics, Operations, and Management Science (ALOMS)), International Publisher of Progressive Information Science and Technology Research, USA (ISBN: 978–1–522–59167–2).
  6. Kumar, K., and Davim, J. P., Optimization using Evolutionary Algorithms and Metaheuristics: Applications in Engineering (Under Book Series Science, Technology, and Management), CRC Press (A Taylor & Francis Company), USA (Catalogue # 311997) ISBN: 978-0-367-26044-6.
  7. Kumar, K. and Davim, J. P., Optimization for Engineering Problems, ISTE Science Publishing Ltd. UK. ISBN: 978–1–786–30474–2.
  8. Kumar, K. and Davim, J. P., Polymers and Composites Manufacturing (Under book series Advanced Composites), VerlagWalter de Gruyter GmbH, GERMANY, ISBN: 978–3–11–065193–5.

9. Kumar, K., Davim, J. P., Design and Optimization of Engineering Products (Under book series Advances in Mechatronics and Mechanical Engineering (AMME)), International Publisher of Progressive Information Science and Technology Research, USA, ISBN 978–15–22534–01–3.
10. Kumar, K., Davim, J. P., Hierarchical Composite Materials (Under book series Advanced Composites), Verlag Walter de Gruyter GmbH, GERMANY, ISBN 978–31–10544–02–2.
11. Kumar, K., Davim, J. P., Composites and Advanced Materials for Industrial Applications (Under book series Advances in Chemical and Materials Engineering (ACME), International Publisher of Progressive Information Science and Technology Research, USA, ISBN 978–15–22552–16–1.
12. Kumar, K., Kumari, N. and Davim, J. P., Non-Conventional Machining in Modern Manufacturing Systems, (Under book series Advances in Mechatronics and Mechanical Engineering (AMME)), International Publisher of Progressive Information Science and Technology Research, USA, ISBN 978–15–22561–61–3.
13. Kumar, K., Zindani, D., Kumari, N. and Davim, J. P., Micro and Nano Machining of Engineering Materials – Recent Developments (Under book series Materials Forming, Machining and Tribology), Springer Nature, Germany, ISBN 978–3–319–99900–5.

- Chapter(s) in Edited Book
    1. Sahu, S. R., and Mishra, P., CFD-Supported Designing of a Louvered Cylindrical Mixing Pipe for Maximum Air Entrainment, *Design and Optimization of Engineering Products,* IGI Global USA, pp. 105-131, DOI: 10.4018/978-1-5225-3401-3.ch006, 2018.
    2. Kalita, H., Zindani, D. and Kumar, K., 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, DOI: DOI: 10.4018/978-1-5225-9167-2.ch003.
    3. Kalita, H., Zindani, D. and Kumar, K., 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.
    4. Zindani, D., **Kumar, K**. and Davim, J.P., Metallic Biomaterials – A Review. In Davim, J. P. eds. *Mechanical Behaviour of Biomaterials.* WoodHead/Elsevier (USA). pp. 83 – 99. DOI: 10.1016/B978-0-08-102174-3.00004-8
    5. Zindani, D., Kumar, K. and Davim, J.P., Mechanical Behaviour of Epoxy Based Green Composite. In Rakesh, P. K. and Singh, I. eds. Processing of Green Composites. Springer Nature Singapore Pte Ltd. pp. 81 – 90. DOI: 10.1007/978-981-13-6019-0_6
    6. Bhuyan, D. and Kumar, K. A Brief History of Prosthetics and Orthotics of the Lower Body and Their Types, In Kumar, K. and Davim, J.P. eds. Design, Development, and Optimization of Bio-Mechatronic Engineering Products, IGI Global USA. pp. 36 – 56 DOI: 10.4018/978-1-5225-8235-9.ch002.
    7. Bhuyan, D. and Kumar, K. Design of a Prosthetic Ankle Complex: A Study in Biomimetic System Design, In Kumar, K. and Davim, J.P. eds. Design, Development, and Optimization of Bio-Mechatronic Engineering Products, IGI Global, USA pp. 101 – 125 DOI: 10.4018/978-1-5225-8235-9.ch005.
    8. Zindani, D., Kumar, K. and Davim, J.P., An Insight into Plant Based Biodegradable Composites. In Kumar, K., and Davim, J.P. eds. Biodegradable Composites – Materials, Manufacturing and Engineering, De Gruyter, Germany. pp. 3 – 12 DOI.10.1515/9783110603699-001
    9. Zindani, D., Roy, A.K. and Kumar, K., Design of Impeller Blade of Mixed Flow Pump: A Comparative Analysis. In Kumar, K. and Davim, J.P.

eds. Design and Optimization of Engineering Products. IGI Global USA. pp. 37 – 66. DOI: 10.4018/978-1-5225-3401-3.ch003.

10. Kumari, N. and Kumar, K., Lower Body Orthotic Calipers with Composite Braces. In Kumar, K. and Davim, J.P. eds. Design and Optimization of Engineering Products. IGI Global USA pp. 133 – 151. DOI: 10.4018/978-1-5225-3401-3.ch007.
11. Zindani, D. and Kumar, K., Selection of Rapid Prototyping Process and Part Orientation for Virtually Manufactured Gears. In Hernández Arellano, J. L., Maldonado Macias, A. A., Castillo Martinez, J. A. and Coronado, P. P. eds. Handbook of Research on Ergonomics and Product Design. IGI Global USA pp. 364 – 380. DOI: 10.4018/978-1-5225-5234-5.ch020.
12. Zindani, D., Kumar, K. and Davim, J.P., Fabrication of Functionally Graded Materials: A Review. In Kumar, K. and Davim, J.P. eds. Hierarchical Composite Materials. De Gruyter, Germany pp. 1 – 20 DOI. 10.1515/9783110545104-001.
13. Zindani, D. and Kumar, K., Industrial Applications of Polymer Composite Materials. In Kumar, K. and Davim, J.P. eds. Composites and Advanced Materials for Industrial Applications IGI Global USA pp. 1 – 15. DOI. 10.4018/978-1-5225-5216-1.ch001.
14. Kumari, N. and Kumar, K., Fabrication of Orthotic Calipers with Epoxy Based Green Composite. In Kumar, K. and Davim, J.P. eds. Composites and Advanced Materials for Industrial Applications IGI Global USA pp. 157 – 176. DOI: 10.4018/978-1-5225-5216-1.ch008.
15. Faisal, N. Kumar, K. and Roy, A. K., Fuzzy Logic Approach for Material Selection in Mechanical Engineering Design, In Ram, M. ed. Advanced Fuzzy Logic Approaches in Engineering Science. IGI Global USA pp. 99 – 116. DOI: 10.4018/978-1-5225-5709-8.ch005
16. Singh, S., Zindani, D., Roy, A. K. and Kumar, K., Fuzzy Logic for Renewable Energy Systems. In Ram, M. ed. Advanced Fuzzy Logic Approaches in Engineering Science. IGI Global USA pp. 284 – 309. DOI: 10.4018/978-1-5225-5709-8.ch013.
17. Zindani, D., Kumar, K., Roy, A. K. and Davim, J.P., Fuzzy Logic for Machining Applications: Review. In Ram, M. ed. Advanced Fuzzy Logic Approaches in Engineering Science. IGI Global USA pp. 341 – 361. DOI: 10.4018/978-1-5225-5709-8.ch016.
18. Faisal, N., Bhowmik, S. and Kumar, K., Recent Developments in Wire Electrical Discharge Machining. Kumar, K., Kumari, N and Davim, J.P. eds. Non-Conventional Machining in Modern Manufacturing Systems. IGI Global USA pp. 125 – 152. DOI: 10.4018/978-1-5225-6161-3.ch006.
19. Zindani, D. and Kumar, K., Recent Developments in Electrical Discharge Machining. In Kumar, K., Kumari, N and Davim, J.P. eds. Non-Conventional Machining in Modern Manufacturing Systems. IGI Global USA pp. 175 – 187. DOI: 10.4018/978-1-5225-6161-3.ch008.
20. Faisal, N., Zindani, D. and Kumar, K., Micro and Nano Machining – An Industrial Perspective. In Kumar, K., Zindani, D., Kumari, N and Davim, J.P. eds. Micro and Nano Machining of Engineering Materials - Recent Developments. Springer Nature, pp. 9 – 29. DOI: 10.1007/978-3-319-99900-5_2
21. Faisal, N., Zindani, D., Kumar, K. and Bhowmik, S., Laser Micromachining of Engineering Materials – A Review. In Kumar, K., Zindani, D., Kumari, N and Davim, J.P. eds. Micro and Nano Machining of Engineering Materials - Recent Developments. Springer Nature, pp. 121 – 136. DOI: 10.1007/978-3-319-99900-5_6
22. Zindani, D. and Kumar, K., Integrated Manufacturing System for Complex Geometries: Towards Zero Waste in Additive Manufacturing. In Uthayakumar, M., Aravind Raj, S., Ko, T. J., Thirumalai K. S., Davim, J. P.

eds. Green Engineering Techniques for Modern Manufacturing. IGI Global USA pp. 14 – 23. DOI: 10.4018/978-1-5225-5445-5.ch002.

23. Zindani, D., Faisal, N. and Kumar, K., Optimization of Process Parameters for Electro-Chemical Machining of EN19: Using Particle Swamp Optimization. In Uthayakumar, M., Aravind Raj, S., Ko, T. J., Thirumalai K. S., Davim, J. P. eds. Green Engineering Techniques for Modern Manufacturing. IGI Global USA pp. 127 – 142. DOI: 10.4018/978-1-5225-5445-5.ch008.
24. Farrukh, Md., Faisal, N. and Kumar, K., Earthquake Resistant Design: Issues and Challenges. In Belgasmia, M. ed. Optimization of Design for Better Structural Capacity. IGI Global USA pp. 201–221. DOI: 10.4018/978-1-5225-7059-2.ch008.
25. Faisal, N. and **Kumar, K.**, Recycling & Reuse of Building Materials from Construction and Demolition: An Environmental Evaluation for Sustainable Growth and Development. In eds. Koç, G. and Christiansen, B. *Reusable and Sustainable Building Materials in Modern Architecture*. IGI Global USA pp. 60 – 79. DOI: 10.4018/978-1-5225-6995-4.ch003.
26. Dhiman, S. K., and Samrah, T., Design and Analysis of Solar Cabinet Dryer for Drying of Potatoes, LectureNote of Mechanical Engineering Advances in Engineering Design, Springer Nature Singapore Pte Ltd, (2019). (DOI: 10.1007/978-981-13-6469-3_10)
27. Ahmad, A., Prakash, O., andKumar, and Pandey, A., A Review of Solar Air Heater. Low Carbon Energy Supply Technologies and System, CRC Press. Accepted. To be published, 2019.
28. Kaviti, A. K.,Kumar, A., and Prakash, O., Effect of Design Parameters on Productivity of Various Passive Solar Stills that will be published by Solar Desalination Technology: Concept, Design, Testing, Modeling, Economics, and Environment that will be published by Springer Singapore, 2019.
29. Pandey, P., Prakash, O., andKumar, A., Desalination and Solar Still: Boon to Earth that will be published by Solar Desalination Technology: Concept, Design, Testing, Modeling, Economics, and Environment that will be published by Springer Singapore, 2019.
30. Roy, A. D., Prakash, O., Singh, S.,Kumar, A., Application of Software in Predicting Thermal Behaviours of Solar Still that will be published by Solar Desalination Technology: Concept, Design, Testing, Modeling, Economics, and Environment that will be published by Springer Singapore, 2019.
31. Kumar, D., Pandey, A., Prakash, O., Kumar, A.,Devroy, A., Simulation, Modeling and Experimental Studies of Solar Distillation Systems that will be published by Solar Desalination Technology: Concept, Design, Testing, Modeling, Economics, and Environment that will be published by Springer Singapore, 2019.
32. Kant, R., Prakash, O., Tripathi, R., and Kumar, A.,Exergy Analysis of Active and Passive Solar Still that will be published by Solar Desalination Technology: Concept, Design, Testing, Modeling, Economics, and Environment that will be published by Springer Singapore, 2019.
33. Sharma, M., **Prakash, O.,**Sharma, A., and Kumar, A., (2018). Fundamentals and Performance Evaluation Parameters Solar Dryer , a book entitled "Recent Trends in Low Carbon Energy Supply Technologies & Management" published by Springer Press, page no 35-50,
34. Prakash, O., Kumar, A.,Kaviti,A. K., Roy,A. D., and Pandey, A., (2018). Design and selection criteria of bio-gas digester , a book entitled "Recent Trends in Low Carbon Energy Supply Technologies & Management" published by Springer Press.

## 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.Kaushik Kumar | Rula International Awards, Malaysia | | International | 2019 |
| 2. | Dr.Kaushik Kumar | Best Paper Award at ICMMSE 2019 for Paper titled "Forced Convection Heat Transfer in a Twin Cylinder System under Static Condition using Computational Approach" | ICMMSE 2019 | International | 2019 |
| 3. | Dr.Kaushik Kumar | Best Paper Award at ICIPDIMS 2019 for Paper titled "Generation of slip line fields incorporating BUE and shear zone to model machining using MATLAB" | ICIPDIMS 2019 | International | 2019 |
| 4. | Dr.Kaushik Kumar | **Convener** 9th International Conference on Materials Processing and Characterization 2019 (ICMPC'19) | GokarajuRangaraju Institute of Engineering & Technology, Hyderabad-500090 Telangana, INDIA | International | 8th – 15th March – 2019 |
| 5. | Dr.Kaushik Kumar | Keynote Lecture on Rapid Prototyping Coupled Non-Traditional Machining Technique – A New Form of Hybrid Manufacturing Process at 1stInternational Conference on Manufacturing, Material Science and Engineering 2019 (ICMMSE2019), | CMR Institute of Technology, Hyderabad, INDIA | International | August 16–17, 2019 |
| 6. | Dr.Kaushik Kumar | Keynote Lecture on Virtual Manufacturing at 1st International Conference on Innovative Product Design and Intelligent Manufacturing System (ICIPDIMS-2019), | National Institute of Technology, Rourkela, INDIA | International | May 17–18 , 2019 |
| 7. | Dr.Kaushik Kumar | Keynote Lecture on Rapid Prototyping Coupled Non Traditional Machining | National Institute of Technology, Rourkela, INDIA | National | March 29 - 30, 2019 |

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|---|---|---|---|---|---|
| | | Technique at National Conference on Advancements in Materials, Design and Manufacturing Methods (AMDMM-2019), | | | |
| 8. | Dr.Kaushik Kumar | **Keynote Lecture** on **Functionally Graded Materials** at 9th International Conference on Materials Processing and Characterization - 2019 (ICMPC'19), GRIET, Hyderabad, INDIA | GRIET, Hyderabad, INDIA | International | March 8 - 10 2019 |
| 9. | Dr.Kaushik Kumar | **Keynote Lecture** on **Optimization Techniques** at National Conference on "Application Of Optimization Techniques to Engineering and Management Sciences" , | NSHM Knowledge Campus, Durgapur, INDIA | National | November 15 – 16, 2018 |
| 10. | Dr.Kaushik Kumar | **Keynote Lecture** on **Additive Manufacturing** at National Conference on "Recent Developments in Mechanical Engineering" (Theme: Coupled-Field Problems in Engineering), | National Institute of Technology, Rourkela, INDIA | National | July 27 -29, 2018 |
| 11. | Dr.Kaushik Kumar | **Resource person** Faculty Development Programme on Research Project Proposal and Research Paper writing, | Amity University Jharkhand, Ranchi, India | National | 11-13 July 2019, |
| 12. | Dr.Kaushik Kumar | **Resource person** Faculty Development Programme on Advanced Manufacturing Technologies | CMR Institute of Technology, Hyderabad, Telengana, India. | National | 10–11 May, 2019, |
| 13. | Dr.Kaushik Kumar | **Resource person** Eight Days Hands – on – Workshop on Application of Robotics & Automation Technology for Industrial Development, | RTC Institute of Technology, Ranchi, Jharkhand, India | National | April, 22–29, 2019 |
| 14 | Dr.Kaushik Kumar | **Resource person** AICTE Sponsored QIP 2018 organised by Department of Production Engineering, | Veer SurendraSai University of Technology, Odisha | National | 25th June–7th July, 2018, |
| 15 | Dr.Kaushik Kumar | **Session chair** 1st International Conference on Manufacturing, Material | CMR Institute of Technology, Hyderabad, INDIA | International | August 16–17, 2019 |

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|---|---|---|---|---|---|
| | | Science and Engineering 2019 **(ICMMSE2019)**, | | | |
| 16 | Dr.Kaushik Kumar | **Session chair** 1st International Conference on Innovative Product Design and Intelligent Manufacturing System (ICIPDIMS-2019), , | National Institute of Technology, Rourkela, INDIA | International | 17th – 18th May – 2019 |
| 17 | Dr.Kaushik Kumar | **Session chair** 9th International Conference on Materials Processing and Characterization - 2019 (ICMPC'19), | GokarajuRangaraju Institute of Engineering & Technology, Hyderabad-500090 Telangana, INDIA | International | 8th - 10th March – 2019 |
| 18 | Dr.Kaushik Kumar | **Session chair** National Conference on "Recent Developments in Mechanical Engineering" (Theme: Coupled-Field Problems in Engineering National Institute of Technology, Rourkela, INDIA. | National Institute of Technology, Rourkela, INDIA. | National | ), July 27–29, 2018, |
| 19. | Dr. Om Prakash | Book Reviewer of Engineering Drawing" by Prof. Basant Agarwal& Prof. C.M. Agarwal published by McGraw Hill Education India in 2018. | McGraw Hill Education India in 2018 | National | 2018 |
| 20. | Dr. Om Prakash | Session chair in the 4th International Conference on Nano electronics Circuits & Communication Systems(NCCS-2018) | ARTTC BSNL Ranchi-835217 Jharkhand India | International | 3rd-4th November 2018 |
| 21. | Dr. Om Prakash | Organising secretary of National Conference on Recent Advancement in Mechanical Engineering | Deptt. Of Mechanical Engineering at Birla Institute of Technology Mesra, Ranchi | National | 18-19 February 2019. |
| 22. | Dr.Richa Pandey | Expert Lecture | AMITY university Ranchi | National | 2019 |
| 23. | Dr.Richa Pandey | Expert Lecture | ABDUL KALAM UNIVERSITY, LUCKNOW | National | 2019 |
| 24. | Dr.Richa Pandey | Key Note Speaker at National workshop in Emerging Techniques in mechanical Engineering | Deptt. Of Mechanical Engineering at Birla Institute of Technology Mesra, Ranchi | National | 2019 |

***5.2*Patents (Applied / Granted) (Between 1st July 2018 to 30th June 2019) NIL**

| Sr. No. | Name of the Inventor | Title of the Invention | Application / Patent No. (As applicable) | Year |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |

### 5.3. MoUs / Collaborations (Between 1st July 2018 to 30th June 2019)

| Sr. No. | Name of Organisation / University | Purpose / Area | Year / Duration |
|---|---|---|---|
| 1. | Unnat Bharat Abbhiyan | Cluster and formulation of project/ Gram Panchayat Development Plan | 2018/2 year |

## SECTION 6 ACTIVITIES/ FACULTY MEMBERS / DOS/DAS

### *6.1* Departmental Students' Activities
### (Please arrange in reverse chronologicalorder: Latest first)

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|
| 1. | Firebolt Racing | Kumar Apurva | Dr.Paritosh Mahata | 2018-19 |

### 6.2 List of Faculties

| Sr. No. | Name ( Please mention Dr. / Prof./ Mr./ Mrs. / Ms., as applicable) | Designation | TEQIP Sponsored (Yes / No) |
|---|---|---|---|
| 1. | Dr. R.P. Sharma | Professor & HOD | No |
| 2. | Dr. D.P. Mishra | Professor | No |
| 3. | Dr. A. K. Roy | Associate Professor | No |
| 4. | Dr. Rajeev Kumar | Associate Professor | No |
| 5. | Dr.Kaushik Kumar | Associate Professor | No |
| 6. | Dr.Richa Pandey | Assistant Professor | No |
| 7. | Dr.S.K.Dhiman | Assistant Professor | No |
| 8. | Dr. Praveen Mishra | Assistant Professor | No |
| 9. | Dr. O.P. Pandey | Assistant Professor | No |
| 10. | Dr.Sujeet Kr. Mishra | Assistant Professor | No |
| 11. | Dr.Abhijit Nag | Assistant Professor | No |
| 12. | Dr. D. Mahto | Assistant Professor | No |
| 13. | Dr.Sankha Bhaduri | Assistant Professor | No |
| 14. | Dr. Om Prakash | Assistant Professor | No |
| 15. | Dr.Nirmal Kumar | Assistant Professor | No |
| 16. | Dr.ArunDayalUdai | Assistant Professor | No |
| 17. | Dr.ParitoshMahata | Assistant Professor | No |
| 18. | Dr. L. S. Brar | Assistant Professor | No |
| 19. | Dr.Ratnesh kumar | Assistant Professor | Yes |
| 20. | Dr. Faisal Rahmani | Assistant Professor | Yes |
| 21. | Dr.Chandrahas Patel | Assistant Professor | Yes |
| 22. | Dr.AnujBajpai | Assistant Professor | Yes |

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|---|---|---|---|
| 23. | Dr.Mukesh Sharma | Assistant Professor | Yes |
| 24. | Prof.Shalin | Assistant Professor | Yes |
| 25. | Prof.Inayath. N | Assistant Professor | Yes |
| 26. | Prof.LanjekarRajanDeorao | Assistant Professor | Yes |
| 27. | Prof.ShazeeRahmani | Assistant Professor | Yes |
| 28. | Prof. P. Pranith Kr. Reddy | Assistant Professor | Yes |

### *6.3.* List of Adjunct Faculties (Between 1st July 2018 to 30th June 2019)

| Sr. No. | Name ( Please mention Dr. / Prof./ Mr./ Mrs. / Ms. , as applicable) | Designation | Affiliation |
|---|---|---|---|
| 1. | Dr.Randeep Agarwal | Visiting Expert | Department of Mechanical Engineering, **University of Queensland, Australia** |
| 2. | Mr.Pawan Kumar Bhageria | Adjunct Fellow | President, Tata Motors Group Strategic Business Unit at Tata Technologies Ltd |

### *6.4.* Board of Studies

| **Sr. No.** | **Name of the Member** | **Designation (Kindly mention Ex-Officio, where applicable)** | **Role (Chairman/ Internal or External Member)** |
|---|---|---|---|
| 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.DhaneshwarMahto | 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 |
| **Two external experts** (Any two from attached list as per Their availability). | | | |
| 1. | Dr.SibnathMaity | Chief Scientist,<br>Head, Technology Innovation Centre Central Mechanical Engineering Research institute (CMERI),<br>M.G. Road, Durgapur West Bengal<br>Mobile: 09434710952<br>Email: drsnmaity@yahoo.com | External Member |
| 2. | Dr. S.K. Dash | Professor<br>Department of Mechanical Engineering<br>IIT Kharagpur–721302, India<br>Mobile: +91 9933017367 | External Member |
| 3. | Mr. Deepak Mishra | Head – Supplier Quality<br>Tata Motors Limited | External Member |

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|---|---|---|---|
| | | Jamshedpur–831010, India. | |
| 4. | Dr.Kailash Agarwal | Associate Director,<br>Outstanding Scientist<br>Nuclear Recycling Group<br>BARC, Trombay, Mumbai – 400 085<br>Ph: 022-25595529/1435<br>Email: kagar@barc.gov.in | External Member |
| 5. | Sri Alok Mukherjee | Scientist G & Head Robotics<br>DRDO R & DE, Pune-411 015,Alandi Road, Dighi<br>Phone: 020-27044800<br>Email: aamukherjee@rde.drdo.in | External Member |
| 6. | Prof.Subir Kumar Saha | Head, Mechanical Engineering<br>IIT Delhi, HauzKhas<br>New Delhi- 110 016<br>Phone: 011-26591135<br>saha@mech.iitd.ac.in | External Member |
| 7. | Mr.Rakesh Kumar Singh | GM, Bar Mill<br>JSPL, Patratu, Ranchi<br>Mobile: 9771437567<br>Email: rakeshsingh@pat.jspl.com | External Member |
| 8. | Mr.Prabhas Kumar | DGM(HOD, Energy Conservation)<br>RDCIS, SAIL, Ranchi<br>Mobile: 8986880120<br>Email:<br>kumar_prabhas@yahoo.com<br>pk@sail-rdcis.com | External Member |
| 9. | Dr. Bharat Bhusan | GM (Process and Technology)<br>Tata Consulting Engineers Ltd.<br>Jamshedpur<br>Mobile: 9910305458<br>Email: bharatb@tce.co.in | External Member |
| 10. | Dr. Shine S.R. | Department of Aerospace Engg.<br>Indian Institute of Space Science & Technology (IIST)<br>Trivandrum, ISRO, Kerala<br>Email: shine@iist.ac.in , Phone: 0471-2568427 | External Member |
| 11. | Mr. Richie Mittal | National Secretary<br>Indian Society of Heating Refrigeration<br>and Air-Conditioning Engineers<br>K-43(Basement), Kailash Colony<br>New Delhi – 110 048, India<br>Phone:011–41635655/29234925<br>Mobile: +91 8744000065 | External Member |
| 12. | Dr.Shailendra Kumar | Professor,<br>Department of Mechanical Engineering<br>N.I.T., Jamshedpur, Jharkhand – 831014<br>Shalkumar.me@nitjsr.ac.in | External Member |
| 13. | Sri Amit Kumar Pandey | Sr. D.G.M.<br>Usha martin<br>Tatisilawai, Ranchi | External Member |

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|---|---|---|---|
| | | Mobile: 9334389784<br>Email:amitkrpandey72@gmail.com | |

### *6.5.* Departmental Academic Committee

| Sr. No. | Name of the Member | Designation (Kindly mention Ex-Officio, where applicable) | Role (Chairman/ Internal or External Member) |
|---|---|---|---|
| 1. | Dr.R.P.Sharma | Professor & HOD (Ex-officio) | Chairman |
| 2. | Dr. D.P.Mishra | Professor | Internal Member |
| 3. | Dr.Kaushik Kumar | Associate Professor | Internal Member |
| 4. | Dr. A. K. Roy | Associate Professor | Internal Member |
| 5. | Dr. Rajeev Kumar | Associate Professor | Internal Member |
| 6. | Dr.DhaneshwarMahto | Assistant Professor | Internal Member |
| 7. | Dr. Praveen Mishra | Assistant Professor | Internal Member |
| 8. | Dr. P.R. Thakura | Professor, Dept. of EEE | External Member |
| 9. | Dr. Sanjay Kr. Jha | Associate Professor, Dept. of Production Engg. | 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. | Law Lasyap | Govt. Of Jharkhand | NGO(state livelihood mission project) | To enhance and diversify household income in select farm and non-farm sectors for targeted beneficiaries in project areas. |
| 2. | Anurag Gupta | Self | Startup | |
| 3. | Neeraj Kumar | Self | Startup | |

***7.2*** **Publication by students, if any**(please follow the example as given in section 4, Please repeat here and **highlight the name** of student)

**Journals**

1. Ahmad, Asim and **Om Prakash** (2019). Thermal analysis of north wall insulated greenhouse dryer at different bed conditions operating under natural convection mode. Environ Prog Sustainable Energy. 2019.e13257. ISSN: 1944-7450
2. Kumari, N.,& Kumar,K. (2018). Design and Evaluation of Adjustable Calipers Using CAD Tools. Materials Today: Proceedings. 5 (2), 13658.
3. Sanghamitra, D. & Kumar,K.**(2018).**Static Structural Analysis of a Powered Ankle Foot Prosthesis Mechanism. Materials Today: Proceedings, 5(2), 11616.
4. Dash, N., Roy, A.K. & Kumar, K. **(2018).**Design and Optimization of Mixed Flow Pump Impeller Blades with Hydrostatic Loading and Varying Semi-cone Angle. Materials Today: Proceedings, 5 (2), 11608.
5. Faisal, N. & Kumar, K. **(2018).** Optimization of Machine Process Parameters in EDM for EN 31 Using Evolutionary Optimization Techniques. Technologies.6 (54), 1.

6. Faisal, N. & Kumar, K. **(2018).**Utilization of Particle Swarm Optimization Technique for Process Parameter Optimization in Electrical Discharge Machining. International Journal of Advanced Materials Manufacturing & Characterization.8 (1), 58.
7. Dey, M.,Jindal, P., Roy, A.K. & Kumar, K. **(2018).** Maximization of Cooling Effectiveness of Turbine Blade Surfaces Using Different Arrangement of Cooling Holes and Various Blowing Ratios. Journal of Engineering Science and Technology. 13 (4), 909.
8. Faisal, N. & Kumar, K. **(2018).**Mechanical and Tribological Behavior of Nano Scaled Silicon Carbide Reinforced Aluminium Composites. Journal of Experimental Nanoscience. 13 (Sup 1), S1.
9. Kumari, N. &Kumar, K. **(2018).**Mechanical Behavior of Graphene and Carbon fibre Reinforced Epoxy Based Hybrid Nano Composites for Orthotic Calipers. Journal of Experimental Nanoscience. 13 (Sup 1), S14.
10. Dash, N., Roy, A.K. & Kumar, K. **(2018).**Design and Optimization of Mixed Flow Pump Impeller Blades by varying Semi-cone Angle. **IOP Conf. Series: Materials Science and Engineering**. 330, 12.
11. Kumari, N., Pradhan, S.K & Kumar, K. **(2018).** Suitability of Composite Material for Orthotic Calipers – Tribological Study.Materials Today: Proceedings. 5, 5608.
12. Srivastava, S., Roy, A.K. & Kumar, K. **(2018).**Design validation & stress analysis of mixed flow pump impeller blades under applied uniformly distributed and uniformly varying loads.Materials Today: Proceedings, 5, 4446.
13. Dash, N., Roy, A.K. & Kumar, K. **(2018).**Design and Optimization of Mixed Flow Pump Impeller Blades – A Review.Materials Today: Proceedings. 5, 4460.
14. Sanghamitra, D., & Kumar,K.**(2018).** Biomedical Design of Powered Ankle- Foot Prosthesis – A Review.Materials Today: Proceedings. 5, 3273.
15. Sanghamitra, D., & Kumar,K. **(2018).**Design and Analysis of Powered Ankle Foot Prosthesis Mechanism Using Hydraulic Systems. **Applied Mechanics and Materials, Trans Tech Publications.**877, 384.
16. Kumari, N. &Kumar, K. **(2018).** Application of Composites in Orthotic Calipers and its Experimental Validations. **Applied Mechanics and Materials, Trans Tech Publications**. 877, 44.
17. Bhuyan, D. & Kumar, K**.(2018).**Static Structural Analysis of Piston Valve of Twin Tube Dampers. IEEE Explore Digital Library. 9.
18. Kumari, N. &Kumar, K**. (2018).** Mechanisms and Materials of Orthotic Calipers for Polio Infected Patients – A Review. IEEE Explore Digital Library. 12..

**Proceedings(National/International)**

1.S., Kumar**,** and Pandey, R., Integration of Reverse Engineering and Additive Manufacturing for patient specific implants, National Conference on Emerging Trends in Mechanical Engineering, NIT Warangal, 09 – 10 JANUARY, 2019.

2S., Kumar**,** and Pandey, R,Development of Patient Specific Total Hip-Joint Replacement Using Reverse Engineering And Additive Manufacturing Technology,ISMEJOURNAL, NIT Jalandhar, 22nd-24th Dec., 2018.

3.Pandey, R.,and Mohanty, S., Design and Analysis of small Horizontal Axis wind turbine blade for low wind speed characteristics ", NCREEC, NIT Jmashedpur, 26-27 Feb, 2018.

4.Gupta, U.,Anas,A.,Dubey, P., and Pandey, R., Development and Real time Simulation of All Wheel Steer On a Rear wheel Drive car", NCREEC, NIT Jmashedpur, 26-27 Feb, 2018.

6.Pandey, R., Kumar, V.,Das, N., kant, M., and kumar, S.,Design and Fabrication of Solar Powered Electric Bicycle", NCREEC, NIT Jmashedpur 26-27 Feb 2018

7.Pandey, R., Paul, D. S., Experimental Study of Liquid Fuel Passive Direct Methanol Fuel Cell, National Seminar EEHVACR2017-2018, Nepal House Ranchi, 10 -11 Feb, 2018.

8. Ahmad, A., and **Prakash, O.,** Energy and Embodied Analysis of Greenhouse Dryer with Insulated North Wall at Different Floor Condition operating under Passive Mode. Solris 2019. An International Conference on Renewable Energy & Sustainable Climate,JamiaMiliaIslamia, New Delhi February 7-9, 2019.

9. Rajak, S. K., Ahmad, A., and **Prakash, O.,** State of Art Review of Parabolic Trough Collector. National Conference on Recent Advancement in Mechanical Engineering (NCRAME 2019) on at Department of Mechanical Engineering, Birla Institute of Technology, Mesra, India, 18-19 February, 2019. e-ISBN: 978-93-8830-572-3.
10. Ahmad, A., and **Prakash, O.,** Testing Method for Thermal Performance Based Rating of Green House Solar Dryer. National Conference on Recent Advancement in Mechanical Engineering (NCRAME 2019) on at Department of Mechanical Engineering, Birla Institute of Technology, Mesra, India, 18-19 February, 2019.e-ISBN: 978-93-8830-572-3.
11. Kumar, S.,Prakash, O., Recent Review in Solar Still. National Conference on Recent Advancement in Mechanical Engineering (NCRAME 2019) on at Department of Mechanical Engineering, Birla Institute of Technology, Mesra, India, 18-19 February, 2019.e-ISBN: 978-93-8830-572-3.

### *7.3*Achievements of Students

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | **Firebolt Racing** | Overall Rank (Mega ATV Championship) - 9th | MEGA ATV CHAMPIONSHIP-QUERIM BEACH, GOA | 17th March to 20th March, 2019 |
| 2. | **Team Srijan** | In Formula Bharat 18, held recently, the team stood first in Business Plan event, also, they stood fifth in the Statics and overall 11th in Formula Bharat 18. | | |

## *8* Distinguished Visitors from Industry/Academia/Research organizations

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| 1. | Mr.Vikas Kumar,Divyansh Agro Equipment's, Hatcheries and Farms | **05.03.2019** | **Insert picture here** |

There might be some department specific information, which may be important, but cannot be entered in the headings given above. Please mention that information in this section.

## *9* List of Distinguished Alumni

| **Sr.No** | **Name, Batch and Affiliation** | **Short Description** |
|---|---|---|
| **1.** | Gopi Krishna<br>,2018,<br>Maruti Suzuki India Limited | Graduate engineer trainee |
| **2.** | Shailja Singh<br>,2018, Avtec | Graduate engineer trainee |
| **3.** | Ankit Kumar Agrawal<br>**,2018,** Tata Steel | Management Trainee Technical |
| **4.** | Kumar Satyam, 2019, ALTAIR | Project Trainee |

| | | |
|---|---|---|
| **5.** | Jawaharlal Nehru, 2019, NOVABEANS RAPID PROTOTYPING | Design Engineer |
| **6.** | Deepankar Kumar, 2019, Asahi India Glass | Master's Engineer Trainee |

***10*** **Any other relevant information**

Admission in Ph.D programme During Session 2018-19

| **S.No.** | **Roll No.** | **Name of candidate** |
|---|---|---|
| 1 | PHD/ME/10002/2018 | Kunal |
| 2 | PHD/ME/10006/2018 | Apoorva Deep Roy |
| 3 | PHD/ME/10005/2018 | Md. Serajuddin |
| 4 | PHD/ME/10003/2018 | AnuAnand |
| 5 | PHD./ME/10051/2018 | Vivek Kumar Singh |

**Department of Management**

## SECTION 1 DEPARTMENTAL PROFILE

*1.* **About the Department** :

The Department of Management was established in the year 1979 with the aim of serving the growing need for qualified professionals who could harness the resources of the country to achieve its development goals. The department has continuously strived to achieve this aim by maintaining the highest standards in the Post Graduate (MBA) and Doctoral Programmes offered by it since its inception.

The vision of the department today is to be recognized as a 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.

The department has a vibrant culture encouraging wide participation of the students in extracurricular activities through three duly elected student bodies. They are:

- Students Activity Forum
- The Academic Forum
- Team Sustainability

The academic infrastructure of the department was strengthened during the last year by upgrading the teaching aids, refurbishing of classrooms and setting up of a Business Analytics Lab.

## SECTION 2 RESEARCH PROJECTS

*2.* **Sponsored Projects (Research and Consultancy)**

*a)* 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. | Attitude towards Female Role Portrayal in Advertising and its impact on Marketing Communication | Dr S Shivani | ICSSR, New Delhi | January, 2016 | Rs 12 Lacs | 13th July, 2019 |

SECTION 3 SEMINAR / CONFERENCE

**3. 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. | Sraboni dutta | AICTE-UKIERI technical leadership program 2018 | AICTE-UKIERI | AICTE | Delhi<br><br>Bangalore<br><br>Shillong | 13th-16th Nov 2018<br><br>20th-23rd Feb 2019<br><br>11th-13th June 2019 |
| 2. | Sujata P.Dash | One day Awareness Workshop on Prevention of Harassment at Workplace | Dr. R. Singh | TEQIP | BIT, Mesra | 25th June, 2019 |
| 3. | Sujata P.Dash | Two-day CEP short term course on Mediation, Moderation and Conditional Process Analysis | Dr. R. Chaudhary | IIT, Patna, Bihar | IIT, Patna, Bihar | 17th-18th May 2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4. | Sujata P.Dash | One day Scilab Workshop | K P Kannan | Pandit Madan Mohan Malviya National Mission on Teachers and Teaching organized by Teaching Learning Centre (ICT) | IIT Bombay | 4th May 2019 |
| 5. | Sujata P.Dash | Two-day workshop on Outcome Based Accreditation | Three members from ICT Mumbai | | Birla Institute of Technology, Mesra, Ranchi | 13th-14th April 2018 |
| 6 | Shelly Srivastava | Participant Centered learning (case method of teaching & learning) | BIT MESRA | IIM Ranchi | IIM Ranchi | 25-26th May 2019 |
| 7 | Rohini Jha | Participant Centered learning (case method of teaching & learning) | BIT MESRA | IIM Ranchi | IIM Ranchi | 25-26th May 2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 8. | Praveen Chandra Jha | International Conference on Financial Inclusion and Inclusive Growth | Dept. of higher education and skill development, Govt. of Jharkhand | University department of Commerce and Business Management, Ranchi University, Ranchi, | University Dept. of Commerce and Business Management | 24 - 25th November 2018 |
| 9. | Anand Pd. Sinha | Third "International Conference on Facets of Business Excellence - FOBE 2018" | MHRD, New Delhi | Institute of Management Technology, Ghaziabad. | Institute of Management Technology, Ghaziabad | 22nd - 26th Nov 2018 |
| 10. | Anand Pd. Sinha | "National Conference on Paradigm Shift in Management Practices for Fostering Excellence" (PSMPFE-2019) | Guru Gobind Singh Indraprastha University | New Delhi Institute of Management Studies | New Delhi Institute of Management Studies | 2nd& 3rd Feb 2019 |
| 11. | Anand Kumar | International Conference on Financial Inclusion and Inclusive Growth, | | Ranchi University | Ranchi University | 24th - 25th Nov, 2018 |

. **Publications in Journals :** (International/National)

1. Mishra P C, Shivani S, & Kishore S (2018). Information Technology as an enabler for Knowledge Management; A Study of Indian Coal Mining Industry. Journal of Global Information Technology Management, 21 (3), 208-225.
2. Roy, S. & Satpathy,B. (2019). Strategic Alliance between Information Intensive Services and Supply Chain Integration: Impact on Firm Performance. Journal of Operations & Production Management.
3. Kumar, A.& Roy, S. (2019). Trading of Derivative in Stock Market: A Predictive Approach towards Effective Decision Making. Published in South Asian Journal of Socio-Political Studies (Sajosps), 12(2).
4. Fatima, S, Malpani, R, Sodhi, S, Ghosh, A. (2019).E-buying of medicines: Trends and factors influencing Online Pharmacy. Accepted for publication in International Journal of Marketing & Business Communication.
5. Dasgupta, A.S, Tiwari, S, Ghosh, A & Fatima, S (2018).Factors Influencing Textile Industry: A Case of India. Asian Textile Journal, 27 (12), 62-64.
6. Srivastava, S.K., Chandra, B., Sinha, A.P. (2018). Effectiveness of Knowledge Management on Customer Relationship Management in Hotel Business Performance. Journal of Environmental Management and Tourism, 6(30).
7. Baral, M.M., Verma, A. Chittipaka, V. (2019). Impact of Cloud Computing in Indian Healthcare Firms: A study. Published in International Journal of Scientific and Technology Research.
8. Baral, M.M., Verma, A. Chittipaka, V. (2019). Ethics in Cloud Computing: Implications for India. Published in International Journal of Innovative Technology and Exploring Engineering; 8(10), 2449 – 2453.
9. Baral, M.M., Verma, A. Chittipaka, V. (2019). Smart Healthcare SCM. Journal of Information and Computational Science; 9(8), 60-69.
10. Srivastava, S.K., Chandra, B., Sinha, A.P. (2018). Effectiveness of KnowledgeManagement on Customer Relationship Management in Hotel Business Performance.Journal of Environmental Management and Tourism, 6(30).

**6**. **Publications in Proceedings:** (International/National)

1. Roy, S.,Kumar K. and Satpathy, B. (2018)., Strategic Planning of Optimizing Productivity: a '5S' under Lean Quality. In proceedings of ICIEND, Bhubneshwar, India,2018.
2. Kumar, A. and Roy, S., Trading Of Derivative in Stock Market: A Predictive Approach towards Effective Decision Making. In proceedings of ICIEND, Bhubneshwar, India,2018.
3. Preeti and Roy, S. (2018). Service Sector Performance by Non-Parametric Approach: A Critical Review. In proceedings of ICIEND, Bhubneshwar, India,2018.
4. Fatima, S. and Ghosh, A., What is guiding customers-instincts or their social group? Influence of demographics and social group on Online Consumer Reviews participation: An exploratory survey". In proceedings of NASMEI, IIM Indore,2019
5. Fatima, S., Malpani, R., Sodhi, S. and Ghosh, A. 2018."E-buying of Medicines: Trends and Factors influencing Online Pharmacy",In proceedings of 1st PANIITMC,IIT Roorkee, November, 2018.

6. Fatima, S, and Ghosh, A.,Time to Dive into Digital Communications. In proceedings of Facets of Business Excellence FOBE, IMT Ghaziabad, Delhi, 2018.
7. Sodhi,S. and Ghosh,A.,Sustainable Product Life Cycle: A Review. In proceedings of Colloquium VGSOM IIT Kharagpur,2018.
8. Jha Rohini, Prasad Sunit., Examining Digital Divide as one of the Barriers in Financial Inclusion, In proceedings of the conference on Financial Inclusion and Inclusive Growth, Ranchi University, 2018
9. Prasad Sunit,Jha Rohini, Financial Inclusion and Financial Education are complementary for the growth of Micro, Small and Medium Enterprises: An Indian case In proceedings of the conference on Financial Inclusion and Inclusive Growth, Ranchi University, 2018
10. Sinha.A.P. Effective Management of Technology and its productivity in Open Cast Coal Mining Industry with special reference to Central Coalfields Limited. In proceedings of Facets of Business Excellence , IMT Ghaziabad, Delhi, 2018.
11. Kumar, A., Sinha, A. &Prasad. A Comparative Study of Attitude and Job Satisfaction of Male Female Teachers in NCR, Delhi. In proceedings of National Conference on Paradigm Shift in Management Practices for Fostering Excellence, New Delhi Institute of Management Studies, New Delhi ,2019

**7. Book:**

- Co-Authored

1. Roy, S.,Kumar, K. and Devim, P.(2019) "soft computing for engineering optimization" . Published from: CRC Taylor and Francis Group, 6000 Broken Sound Parkway NW, Suite 300,Boca Raton, FL 33487, USA . ISBN **978-0-367-14861-4**

- Chapter(s) in Edited Book

1. Baral, M.M. and Verma , A.(2018) "Cloud based intelligent system for Supply Chain management: A Future Roadmap for SCM technologies". In Scopus Book series LNEE by Springer, Singapore; Nano-electronics, Circuits and Communication Systems; Proceeding of NCCS 2017; Vol. 511, p.p. 13-24, Edition 1, ISBN 978-981-13-0775-1.
2. Preeti and Roy, S. (2019). Data Envelopment Analysis Applications to Manufacturing Sector.In "Optimization using Evolutionary Algorithms and Metaheuristics: Applications to Engineering". CRC Press (Taylor & Francis Company), Catalogue # 311997, ISBN: 978-0-367-260440-6.

## SECTION 6 ACTIVITIES/ FACULTY MEMBERS / BOS

### *8.* Departmental Students' Activities

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|
| 1. | RBI E-BAAT | Adya Singh, Udit Sahoo, Shruti, Rishav Tiwari | Dr. Sraboni Dutta | 29.01.19 |
| 2. | ICICI Stockmind 7 | Adya Singh, Ayushi, Oshin | Dr. Sraboni Dutta | 17.01.19 |

| | | | | |
|---|---|---|---|---|
| 5. | Case study competition | Adya Singh, Udit Sahoo | Dr. Sraboni Dutta | 24.01.19 |
| 6. | SEBI visit | Rishav Tiwari ,Shruti | Dr. Sraboni Dutta | 4.10.18 & 5.10.18 |
| 7. | MBA Quizzard | Adya Singh, Udit Sahoo | Dr. Sraboni Dutta | 11.09.18 |
| 8. | Industrial visit to Jindal Steel and Power Limited, Patratu | Adya Singh, Udit Sahoo | Dr. Sraboni Dutta | 25.09.18 |

**9. List of Faculties**

| **Sr. No.** | **Name** | **Designation** | **TEQIP Sponsored (Yes / No)** |
|---|---|---|---|
| 1. | Dr.Shradha Shivani | Professor | |
| 2. | Dr. Utpal Baul | Professor | |
| 3. | Dr. Manju Bhagat | Professor | |
| 4. | Dr.R.N Bhagat | Professor | |
| 5. | Dr. Supriyo Roy | Associate Professor | |
| 6. | Dr.Sraboni Dutta | Associate Professor | |
| 7. | Dr. P.C Jha | Assistant Professor | |
| 8. | Dr. D.K Chand | Assistant Professor | |
| 9. | Dr. Anupam Ghosh | Assistant Professor | |
| 10. | Dr. Rohit Kumar Pandey | Assistant Professor | |
| 11. | Mr. Anand Kumar | Assistant Professor | |
| 12. | Dr. Rohini Jha | Assistant Professor | |
| 13. | Dr. Amitabh Verma | Assistant Professor | |
| 14. | Mr. S.K Singh | Assistant Professor | |

| | | | |
|---|---|---|---|
| 15. | Dr. Anand Prasad Sinha | Assistant Professor | |
| 16. | Mrs. Sujata Priyambada Dash | Assistant Professor | |
| 17. | Mrs. Shelly Srivastava | Assistant Professor | |

***10.*** **List of Adjunct Faculties**

| Sr. No. | Name | Designation | Affiliation |
|---|---|---|---|
| **1.** | Mr. Alok R. Chaturvedi | Professor | Krannert School of Management, Purdue University |

***11.*** **Board of Studies**

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | Dr. S. Shivani | Professor | Chairman |
| 2. | Dr. Utpal Baul | Professor | Internal |
| 3. | Dr. S.K. Bose | Professor | Internal |
| 4. | Dr. Manju Bhagat | Professor | Internal |
| 5. | Dr. R.N. Bhagat | Professor | Internal |
| 6. | Dr. Supriyo Roy | Associate Professor | Internal |
| 7. | Dr. Amitabh Verma | Assistant Professor | Internal |
| 8. | Dr. Vinay Sharma | Professor | External |
| 9. | Dr. G. Sahoo | Professor | External |
| Any two of the Following | | | |
| 1 | Prof. Partha Pratim Sengupta | Sr. Professor | External |
| 2. | Dr. A.K. Sarkar | Associate Professor | External |
| 3. | Dr. Priyobrata Bhattacharjee | DGM, Birla Corporation Ltd. | External |
| 4. | Dr. Shivesh Singh | Vice President, Bandhan Bank | External |

SECTION 7 OTHER INFORMATION

### *12.* Achievements of Students

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1 | Rishav Raman Tiwari | 2nd Position Turn the table | Management Department, BIT Mesra | 11/09/2018 |
| 2 | Abdur Rahim | 3rd Position Turn the table | Management Department, BIT Mesra | 11/09/2018 |
| 3 | Raunak Upadhayay | 1st Position Channel Surf | Management Department, BIT Mesra | 11/09/2018 |
| 4 | Yatika Garg | 1st Position ICICI Stock Mind | Management Department, BIT Mesra | 17/01/2019 |
| 5 | Oshin,Prachi,Priyanka, Diksha,Trishala,Jeeshna,Sonal,Debanjana,Jyoti,Kirti,Ranjana | Winner in Dance Competition at BITOSAV | BIT Mesra | 22/02/2019 |
| 6 | Anchal, Priyanka, Varsha, Ritu, Puja, Nikita, Meenu, Sweta, Nevedita, Natasha | 3rd in Dance Competition at BITOSAV | BIT Mesra | 22/02/2019 |
| 7 | Silky Kumari and Prerna Mitra | Runner Up Position Vajra'19 women's inter-college volleyball tournament. | BIT Mesra | 22/02/2019 |

### *13.* Distinguished Visitors from Industry/Academia/Research organizations

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| 1. | **Mr. Rajvardhan** **(**Sr. VP Olam International Limited**)** | **01.03.19** | |
| 2. | **Ms. Mridula Shekhar (Chief Marketing Officer, TATA AIA)** | **16.02.19** | |
| **3.** | **Mr. Ravi Pandey (Pre-sales Consultant at Kronos Incorporated)** | **16.02.19** | |

| | | | |
|---|---|---|---|
| **4.** | **Dr. Alok Chaturvedi (Professor of Information Systems at Krannert School of Management, Purdue University, USA)** | **8.02.19** | |
| **5.** | **Mr. Gyanendra Neeraj (AGM, SEBI Ranchi Local Office)** | **07.02.19** | |
| **6.** | **Mr. Brij Raj (General Manager of RBI Patna)** | **29.01.19** | |

| | | | |
|---|---|---|---|
| **7.** | **Ms. Smita Chakraborty (Zonal Head Marketing (East), ICICI Securities)** | **17.01.19** | |
| **8.** | **Dr. Pradip Bala (Associate Professor, IIM Ranchi)** | **11.01.19** | |

***14.*List of Distinguished Alumni**

| Sr. No | Name, Batch and Affiliation | Short Description |
|---|---|---|
| 1. | Mr V Vaidyanathan (88-90) | Founder and Executive Chairman, IDFC First Bank |
| *3.* | Mr Pulkit Trivedi (200-02) | Director, E Commerce, Travel and Financial Services, Facebook India. |
| *4.* | Mr Pankaj Sinha (200-02) | Managing Director, Coca Cola Srilanka & Maldives. |

| | | |
|---|---|---|
| 5 | Mr. Kamlesh Kumar Sharma (97-99) | Vice President and Chief Communication Officer, Hindustan Coca Cola Beverages Pvt Ltd |
| 6 | Ms. Mridula Shekhar (99-01) batch) | Chief Marketing Officer, TATA AIA Life Insurance) |

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**Department of Pharmaceutical Sciences and Technology**

SECTION 1 DEPARTMENTAL PROFILE

## 1. About the Department

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

- **Highlights of the Department:**

*i.* **B. Pharm. and M. Pharm. courses are recognized by both Pharmacy Council of India and AICTE.**

*ii.* **Ranked 11th 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)**
   - *a.* **Pharmaceutical Chemistry**
   - *b.* **Pharmaceutics**
   - *c.* **Pharmacology**
   - *d.* **Pharmaceutical Quality Assurance**
   - *e.* **Pharmacognosy**
3. **M. Pharm. Programme under AICTE Q.I.P (offered to academia sponsored candidates only).**
4. **Ph. D. (in Pharmaceutical Sciences and allied research applications).**

- **Research:**

- **An array of research strategies is being encouraged in the field of:**
  - *a.* Novel Drug Delivery Systems
  - *b.* Natural Products Chemistry
  - *c.* Development of Synthetic Medicinal Agents
  - *d.* Biochemical Pharmacology & Toxicology
  - *e.* 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. Sponsored Projects (Research and Consultancy)

*a)* Ongoing Projects

| Sr. No. | Project Title | PI / Co PI / Collaborator, if any | Funding Agency | Date of Sanction | Sanctioned Amount (Lacs) | Duration of the Project |
|---|---|---|---|---|---|---|
| *1.* | Packaging design and some clinical study of hair dyes | Dr. K. Jayaram Kumar | TRIFED, GOI. | 4.1.2019 | 6.3 | 7 months |
| *2.* | Development of a robust method for enrichment of shellac and isolation of Laccaic acid B from lac dye. | Dr. Manik | Tajna Shellac Pvt. Ltd. - Industry Sponsored Research Project | 19.5.2019 | 2.80 | 2 Years |
| *3.* | Phyto-chemicalcharacterization of polyphenols in Ocimumtenuiflorum 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 |
| *4.* | 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 |
| *5.* | 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 |
| *6.* | 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 |
| *7.* | Prophylactic | Dr. Animesh | BIRAC- | 11.03.2017 | 7.5 Lacs | 2 years |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Transdermal Patch Against Neurotoxin Poisoning Biological Warfare Situations | Ghosh | SRISTI (PMU) (Society for Research) | | | |
| *8.* | 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 |

*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 ofDifferent Types of Hair Dyes Using Myrobalan | Dr. K. Jayaram Kumar | GOI-TRIFED | 30.03.2016 | 9.83 | 2016-2018 2 years |

## SECTION 3 SEMINAR / CONFERENCE

**3. Seminar / Conferences / Short – Term Courses Conducted by the Department/Campus**

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| *1.* | PCI-sponsored "Continuing Education Program 2018' on "Recent Trends in Pharmaceutical Education and Research | Chief Coordinator: Dr. S. Samanta Coordinator: Dr. R. N. Gupta | Pharmacy Council of India | Sep 12-14, 2018 |
| *2.* | Patient Safety Career opportunity for Pharmacy Graduates' | Dr. R. N. Gupta & Dr. M. P. Chopra | IPA-Jharkhand State Branch | Sep 12, 2018 |
| *3.* | Patient Safety -Current scenario and Ways Forward | Dr. R. N. Gupta & Dr. M. P. Chopra | IPA-Jharkhand State Branch | Sep 24, 2018 |
| *4.* | Innovations and Challenges in Newer Drug Delivery Systems | Chief Coordinator: Dr. S. Samanta Coordinator: Dr. K. Jayaram Kumar Faculty coordinator: Dr. S. K. Singh & Dr. T. Bal | AICTE-QIP | Nov 30-Dec 13, 2018 |
| *5.* | AICTE-QIP: Cutting Edge& Emerging Technologies in Pharmaceutical Education & Research | Chief Coordinator: Dr. S. Samanta Coordinator: Dr. K. Jayaram Kumar Faculty coordinator: Dr. M. Ghosh & Dr. M. P. Chopra | AICTE-QIP | Jan 11- 24, 2019 |
| *6.* | Developmental path for phytopharmaceuticals | Chief Coordinator: Dr. S. Samanta | AICTE-QIP | Feb 1-15, 2019 |

| | | | | |
|---|---|---|---|---|
| | towards future perspective | Coordinator: Dr. K. Jayaram Kumar<br>Faculty coordinator: Dr. A. Pandey & Dr. S. Banerjee | | |
| *7.* | Drug Discovery, Designing and Development | Chief Coordinator: Dr. Swastika Ganguly,<br>Co-Cordinator: Dr. Venkatesan J. and Dr. Sandeep Singh | MakeIntern and e-cell IIT Kharagpur with Dept. of Pharm. Sci. and Tech., BIT Mesra | 5th to 7th March 2019. |
| *8.* | One Day Workshop on Tackling Antimicrobial Resistance in Tuberculosis by Dr. Sanjib Bhakta, Professor, University of London and UCL | Chief Coordinator: Dr. S. Samanta Co-Cordinator: Dr. Venkatesan J. | Dept. of Pharm. Sci. and Tech., BIT Mesra | April 11, 2019 |

**4. 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. Manik | ET702x Designing Learner-Centric MOOC | IITBombayX | IIT Bombay | MOOC Online | 02.08.18 to 06.09.18 |
| *2.* | Dr. Manik | FDP301x Mentoring Educators in Educational Technology | Pandit Madan Mohan Malaviya National Mission for Teachers and Teaching (PMMMNMTT), MHRD, GoI | IITBombayX, IIT Bombay | MOOC Online | 17.05.18 to 27.06.18 |
| *3.* | Dr. Manik | Learn Moodle 3.5 Basics | Learn Moodle MOOC run by Moodle HQ | Moodle HQ | MOOC Online | 01.06.18 to 31.06.18 |
| *4.* | Dr. Sandeep Kumar Singh | AICTE Sponsored Quality Improvement Programme on "Cutting Edge and Emerging Technologies in Pharmaceutical Education and Research" | AICTE | Dept. of Pharm. Sci. and Tech., BIT Mesra | BIT Mesra | 11.01.19 to 24.01.19 |
| *5.* | Dr. Sandeep Kumar Singh | MOOC Course on ANATOMY403.4x: Anatomy: Gastrointestinal, Reproductive and Endocrine Systems | University of Michigan | University of Michigan | MOOC Online | 24.01.19 |
| *6.* | Dr. Manik | Developmental Path of Phytopharmaceuticals towards Future Perspective | AICTE Sponsored Quality Improvement Program: 2018-19 | Dept. of Pharm. Sci. and Tech., BIT Mesra | BIT Mesra | 01.02.19 to 15.02.19 |
| *7.* | Dr. M. P. Chopra | Cutting Edge & Emerging Technologies in Pharmaceutical Education & research | AICTE | Dept. of Pharm. Sci. and Tech., BIT Mesra | BIT Mesra | 11.01.19 to 24.01.19 |

## *4.* Publications in Journals

International/National


1. Acharjee, S., Maity, T. K., Samanta, S., Mana, S., Chakraborty, T., Singha, T., Mondal, A. (2018). Antihyperglycemic activity of chalcone based novel 1-{3-[3-(substituted phenyl) prop-2-enoyl] phenyl} thioureas. Synthetic Communications an International Journal for Rapid Communication of Synthetic Organic Chemistry. DOI: 10.1080/00397911.2018.1539178.
2. Pramodh, B., Lokanath, N.K., Naveen, S., Naresh, P., Ganguly, S.,Panda, J. (2018).Molecular structure, Hirshfeld surface analysis, theoretical investigations and nonlinear optical properties of a novel crystalline chalcone derivative: (E)-1-(5-bromothiophen-2-yl)-3-(p-tolyl)prop-2-en-1-one.Journal of Molecular Structure 1161, 9.
3. Debnath, B., Wang, P., Yang, L., Zheng, Y., Ganguly, S. (2018). Synthesis and Biological Evaluation Of Novel (2-Oxo-3-(Arylimino)Indolin-1-Yl)-N-Aryl Propanamides As Anti-Human Immunodeficiency Agents. Asian Journal of Pharmaceutical and Clinical Research,11(12),1.
4. Ashok Kumar Varma, C., Kumar, K. J. (2018), Characterization and evaluation of smart releasing polysaccharide from yellow poinciana seed of Jharkhand Int. J. Biol. Macromol., 118, 2156-2162.
5. Molla, A., Ranjan, S., Rao, M. S., Dar, A. H., Shyam, M., Jayaprakash, V., Hussain, S. (2018) Borax Catalysed Domino Synthesis of Highly Functionalised spirooxindole and Chromenopyridine Derivatives: X-Ray Structure, Hirshfeld Surface Analysis and Molecular Docking Studies ChemistrySelect3, 8669-8677.
6. Nath, C., Badavath, V. N., Thakur, A., Ucar, G., Acevedo, O., Siddique, M. U. M., Jayaprakash, V. (2018) Curcumin-based pyrazoline analogues as selective inhibitors of human monoamine oxidase A MedChemComm 9, 1164-1171.
7. Venkatesan, J., Singh, S.K., Sukumaran, A., Kim. S.K., Shim, M.S. (2018). Preparation, characterization and biological applications of Biosynthesized Silver Nanoparticles with Chitosan-Fucoidan Coating, Molecules 1429, 1-12.
8. Ali, H., & Singh, S.K., (2018) Preparation and characterization of solid lipid nanoparticles of furosemide using quality by design, Particulate Science and Technology 36, 695-709.
9. Dey, S., Ghosh, M. (2018). A LC/MS-MS Guided Isolation of Laccaic Acid-A: A Potent Antimicrobial Agent. Indian J of Pharmaceutical Education and Research, 52, S287-S295
10. Behera, P.C., Ghosh, M. (2018). Evaluation of antioxidant, antimicrobial, and antiurolithiatic potential of different solvent extracts of Aerva lanata linn flowers. Pharmacognosy Magazine, 14, 53-57.
11. Donalisio, M., Cagno, V., Civra, A., Gibellini, A., Musumeci, G., Rittà, M., Ghosh, M., Lembom D. (2018). The traditional use of Vachellianilotica for sexually transmitted diseases is substantiated by the antiviral activity of its bark extract against sexually transmitted viruses. Journal of Ethnopharmacology, 213, 403-408
12. Dey, S., Shah, S., Ghosh, M., Karki, N., Basak, S., Sahoo, N.G. (2018). A Novel, Quick Column Switching RP-HPLC Guided Metabolite Profiling of Albendazole-Praziquantel in Rat Plasma: Designing New Combination Dosage Regimen with Higher Therapeutic Window. Current Analytical Chemistry, 14, 604-614.
13. Sarkar, B., Vyas, P., Haque, I., Mukhopadhyay, K. (2018). A rapid UPLC method for simultaneous separation and detection of anthocyanidins from Ocimum, Hibiscus and Syzygium species and estimation of their antioxidant activity. Journal of Liquid Chromatography & Related Technologies. 41(10), 658–667

14. Soni, S.R., Kumari, N., Bhunia, B. K., Sarkar, B., Mandal, B., Ghosh, A. (2018). Synthesis and characterization of a non-cytotoxic and biocompatible acrylamide grafted pullulan-Application in pH responsive controlled drug delivery. International Journal of Biological Macromolecules, 120, 753-762.
15. Soni, S.R., Kumari, N., Bhunia, B. K., Sarkar, B., Mandal, B., Ghosh, A. (2018). In vitro and in vivo evaluation of pirfenidone loaded acrylamide grafted pullulan-poly (vinyl alcohol) interpenetrating polymer networks. Carbohydrate Polymers, 202, 288-298.
16. Rangra, N. K., Samanta, S., Pradhan. K. K. (2019). A comprehensive review on phytopharmacological investigations of Acacia auriculiformis A. Cunn. ex Benth., Asian Pacific Journal of Tropical Biomedicine 9(1), 1.
17. Toppo, A. J., Chandra, S., Jha, D. &Mitra Mazumder, P. ( 2019). In vitro evaluation of anti-acetylcholinesterase and free radical scavenging potential of leaf extracts of some selected medicinal plants., Asian Pacific Journal of Tropical Biomedicine; 9(2): 60-65.
18. Jha, D.&Mitra Mazumder, P. (2019). High fat diet administration leads to the mitochondrial dysfunction and selectively alters the expression of class 1 GLUT protein in mice.Molecular Biology Reports; 46(2): 1727–1736
19. Das, D., Kumar, K. J. (2019) Enhancing resilient property of Kaempferia galanga rhizome starch by succinylation, Int. J. Biol. Macromol., 124, 1033-1039.
20. Deshkar, D., Gupta, R.N., Kumar, K. J., (2019) Studies on effect of co-processing on palmyrah and maize starch mixtures using DOE approach, Int. J. Biol. Macromol., 122, 417-424.
21. Mondal, A., Kumar, K. J.(2019)Effect of thermal modification on the release characteristics of pink potato starch of Jharkhand, India, Int. J. Biol. Macromol., 140, 1091-1097.
22. Abdelnabi, R. , Geraets, J. A. , Ma, Y. , Mirabelli, C. , Flatt, J. W., Domanska, A., Delang, L. , Jochmans, D., Kumar, T. A., Jayaprakash, V., Sinha, B. N., Leyssen, P., Butcher, S. J. , Neyts J. (2019) A Novel Druggable Interprotemer Pocket in the Capsid of Rhino- and Enteroviruses, PLoS Biology 17 (6), e3000281, 1-17.
23. Sonawane, V. R., Siddique, M. U. M., Gatchie, L., Williams, I. S., Bharate, S. B., Jayaprakash, V., Sinha, B. N., Chaudhuri, B. (2019) CYP Enzymes, Expressed within Live Human Suspension Cells, are superior to widely-used microsomal enzymes in identifying potent CYP1A1/CYP1B1 inhbitors: Identification of quinazolinones as CYP1A1/CYP1B1 inhibitors that efficiently reverse B[q]P toxicity and cisplatin resistance European Journal of Pharmaceutical Sciences 131, 177-194.
24. Sonawane, V., Siddique, M. U. M., Jadav, S. S., Sinha, B. N., Jayaprakash, V., Chaudhuri, B. (2019) Cink4T, a quinazolinone-based dual inhibitor of Cdk4 and tubulin polymerization, identified via ligand-based virtual screening, for efficient anticancer therapy European Journal of Medicinal Chemistry 165, 115-132.
25. Siddique, M. U. M., Barbhuiya, T. K., Sinha, B. N., Jayaprakash, V. (2019) Phytoestrogens and their synthetic analogues as substrate mimic inhibitors of CYP1B1 European Journal of Medicinal Chemistry 163, 28-36.
26. Hussain, A., Shakeel, F. Singh, S. K., Alsarra, I. A.,Faruk, A., Alanazi, & F. K., Christoper, G.V. P., (2019). Solidified SNEDDS for the oral delivery of rifampicin: Evaluation, proof of concept, in vivo kinetics, and in silico GastroPlus™ simulation, International Journal of Pharmaceutics 566, 203-217.
27. Kant, K., Lal, U. R., Ghosh, M. (2019). Antibacterial Activity with Bacterial Growth Kinetics and GC-MS Studies on Leaf and Tuber Extracts of Arisaematortuosum (Wall.) Schott. Indian Journal of Pharmaceutical Education and Research, 53, S280-S287.
28. Nayan, S., Mishra, C.K., Priyadarshini, D., Pradhan, K.K., Ghosh, M.,Pattnaik, A. (2019). Wound Healing Activity of Gel Formulated Leaves Extract of Neolamarckiacadamba (Roxb) Bosser. Indian Journal of Pharmaceutical Education and Research, 53, S416-S422

29. Kumar, G., Ghosh, M., Pandey, D. (2019). Method development for optimized green synthesis of gold nanoparticles from Millettiapinnata and their activity in Non-small cell lung cancer cell lines. IET Nanobiotechnology, 13, 626-633.
30. Kant, K., Lal, U. R., Kumar, A., Ghosh, M. (2019). A merged molecular docking, ADME-T and dynamics approaches towards the genus of Arisaema as herpes simplex virus type 1 and type 2 inhibitors. Computational Biology and Chemistry, 78, 217–226.
31. Mittal, A., Sardana, S., Pandey, A. (2019). Scientific validation of wound healing potential of Jasminum sambac Ait. South African Journal of Botany,121, 584-589.
32. Mehta, B. K., Singh, K. K., &Banerjee, S. (2019). Effect of Exercise on Type 2 Diabetes associated cognitive impairment in rats, Int J Neurosci, 31, 1-12.
33. Roy Sarkar, S.&Banerjee, S.(2019). Gut microbiota in neurodegenerative disorders, J Neuroimmunol, 9, 328:98-104
34. Mehta, B. K., Singh, K. K., &Banerjee, S.(2019). Minocycline reverses diabetes-associated cognitive impairment in rats, Pharmacol Rep, 71(4), 713-720.

**National Journals**

1. Biswas, A. &Banerjee, S. (2018). Effect of *Valeriana wallichii* on alcohol addiction in mice, Phcog Mag, 14, 613-618
2. Naresh, P., Ganguly, S., Panda, J. (2018). Synthesis, Antimicrobial Evaluation and Molecular Docking Studies of Novel Oxazolidinone-Thiophene Chalcone Hybrid Derivatives.Research Journal of Pharmacy and Technology,1, (12),5611.
3. Rangra, N. K., Samanta, S., Pradhan. K. K. (2019) In Vivo Anti-inflammatory Potential of Leaf Extracts of Acacia auriculiformis Benth., Indian Journal of Pharmaceutical Sciences 81(4).
4. Ganguly, S. & Shaw, P. (2019). Synthesis, Antimicrobial Activity and Binding Mode Analysis of Some New Diaryl Imidazole Derivatives. Indian Journal of Heterocyclic Chemistry, 29 (01), 5.
5. Panigrahi, N., Ganguly, S., Panda, J. (2019). Ultrasound Assisted Synthesis, Characterization and Antimicrobial Evaluation of Novel Oxazolidinone- Biphenyl Chalcone Hybrid Derivatives, Indian Journal of Pharmaceutical Education and Research, 53(2), 22.
6. Das, J., &Mitra Mazumder, P. (2018). Quercetin as a modulator of Diabetic macrovascular complications in murine and chick embryo models, Indian Journal of Pharmaceutical Education and Research; 52(4): 594 – 601.
7. Srivastava, S., Yadav, S. K. S., Roy Chowdhury, A., Thombare, N.K., &Mitra Mazumder, P. (2018). Evaluation Of Wound Healing Properties Of Tannin Isolated From Butea Gum., Multilogic In Science; 8(Special Issue (A)): 368 – 369.
8. Jha, D. &Mitra Mazumder, P. ( 2019). Amelioration of Metabolic Syndrome in High Fat Fed Mice by Hydro-ethanolic Fraction of M. longifolia (J. Koenig)., Indian Journal of Pharmaceutical Education and Research; 53(1):104-111.
9. Kishore L., Mazumder, P. M., Lal, U. R. (2019). FingerPrint Analysis by HPTLC, Isolation, Evaluation of its In-vitro Antioxidant Activity and Spectroscopic Characterization of Bioactive Compounds of Trigonellafoenum-graecum Seeds., International Journal of Pharmacognosy and Phytochemical Research; 11(2):53-59.
10. Kishore L., &Mazumder, P. M. (2019). Extraction and evaluation of Trigonella foenum-graecum L. seeds extract for attenuating the progression of nephropathy in diabetic rats., Asian Journal of Pharmacy and Pharmacology; 5(5):933-941.

6. Publications in Proceedings

1. Chatterjee, A., Kispotta, S., Mitra Mazumder, P. Sharma, N. Evaluation of immunomodulatory properties of active fraction of Bombax ceiba Linn leaves, In Proceedings of3rd Pharm. Tech. IAPST on International Conference Molecular mechanism of disease and novel therapeutic approaches" held at Centurion University Bhubaneshwar , Odisha, 19 – 20th January 2019, IAPST/ABS/P-05 (PAGE No. 3-4).
2. Agrawal, M., Jha, D., Abdullah, S. M., Mitra Mazumder, P. To develop and evaluate acute asthma model induced by ovalbumin and formaldehyde exposure in mice. In Proceedings of 7th International Symposium on Current Trends in Drug Discovery Research, CSIR-CDRI, Lucknow, February 20-23, 2019. abstract no P22-32.
3. Tripathi, S., Mitra Mazumder, P. Protective Effect Of Bioflavonoid (Chrysin) On Scopolamine Induced Memory Impairment In Albino Mice.In Proceedings of 2nd National Conference on "Recent Advances and Challenges in Healthcare", (REACH) held at GD Goenka University, Sohna, Haryana, on March 16, 2019 Abstract Number- 4
4. Kumari,U., Mitra Mazumder, P., Tripathi, S. Microelement leads to cognitive impairment in mice. In Proceedings of BCRCPiCON – 2019, held at Dr. B.C. Roy College of Pharmacy & Allied Health Sciences, Durgapur, West Bengal, on date: 4th & 5th February, 2019, Abstract book on page 35.
5. Kumar Varma, C. A., &Jayaram Kumar, K., Impact of carboxymethylation on the physicochemical, morphological and thermal characteristics of yellow poinciana seed polysaccharide. In Proceedings of the International Conference on Recent Trends in Science & Technology, S.S.S.K.R. InnaniMahavidyalaya, Karanja (Lad), 2018.
6. Deshkar, D., Bose, S., Jayaram Kumar, K., Physicochemical characterization and drug release profile of carboxymethylated starches prepared from pink potato. In Proceedings of the International Conference on Recent Trends in Science & Technology, S.S.S.K.R. InnaniMahavidyalaya, Karanja (Lad), 2018.
7. Dutta, D., Das, S., Ghosh, M., Validated HPTLC method for the determination of nintedanib in bulk drug. In Proceedings of The 22nd International Electronic Conference on Synthetic Organic Chemistry session Bioorganic, Medicinal and Natural Products Chemistry, 2018 (doi:10.3390/ecsoc-22-05675).
8. Baag, S., Pradhan, K. K., Stability Studies of Olopatadine hydrochloride by using UV-Visible Spectrophotometric method as per ICH guideline, In Proceedings of International Conference on Key concern and considerations in Pharmaceutical Sciences and Technology: South-East Asian Perspective, BCRCPicon-2019, WB.
9. Roy, A, Pradhan, K. K., Development of a Validated UV-Visible Spectrophotometric for the Estimation ofOlopatadine hydrochloride, In Proceedings of International Conference on Key concern and considerations in Pharmaceutical Sciences and Technology: South-East Asian Perspective, BCRCPicon-2019, WB.
10. Das, A, Pradhan, K. K.Development,Validation and Stability Study of Perinopril by using UV-Visible Spectrophotometric method as per ICH guideline , In Proceedings of International Conference on Key concern and considerations in Pharmaceutical Sciences and Technology: South-East Asian Perspective, BCRCPicon-2019, WB.

**7. Book:**

- Single Authored

*1.* **Ghosh, M.** (2019). Pharmaceutical Validation. Kindle

Direct Publishing (KDP) Amazon Digital Services, Inc. ISBN-10: 1076506569; ISBN-13: 9781076506566

- Edited Books
  1. **Jayaprakash, V.,** Castagnolo, D. & Ozkay, Y. (Eds.). (2019) Medicinal Chemistry of Neglected and Tropical Diseases: Advances in the Design and Synthesis of Antimicrobial Agents, Boca Raton, NY: CRC Press, Taylor & Francis Group
- Chapter(s) in Edited Book
  1. Venkatesan, J., Anil, S., **Singh, S. K.,** & Kim, S.K. (2018). Marine Polysaccharides: Advances and Multifaceted Applications, Ahmed, S., & Soundararajan, A., (Eds.), Recent Advances of Alginate Biomaterials in Tissue Engineering, Chapter 9, (pp. 207-233), Pan Stanford Publishing Pte. Ltd. (CRC Press).
  2. Das, S., Singh, A., Kar, S., Ghosh, R., Pal, M., Fatima, M., Singh, N., **Singh, S.K**., (2019). Pharmaceutical Quality by Design, Beg, S., and Hasnain, M.S., (Eds), Application of QbD Framework for Development of Self-Emulsifying Drug Delivery Systems, Chapter 14, (pp 297-350), Academic Press
  3. Anushree Verma, Pankaj Dagur, **Manik Ghosh** (2019). Chapter 2: Achyranthes aspera L. in Medicinal Plants in India: Importance and Cultivation - Volume – II, JAYA PUBLISHING HOUSE, Delhi-110089, ISBN: 978-93-89235-03-62.
  4. Pankaj Dagur, Anushree Verma, Rojalini Samanta, **Manik Ghosh** (2019). Chapter 24: Oroxylumindicum (L.) (Kurz) - Sona in Medicinal Plants in India: Importance and Cultivation - Volume – II, JAYA PUBLISHING HOUSE, Delhi-110089, ISBN: 978-93-89235-03-62.
  5. Joshi D, Roy S &**Banerjee S.** Prebiotics: A Functional Food in Health and Disease. In SC Mandal, V Mandal & T. Konishi (Eds.), Natural Products in Drug Discovery: An Integrated Approach (pp.507-523). Amsterdam, NL: Elsevier

## 8. 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. R. N. Gupta | IPA President Oration Award 2018 | Indian Pharmaceutical Association | National | 2018 |
| *2.* | Dr. R. N. Gupta | Prof. M L Khorana Best Paper Award 2017 | Indian Pharmaceutical Association | National | 2018 |
| *3.* | Dr. R. N. Gupta | Nominated as Vice Chairman in multidisciplinary Researcher | Rajendra Institute of Medical Sciences, Ranchi | State | 2018 |
| *4.* | Dr. R. N. Gupta | Nominated as Reviewer for National Formulary of India 2019 | Ministry of Health, Govt. of India | National | 2019 |
| *5.* | Dr. R. N. Gupta | Nominated as Expert member by Indian Pharmacopoeia Commission for Guidance manual | Indian Pharmacopoeia Commission Ministry of Health and FamilyWelfare, Govt. of India | National | 2019 |
| *6.* | Dr. Manik | Top Performer FDP301x Mentoring Educators in Educational Technology | Pandit Madan Mohan Malaviya National Mission for Teachers and Teaching (PMMMNMTT), MHRD, GoI, IIT Bombay | National | 2018 |
| *7.* | Dr M. P. Chopra | Pharma Achievement Award 2018 | IPGA | State | 2018 |

## *9.* Patents (Applied / Granted)

| Sr. No. | Name of the Inventor | Title of the Invention | Application / Patent No. (As applicable) | Year |
|---|---|---|---|---|
| 1. | Manik, Suddhasattya Dey, Kalidas Acharya | Automatic Mobile Phase Delivery System for HPLC | J-4/3552/2019-KOL 15/04/2019 | 2019 |

**10 Departmental Students' Activities**

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|
| *1.* | IPA "Pharma Cup Tournament 2019" | Yashaswee Raman Kumar Kush, Nikhil Kumar, Anand Kumar | Dr. R. N. Gupta& Dr. M. P. Chopra | Feb20-Mar22, 2019 |
| *2.* | 'Public Speaking' Organized by IPA, Jharkhand State Branch | Yashaswee Raman | Dr. R. N. Gupta& Dr. M. P. Chopra | August 29, 2018 |
| *3.* | Quiz Competition Organized by IPA, Jharkhand State Branch | Shivjyoti Mukherjee. Mr Dipen Roy and Asutosh Sengupta | Dr. R. N. Gupta& Dr. M. P. Chopra | October 26, 2018 |
| *4.* | State level NEC- 2018 | -- | Dr. R. N. Gupta& Dr. M. P. Chopra | October 30, 2018 |

**12. List of Faculties as on 30.6.2019**

| Sr. No. | Name | Designation | TEQIP Sponsored (Yes / No) |
|---|---|---|---|
| *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. Shakti Prasad Pattanayak | Assistant Professor | No |
| *15.* | Dr. Abhimanyu Dev | Assistant Professor | No |
| *16.* | Dr. Biswatrish Sarkar | Assistant Professor | No |
| *17.* | Dr. Trishna Bal | Assistant Professor | No |
| *18.* | Dr. Anima Pandey | Assistant Professor | No |
| *19.* | Dr. Neelima Sharma | Assistant Professor | No |
| *20.* | Dr. Sandeep Kumar Singh | Assistant Professor | No |
| *21.* | Dr. Animesh Ghosh | Assistant Professor | No |
| *22.* | Dr. Sugato Banerjee | Assistant Professor | No |
| *23.* | Dr. Kishanta Kumar Pradhan | Assistant Professor | No |
| *24.* | Dr. Mahendra Pratap Chopra | Assistant Professor | No |

***11.*** **Board of Studies**

| Sr. | Name of the Member | Designation | Role |
|---|---|---|---|

| **No.** | | (Kindly mention Ex-Officio, where applicable) | (Chairman/ Internal or External Member) |
|---|---|---|---|
| *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.) PapiyaMitraMazumder | 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. ManikGhosh | 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 |

***12.*** **Departmental Academic Committee**

| Sr. No. | Name of the Member | Designation | Role (Chairman/ Internal or External Member) |
|---|---|---|---|
| *1.* | Dr. S. Samanta(HOD) | Ex-Officio | Chairman |
| *2.* | Dr. P. R. P. Verma | Professor | InternalMember |
| *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. A. K. Pattnaik | Associate Professor | Internal Member |
| *11.* | Dr. Venkatesan J. | Associate Professor | Internal Member |
| *12.* | Dr. Manik Ghosh | Assistant Professor | Internal Member |
| *13.* | Dr. Abhimanyu Dev | Assistant Professor | Internal Member |
| *14.* | Dr. S. P. Pattanayak | Assistant Professor | Internal Member |
| *15.* | Dr. (Mrs.) Usha Jha | Professor, Dept. of Chemistry | External Member |
| *16.* | Dr. K. Mukhopadhyay | Professor, Dept. of Bio-Engineering | External Member |

## SECTION 7 OTHER INFORMATION

***13.*** **Publication by students**

1. **Soni, S.R., Kumari, N**., Bhunia, B. K., Sarkar, B., Mandal, B., Ghosh, A. (2018). Synthesis and characterization of a non-cytotoxic and biocompatible acrylamide grafted pullulan- Application in pH responsive controlled drug delivery. International Journal of Biological Macromolecules, 120, 753-762.
2. **Soni, S.R., Kumari, N.,**Bhunia, B. K., Sarkar, B., Mandal, B., Ghosh, A. (2018). In vitro and in vivo evaluation of pirfenidone loaded acrylamide grafted pullulan-poly (vinyl alcohol) interpenetrating polymer networks. Carbohydrate Polymers, 202, 288-298.
3. **Das, J**., & Mitra Mazumder, P. (2018). Quercetin as a modulator of Diabetic macrovascular complications in murine and chick embryo models, Indian Journal of Pharmaceutical Education and Research; 52(4): 594 – 601.
4. **Ali, H.,**& Singh, S.K., (2018) Preparation and characterization of solid lipid nanoparticles of furosemide using quality by design, Particulate Science and Technology 36, 695-709.
5. **Biswas, A.,**&Banerjee, S. (2018). Effect of *Valeriana wallichii* on alcohol addiction in mice, Phcog Mag, 14, 613-618.
6. **Jha, D**.& Mitra Mazumder, P. (2019). High fat diet administration leads to the mitochondrial dysfunction and selectively alters the expression of class 1 GLUT protein in mice. Molecular Biology Reports; 46(2): 1727–1736
7. **Jha, D**.& Mitra Mazumder, P. (2019). Amelioration of Metabolic Syndrome in High Fat Fed Mice by Hydro-ethanolic Fraction of M. longifolia (J. Koenig)., Indian Journal of Pharmaceutical Education and Research; 53(1):104-111.
8. **Hussain, A.,** Shakeel, F. Singh, S. K., Alsarra, I. A., Faruk, A., Alanazi, & F. K., Christoper, G.V. P., (2019). Solidified SNEDDS for the oral delivery of rifampicin: Evaluation, proof of concept, in vivo kinetics, and in silico GastroPlus$^{TM}$ simulation, International Journal of Pharmaceutics 566, 203-217.

9. **Das, S., Singh, A., Kar, S., Ghosh, R., Pal, M., Fatima, M.,Singh, N.,** Singh, S.K., **(2019).** Pharmaceutical Quality by Design, Beg, S., and Hasnain, M.S., (Eds), Application of QbD Framework for Development of Self-Emulsifying Drug Delivery Systems, Chapter 14, (pp 297-350), Academic Press.
10. **Mehta, B. K.,** Singh, K. K., &Banerjee, S. (2019). Effect of Exercise on Type 2 Diabetes associated cognitive impairment in rats, Int J Neurosci, 31, 1-12.
11. **Roy Sarkar, S.** &Banerjee, S. (2019). Gut microbiota in neurodegenerative disorders, J Neuroimmunol, 9, 328:98-104.
12. **Mehta, B. K.** &Banerjee, S. (2019). Minocycline reverses diabetes-associated cognitive impairment in rats, Pharmacol Rep, 71(4), 713-720.

**18.Achievements of Students**

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | Bina K Mehta | Article of the year at Indian Journal of Pharmaceutical Sciences | Indian Pharmaceutical Association (IPA) | Dec 12, 2018 New Delhi |
| 2. | Suparna Roy Sarkar | Best Poster award at 6th International Congress of Society of Ethnopharmacology | Society for Ethnopharmacology, India& Manipal College of Pharmaceutical Sciences | Feb 10, 2019 Manipal Academy of Higher Education, Manipal |

**19.Distinguished Visitors from Industry/Academia/Research organizations**

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| *1.* | Dr. Subhas Mandal, Chairman, RAD, IPA and Vice President IPA | September 12, 2018 | |
| *2.* | Dr. Mohan Raj, Secretary of IPA, Anantapur Branch | January 11, 2019 | |
| *3.* | Dr.Probir Banerjee, President IPA, Bengal State branch | February 10, 2019 | |

**20.List of Distinguished Alumni**

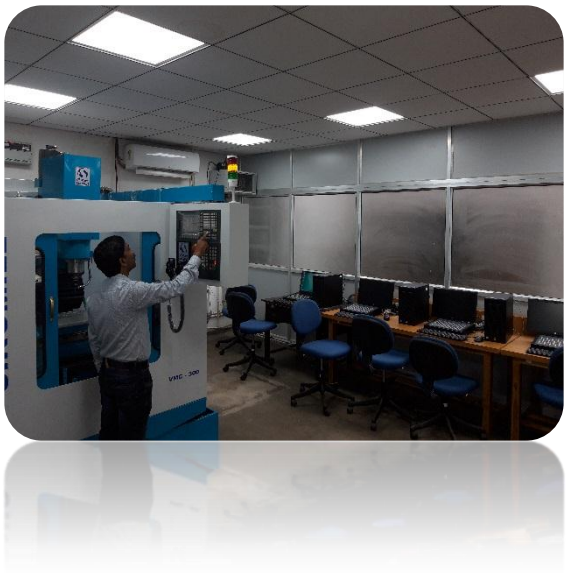
| Sr. No | Name, Batch and Affiliation | Short Description |
|---|---|---|
| 1. | Dr. C. Veeresham<br>Professor, Kakatiya University, Warrangal<br>(1984 Batch, M. Pharm) | He is the Ex-Principal & Head, Dept. of Pharmacy, Kaktiya University, Warrangal |
| 2. | Ms. Ritu Sahay<br>Drug Controller<br>Jharkhand State<br>(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<br>(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<br>Vice President / Global Head Small Molecules CMC Dev at Roche-GenentechPharma Group<br>(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. | Dr. Susmita Chanda<br>Executive VP, Preclinical Development at Aligos Therapeutics USA<br>(1984 batch M. Pharm) | She has over 20 years of experience in the pharmaceutical industry in drug discovery and development safety assessment for a variety of therapeutic indications |

**21.Any other relevant information**

1. World Pharmacist Day was celebrated on September 25, 2018 by IPA Jharkhand State branch in collaboration with Dept. of Pharmaceutical Sciences and Technology, BIT, Mesra. Dr. R.N. Gupta (Chairman, Hospital Pharmacy Division, IPA), Dr. S. Samanta (HOD), Dr. B. N. Sinha (Vice President, IPA-State Branch), Dr. M. P. Chopra (Secretary, IPA-State Branch) and Dr. P. M. Mazumdar (Council Member, IPA-State Branch)addressed the gatheringat BIT auditorium on the occasion.
2. IPA Jharkhand state branch celebrated 57th National Pharmacy Week (NPW) at Ranchi. The inaugural programme was held at auditorium of Dept of Pharmaceutical Sciences & Technology on 21st November2018.
3. Dr. Swastika Ganguly organized a virtual lecture on "Cardiac Pulmonary Resuscitation" given by Dr. Vemuri Murthy, Faculty of the Department of EmergencyMedicine, University of Illinois at Chicago on 17$^{th}$ January 2019.

**Department of Production Engineering**
**Annual Report 2018-19**

## SECTION 1 DEPARTMENTAL PROFILE



### 2. 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

### 3. Sponsored Projects (Research and Consultancy)

*c)* Ongoing Projects

| Sr. No. | Project Title | PI / Co PI / Collaborator, if | Funding Agency | Date of Sanction | Sanctioned Amount | Duration of the Project |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| | | any | | | | |
| 1. | "Additive Manufacturing of Aluminium based alloys" | Dr. S.V.S.K. Deepak Kumar (PI)<br>Dr. S. K. Jha,<br>Dr. Joyjeet Ghose,<br>Dr. Animesh Mandal,<br>Dr. Ajit Behera | NPIU, MHRD, India TEQIP-III (CRS ) | 18.06.2019 | Rs. 12,85,000.00 | June-2019 to Sept-2020 |
| 2. | "Experimental investigation on the Micro-EDM characteristics of Aluminium based composites" | Dr. Shailesh Kumar Dewangan,<br>Dr. S.V.S.K. Deepak Kumar (Co-PI)<br>Dr. S. K. Jha,<br>Dr. Vishesh Ranjan Kar | NPIU, MHRD, India TEQIP-III (CRS) | 18.06.2019 | Rs. 5,94,000.00 | June-2019 to Sept-2020 |
| 3. | "Thixoforming of Aluminum based alloys and composites" | Dr. S. V. S. K. Deepak Kumar (PI) | TEQIP-III (SEED Money Scheme) | July-2018 | Rs. 2,00,000.00 | July-2018 to June--2020 |
| 4. | Experimental investigation on the Micro-EDM characteristics of Aluminium based Composites. | PI- Shailesh Kumar Dewangan | CRS-TEQIP III | 18 June 2019 | 594000 | 1 year |
| 5. | Studies on Metal Inert Gas Welding based Additive Manufacturing of Aluminium Alloys | PI – Sonu Rajak | CRS-TEQIP III | 18 June 2019 | 1450000/- | 1 year |
| 6. | Modelling and analysis of Nonlinear Energy Sink with Energy Harvester | PI – Prakash Kumar | CRS-TEQIP III | 18 June 2019 | 1345000/- | 1 Year |

SECTION 3 SEMINAR / CONFERENCE

**3. 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. L N Pattanaik | 7th International & 28th All India | TEQIP-III | Anna University, | Anna University, | 13-15 Dec 2018 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | Manufacturing Technology, Design and Research Conference 2018 (AIMTDR 2018) | | Chennai | Chennai | |
| 2. | Dr. Bappa Acherjee | One-week Short Term Training Program on Induction Training | Self-financed | National Institute of Technical Teachers' Training and Research, Kolkata | National Institute of Technical Teachers' Training and Research, Kolkata | July 13-20, 2018 |
| 3 | Dr. S.V.S.K. Deepak Kumar | SMART Foundry-2018 (workshop) | VNIT-Nagpur | IIT Bombay & VNIT-Nagpur | VNIT-Nagpur | 31.08.2018 to 02.09.2018 |
| 4 | Dr. S.V.S.K. Deepak Kumar | MARFF-2018 (workshop) | TEQIP-III | B.I.T Sindri, | B.I.T Sindri, Dhanbad | 3.10.2018 to 05.10.2018 |
| 5 | Dr. S.V.S.K. Deepak Kumar | Faculty Development Program on Digital Pedagogies(FDP-2019) | NPIU, TEQIP-III | NPIU, TEQIP-III IIT Hyderabad | IIT Hyderabad | 10.06.2019 to 14.06.2019 |
| 6 | Dr. S.V.S.K. Deepak Kumar | ICPCM-2018 (Conference) | NIT Rourkela | NIT Rourkela | NIT Rourkela | 06.12.2018 to 08.12.2018 |
| 7 | Dr. S.V.S.K. Deepak Kumar | FLAME-2018 (Conference) | Amity Univ. Noida | Amity University | Amity Univ. Noida | 3.10.2018 to 05.10.2018 |
| 8 | Dr. S.V.S.K. Deepak Kumar | ICDP-2019 (Conference) | AICTE, New Delhi, NPIU | AICTE, New Delhi, NPIU | AICTE, New Delhi | 01.04.2019 to 03.04.2019 |
| 9 | Dr. S.V.S.K. Deepak Kumar | ICAMME-2019 (Conference) | KIIT Bhubaneswar | KIIT Bhubaneswar | KIIT Bhubaneswar | 15.03.2019 to 17.03.2019 |
| 10 | Dr. S.V.S.K. Deepak Kumar | MMMAC-2019 (workshop) | TEQIP-III | TEQIP-III | NIT Jamshedpur | 20.05.2019 to 25.05.2019 |
| 11 | Dr. S.V.S.K. Deepak Kumar | APAM-2019 (workshop) | TEQIP-III, NPIU | TEQIP-III, NPIU | NIT Rourkela | 23.05.2019 to 27.05.2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 12 | Dr. S.V.S.K. Deepak Kumar | ICSD-2019 (Conference) | JRU-Ranchi | JRU-Ranchi | JRU-Ranchi | 01.06.2019 to 02.06.2019 |
| 13 | Dr. Shailesh Kumar Dewangan | Advance Pedagogies; Active learning and digital tools | TEQIP-III | IIT Hyderabad | IIT Hyderabad | 10-14 June 2019 |

## SECTION 4 RESEARCH PUBLICATIONS

***4.*** **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 100: 1719-1730.
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.
3. Acherjee B., Maity D., Prakash S., Kuar A.S. & Mitra S. (2018) Optimal process parameter selection of underwater Nd:YAG laser micro-channeling on PMMA by firefly algorithm and flower pollination algorithm, Journal of the Chinese Society of Mechanical Engineers, 39 (5), 515-533.
4. Abhilash J., Apeksha & Acherjee B. (2018) Simulation of friction stir welding using thermo-mechanical coupled finite element method, IOP Conf. Series: Materials Science and Engineering, 455, 012113.
5. Jamal F., Rath S. & Acherjee B. (2019) Process modelling of flat rolling of steel, Advances in Materials and Processing Technologies, 5 (1), 104-113.
6. Subhendu, N., Jena, H., Priyanka and Deepak Sahini (2018). Analysis of Mechanical Properties of Jute Epoxy Composite with Cenosphere Filler, Journal of Silicon. 11(2), 659-671.
7. Dewangan, S. K. Tiger, C. & Nayak N. (2018). Optimization of EDM Process Parameters by using PCA based Grey Relation Analysis. International Journal of Mechanical and Production Engineering, 6 (2), ISSN: 2320-2092.
8. Dewangan, S. K. Kumar P. & Jha. S. K. Optimization of Quality and Productivity of Wire EDM by using $L_9$ Orthogonal Array. Advances in Industrial and Production Engineering, Lecture Notes in Mechanical Engineering. 2019, 93-100. ISBN no. 978-981-13-6411-2, 978-981-13-6412-9.
9. Md. Shahzar Jawaid, Dr. Sharad Chandra Srivastava, Dr. S. Datta, Savings of Total Energy Consumption By Using Sequencing Rule-Based System, International Journal of Engineering Technology Science and Research (IJETSR) 2018, Volume 5, Issue 4. ISSN 2394 – 3386

**5**. **Publications in Proceedings:** (International/National)

1. L. N. Pattanaik and Ch. Koteswarapavan, "Assessment of Lean Manufacturing Using Data Envelopment Analysis (DEA) on Value Stream Maps", Proceedings of 1st International Conference on Innovative Product Design and Intelligent Manufacturing System (ICIPDIMS-19), 17-18 May, 2019, NIT-Rourkela.
2. S. Deepak kumar, Shailesh Dewangan, S. K. Parida, S. K. Jha, "Optimization of EDM process parameters of Thixoformed A356-5$TiB_2$ in-situ composites", Proc. of ICPCM-2018, NIT Rourkela, 6-8th Dec-2018, p.42.
3. Sourav Chakraborty, P Arvind, Shalini Sinha, S Deepak Kumar, (2019). Implementation of IoT based PLC in

Smart Relaying Applications, 6(2), 249-252. ISSN 2394 – 7780.

4. Md. Shahzar Jawaid, Dr. S. C. Srivastava, Dr. S. Datta, "An approach of minimizing energy consumption in the machining system using job sequences varying technique", 7 th International & amp; 28 th All India Manufacturing Technology, Design and Research Conference2018 (AIMTDR 2018 Conference)

**6. Book:**

- Chapter(s) in Edited Book

1. 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)
2. 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
3. Acherjee B. (2019). FEM - ANN sequential modelling of laser transmission welding for prediction of weld pool dimensions. In K. Kumar, N. Kumari & J.P. Davim (Eds), Non-Conventional Machining in Modern Manufacturing Systems (pp. 249-261), IGI Global, ISBN: 9781522561613 (Hardcover), 9781522561620 (eBook).
4. S. Deepak kumar, Joyjeet Ghose, A. Mandal, Thixoforming of light-weight alloys and composites: an approach toward sustainable manufacturing, Sustainable Engineering Products and Manufacturing Technologies. Chapter No. 2, Elsevier, Academic Press May-2019, Pages 25-43, 2019. ISBN:978-0-12-816564-5.
5. S. Deepak Kumar, A. Chattree, S.K Jha, N.K Singh,A. Mandal, Deformation Behavior of Semi-solid Forged A356-5TiB2 Nano-In Situ Composites" Advances in Industrial & Production Engineering, Lecture notes in Mechanical Engineering, Publisher: Springer, Singapore, pp. 77-84,2019.ISBN:978-981-13-6411-2.
6. S. Deepak Kumar, D. Karthik, S. K. Parida, S. K. Jha, Optimization of Semi-solid-Forging Parameters of A356-5TiB2 In Situ Composites Using ANSYS and DEFORM Simulation, Innovations in Soft Computing & Information Technology, Publisher: Springer, Singapore, pp. 279-286,2019.ISBN:978-981-13-3184-8.

## SECTION 5 ACTIVITIES/ FACULTY MEMBERS / BOS

**7. 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 | No |

| | | | |
|---|---|---|---|
| | | Professor | |
| 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 | Dr. Prakash Kumar | Assistant Professor | Yes |
| 12 | Dr. Sonu Rajak | Assistant Professor | Yes |
| 13 | Mr. Vivek Prabhakar | Assistant Professor | Yes |

***8.*** **List of Adjunct Faculties**

| Sr. No. | Name ( Please mention Dr. / Prof./ Mr./ Mrs. / Ms. , as applicable) | Designation | Affiliation |
|---|---|---|---|
| 1. | Mr. Pawan Kumar Bageria | Adjunct Fellow | President, Tata Motors Group SBU, Tata Technologies, Bangalore |

***9.*** **Board of Studies**

| Sr. No. | Name of the Member | Designation (Kindly mention Ex-Officio, where applicable) | Role (Chairman/ Internal or External Member) |
|---|---|---|---|
| 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 |
| 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 - | External Member |

| | | | |
|---|---|---|---|
| | | 302017<br>Mobile: +91-9950344500<br>Email: dangayach@gmail.com | |
| 12. | Dr. Saroj Kumar Patel<br>Professor | Department of Mechanical Engineering, National Institute of Technology Rourkela, Odisha, India - 769008<br>Mobile: +91 9437484951<br>E-mail: skpatel@nitrkl.ac.in | External Member |
| 13. | Dr. Ghanshyam Das<br>Professor | Head, Department of Metallurgy & Materials, National Institute of Foundry & Forge Technology (NIFFT), Hatia - 834003, Ranchi, Jharkhand<br>Mobile: +91-7352060676<br>Email: drgdas.nifft@gov.in | External Member |
| 14. | Mr. Rohit Saboo<br>President and CEO<br>(Alumni of Prod. Department) | National Engineering Industries Limited, Jaipur - 302006<br>Mobile: +91-1412222335<br>Email: rsaboo@nbcbearings.in | External Member |
| 15. | Mr. P.Pathak<br>DGM | Rolling Technology<br>R&D SAIL, Ranchi<br>Mobile: +91-8986880223<br>Email: ppathak@sail-rdcis.com | External Member |
| 16. | Mr. Rajneesh Kumar,<br>Chief Manager (E&M)<br>(Alumni of Prod. Department) | CMPDIL,Coal India Limited, Ranchi - 834031<br>Mobile: +91-9431102543<br>Email: rajneesh.kumar@coalindia.in | External Member |
| 17. | Mr. Prabhakar Kadapa<br>CEO | AVTEC Limited, Delhi.<br>Email: prabhakar.kadapa@avtec.in | External Member |
| 18. | Mr. Vishwajit Kumar<br>Senior Manager | Iron Making Division, MECON Ltd, Doranda, Ranchi-834002<br>Mobile: 09431186722<br>Email: vishwajit@mecon.co.in | External Member |

## SECTION 6 OTHER INFORMATION

*10.* **Publication by students, if any**


1. 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)
2. 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.
3. L. N. Pattanaik and Ch. Koteswarapavan, "Assessment of Lean Manufacturing Using Data Envelopment Analysis (DEA) on Value Stream Maps", Proceedings of 1st International Conference on Innovative Product Design and Intelligent Manufacturing System (ICIPDIMS-19), 17-18 May, 2019, NIT-Rourkela.
4. 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 100: 1719-1730.
5. 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.
6. Abhilash J., Apeksha and Acherjee B. (2018) Simulation of friction stir welding using thermo-mechanical coupled finite element method, IOP Conf. Series: Materials Science and Engineering, 455, 012113.

## *11.* Achievements of Students

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | ADITYA SINGH (BE/10664/16) | Rank 1 in Cyber Threat Competition, 3 Lakhs cash prize and pre placement offer | Deloitte Techno Utsav | April 16 2019 Bangaluru |
| 2. | ADITYA KUMAR LAL (BE/10016/16) | Rank 1 in Cyber Threat Competition, 3 Lakhs cash prize and pre placement offer | Deloitte Techno Utsav | April 16 2019 Bangaluru |

## *12.* Distinguished Visitors from Industry/Academia/Research organizations

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| 1. | Invited lecture in One Day Workshop on the topic "FEM using Hyperworks" by Mr. Ghanshyam Gope, Faculty, CAD/CAM/CAE from Jharkhand Government MSME Tool Room,Ranchi And Mr. Purnendu Pankaj, Engineer - Training | 31/08/2018. | **Insert picture here** |
| 2. | Expert lecture in One Day Workshop- "Manufacturing Simulation Technologies" by Mr. Kaushik Maity, Manager, Altem Technologies, Bangalore | 15/03/2019 | |
| 3 | Expert lecture in One Day Workshop- "X-RayResidual stress analyzer" by Mr. Amit Bandyopadhyay, General Manager (Business Development) and Mr. Ryo Masuya (Productapplication specialist), of Pulstec, Japan | 24/05/2019 | |

## DEPARTMENT OF REMOTE SENSING

SECTION 1 DEPARTMENTAL PROFILE

### 1. About the Department

Department of Remote Sensing was established in 1997 with an aim to meet the increasing demand for qualified manpower in this rapidly developing field. Application of Remote Sensing / Geoinformatics techniques using tools such as Geographic Information System (GIS) and Global Positioning System (GPS) in various activities including resources evaluation, environmental monitoring and land use/land cover mapping etc, has grown considerably during the last few decades and RS data products are increasingly being used for plan formulation at all levels. An essential pre-requisite to partaking in these opportunities is the building of various indigenous capacities for the development and utilization of space science and technology.

Department of Remote Sensing is a FIST-DST sponsored department and is also supported by UGC SAP (Special Assistance Programme).A multi-disciplinary team of faculty members is the strength of the department and they are also engaged in various R&D project and consultancy projects from various government and international organizations. The department also participates in the Distance learning Programmes (EDUSAT) conducted by IIRS, ISRO, Dehradun.

**Postgraduate Programmes offered by the department**: Department offers two Post Graduate Programmes of 2 years duration: (a) M. Tech. in Remote Sensing, (b) M.Sc. in Geoinformatics. **Our M.Tech Programme is NBA-Accredited.** In M.Tech. course, first year focuses on Theoretical and Practical Aspects of Remote Sensing, GIS, GPS, Photogrammetry, Programming, Geostatistics and various geo-spatial applications. Second year focuses mainly on developing Independent Research Skill through individual geo-spatial research project.

For MSC, the period of theoretical study is spread over 3 semesters with examination requirements at the end of each semester. In Fourth Semester, main emphasis is on Research Project.

**Department of Remote Sensing also offers Ph.D. programme in inter-disciplinary mode**.

The Department has state-of-art laboratories equipped with latest software, hardware to provide hands-on training to its postgraduate students. The Department has seven dedicated labs catering to Digital Image Processing (DIP), GIS, Digital Photogrammetry, Satellite Navigation & GPS, Remote Sensing Research & Project, and departmental library for Satellite Data and Maps.

Major equipment in different labs are as follows:

1. Leica Smart Station (Total Station with DGPS)
2. Leica Deferential Global Positioning System
3. Unmanned Aerial Surveillance Vehicle with Thermal Sensor, Optical Sensor and Surveillance Camera

4. Ground Water Resistivity Meter
5. Hand held GPS
6. i7 desktop with IR emitter, 3D vision kit, 3D monitor & Leica Photogrammetry Suit
7. i7 desktop with 24" TFT monitor with ERDAS Image Processing Software
8. i5 desktop with 19" TFT monitor with Arc GIS software
9. A0 plotter & scanner ( Multi-function printer)

## SECTION 2 RESEARCH PROJECTS

**2. Sponsored Projects (Research and Consultancy)**

a) Ongoing Projects

| S. No. | Project Title | PI / Co PI / Collaborator, if any | Funding Agency | Date of Sanction | Sanctioned Amount | Duration of the Project |
|---|---|---|---|---|---|---|
| 1. | SMG-BIT Agri Research Project | Dr. C. Jeganathan<br>Dr. A.P. Krishna<br>Dr. Vandana Bhattacharjee<br>Dr. Abhijit Mustafi<br>Dr. Sudhanshu Mishra | Skymap Global Pvt. Ltd. | 01-01-19 | 7.5 Lacs | 1 year |
| 2. | "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<br>Co-PI Dr. A.P. Krishna & Dr. Gulab Singh IITB | SAC, ISRO, Ahmedabad | 14.05.2018 | 13.44 Lacs | 2 Years |
| 3. | Land Use Land Cover Mapping of Eastern UP and Western Bihar – 3rd Cycle | Dr. C. Jeganathan (PI)<br>Dr. A.P. Krishna (Co-PI)<br>Dr. V.S. Rathore (Co-PI)<br>Mrs. Richa Sharma (Co-PI)<br>Mr. Nitish Kr. Sinha (Co-PI) | National Remote Sensing Centre (NRSC), ISRO, Hyderabad | August, 2016 | 51.48 Lacs | 3 years |
| 4. | 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 | Dr.Mili Ghosh Nee Lala (PI),<br>Dr. A. P. Krishna (Co-PI),<br>Dr.C.Jeganathan (Co-PI) | ISRO, Bangalore | 18-08-16 | 17.43 Lacs | 3 |
| 5. | Refinement of | Dr.Mili Ghosh Nee | ISRO, | 17-08-16 | 17.20 | 3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | existing algorithms for FeO and $TiO_2$ mapping using HySI data and a comparative assessment of the HySI generated maps with that of Clementine and Moon Mineralogy Mapper-derived FeO and $TiO_2$ products | Lala(PI), Dr.A.P.Krishna (Co-PI), | Bangalore | | Lacs | |
| 6 | National Wasteland Change Analysis - 2015-2016 | Dr.V.S.Rathore (PI), Dr.A.P.Krishna(Co-PI), Dr.C.Jeganathan Mr.Nitish Kr.Sinha(Co-PI) | NRSC, ISRO, Hyderabad | 2016 (22.07.2016 and LUCMD:BH-UP-NWCA:3 CY:30) | 13.25 Lacs | Ongoing |

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. | Ground Water Quality Mapping In Parts Of MP State under RGNDWM Ph IV | PI: Dr. V. S. Rathore | National Remote Sensing Center, | 2.6.11 | 45.25 Lacs | 2.6.11 - 31.12.18 |
| 2 | National Land degradation Mapping- 2nd Cycle | Dr. A.P. Krishna (PI) Dr. C. Jeganathan (Co-PI) Dr. V.S. Rathore (Co-PI) Mr. Nitish Kr. Sinha | NRSC, ISRO, Hyderabad | 26-05-16 | 16.66 Lacs | Jul, 2018 |
| 3. | IWMP-KANKE | Executive Committee (Dr. V.S. RATHORE, Nodal Officer, Head, DRS, Project Coordinator, Dean Student Welfare, Project Director, Head, Civil & Environmental Engg, Mission Director) | Mord, dolr, Govt of India | 30.06.11 | 5.94 Lacs | 30.06.11 -31.3.2019 |
| 4. | Locating Ground Water Table | Dr. V.S. Rathore | ONGC, Bokaro | 20.08.2018 | 1.20 Lacs | completed |

| | | | | | | |
|---|---|---|---|---|---|---|
| | near Bokaro town at 16 different locations | | | | | |

## SECTION 3 SEMINAR / CONFERENCE

### 3. Seminar / Conferences / Short – Term Courses Conducted by the Department/Campus

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| 1. | Workshop on National Information System for Climate and Environment Studies (NICES) Data Products | Dr. Mili Ghosh (BIT Mesra) Dr. D. Dutta(NRSC) | NRSC (ISRO), Hyderabad | 31-01-19 |

### 4. Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

| Sr. No. | Name of the Faculty | Title of the Conference/ Seminar | Funding Agency | Organizers | Venue | Date |
|---|---|---|---|---|---|---|
| 1. | Dr.A.P.Krishna Dr.Mili Ghosh | 2nd Lunar Science Meet | ISRO | ISRO | ISRO HQ, Bangalore | 13-14th June,2019 |
| 2. | Dr.V.S.Rathore | Advancements in Remote Seensing Data Analysis | Department of Civil Engineering, IIT Roorkee | IIT Roorkee | IIT Roorkee | 17 – 21 June 2019 |
| 3 | Mrs.R.N.K.Sharma | 4th Int. Conf. on Adv. Machine Learning Tech. & Appli(AMLTA-19) | Self financed | SRGE,Cairo University, Egypt | Cairo | 28-30 th Mar, 2019 |
| 4. | Dr.A.P.Krishna<br>Dr.C.Jeganathan<br>Dr.N.Patel<br>Dr.V.S.Rathore<br>Mrs.RNK Sharma<br>Dr.Mili Ghosh Nee Lala | Workshop on National Information System for Climate and Environment Studies (NICES) Data Products | ISRO | Dept. of Remote Sensing, BIT Mesra and NRSC, ISRO | BIT Mesra, Ranchi | 31st Jan,2019 |
| | Dr. C. Jeganathan, | International Conference on Environmental Challenges and Sustainability (ICECS 2018) | Central University of Jharkhand, Brambe, Ranchi | Central University of Jharkhand, Brambe, Ranchi | Central University of Jharkhand, Brambe, Ranchi | 31st Oct to 2nd Nov, 2018 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Dr. C. Jeganathan, | Advancing Drought Monitoring,Prediction and Management Capabilities | India-UK Water Centre | India-UK Water Centre | Lancaster University, UK | 18th Sep to 20th Sep, 2018 |
| | Dr. V.S. Rathore | One day workshop prevention of harassment at work place | TEQIP-III | BIT Mesra, Ranchi | BIT Mesra, Ranchi | June 25, 2019 |
| | Dr. V.S. Rathore | One day workshop on "Intellectual Property Rights Management" | TEQIP- III | IPR Cell , BIT Mesra, Ranchi | R&D Seminar Hall, BIT Mesra, Ranchi | June 10, 2019 |
| | Dr. C. Jeganathan | One day workshop on "Intellectual Property Rights Management" | TEQIP- III | IPR Cell , BIT Mesra, Ranchi | R&D Seminar Hall, BIT Mesra, Ranchi | June 10, 2019 |

## SECTION 4 RESEARCH PUBLICATIONS

***5.*** **Publications in Journals :** (International/National)

1. Suman Sinha, Santra, A., Sharma, L.K., Jeganathan, C., Nathawat, M.S., Das, A.K. and Shiv Mohan (2018). Multi-polarized Radarsat-2 satellite sensor in assessing forest vigor from above ground biomass. Journal of Forestry Research, 29(4), 1139-1145.
2. Niraj Priyadarshi, V.M. Chowdary, Iswar Chandra Das, Jeganathan C., Y.K. Srivastava, G Srinivasa Rao, Uday Raj & Chandra Shekhar Jha (2018). Wavelet and non-parametric statistical based approach for long term land cover trend analysis using time series EVI data. Geocarto International. DOI: 10.1080/10106049.2018.1520925.
3. Saptarshi Mondal and Jeganathan, C. (2018). Evaluating the performance of multi-class and single-class classification approaches for mountain agriculture extraction using time series NDVI. Journal of Indian Society of Remote Sensing, 46(12), 2045-2055.
4. Margaret Johnson, Petrutza C. Caragea, Wendy Meiring**,** C. Jeganathan and Peter M. Atkinson (2018). Bayesian Dynamic Linear Model for estimation of phenological events from Remote sensing data. Journal of Agricultural, Biological and Environmental Statistics. DOI: 10.1007/s13253-018-00338-y.
5. Suman Sinha, A. Santra, A. K. Das,L. K. Sharma, Shiv Mohan,M. S. Nathawat, S. S. Mitra &C. Jeganathan (2019). Accounting tropical forest carbon stock with synergistic use of space-borne ALOS PALSAR and COSMO-Skymed SAR sensors. Tropical Ecology, 60(1), 83-93. DOI 10.1007/s42965-019-00011-6.
6. Hazra, P and Krishna, A P, 2019. Spatio-temporal change assessment of glacier extent in Sikkim Himalaya, India using geospatial techniques, Environmental Earth Sciences, DOI: 10.1007/s12665-019-8390-1;
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

8. Kumar, A, Krishna, A P, 2018. Assessment of groundwater potential zones in coal mining impacted hard-rock terrain of India by integrating geospatial and analytic hierarchy process (AHP) approach, Geocarto International, Vol. 33, No. 2, pp. 105–129; DOI: 10.1080/10106049.2016.1232314;
9. Gulab Singh, Rashmi Malik, Shradha Mohanty, Virendra Singh Rathore, Kanta Yamada, Maito Umemura, and Yoshio Yamaguchi (2019). Seven-Component Scattering Power Decomposition of POLSAR Coherency Matrix, IEEE Transactions On Geoscience And Remote Sensing. **DOI:** 10.1109/TGRS.2019.2920762Pandey, A.K. and Sharma, Richa, N.K Sharma , G. P. (2019). Forest-cover change over Chotanagpur– An empirical approach on periodic sequence, Indian Forester, 145 (6) : 501-512.
10. Mushtaq F, Lala M G N, Anand A(2018). Spatio-temporal variability of lightning activity over J&K region and its relationship with topography, vegetation cover, and absorbing aerosol index (AAI). Journal of Atmospheric and Solar-Terrestrial Physics, 179, 281-292.
11. Mushtaq F, Ahmad P and Lala M G N, (2018).Spatio-temporal change of surface temperature of Himalayan Lake and its inter-relation with water quality and growth in aquatic vegetation.Geocarto International, DOI: 10.1080/10106049.2019.1590467.

**6**. **Publications in Proceedings:** (International/National)

1. Swadhina Koley and Jeganathan, C. (2018). Geospatial technology: the emerging global trend towards the new horizon of sustainable agriculture. National Conference for Education in Science, Mathematics & Technology, Organised by Taurian World School, Ranchi, 11th August 2018. (2nd Best Paper Award).
2. Beependra Singh, C. Jeganathan and V.S. Rathore. (2018). Remote Sensing Technology for Monitoring and Modelling Ecological Processes, National Conference on Education in Science, Mathematics and Technology (NCESMT), at Taurian World School, Ranchi, Jharkhand on 11th August 2018.
3. Beependra Singh, C. Jeganathan and V.S. Rathore (2019). Assessment of Ecosystem health: A case study of Saranda forest, West Singhbhum district of Jharkhand, Central Indian Landscape Symposium, at Melghat, Maharashtra, India 3rd - 6th January, 2019 (Poster Presentation) (Sponsored by Network for Conserving Central India).
4. Farzana Shaheen, Nayama Valsa Scariah,Mili Ghosh Nee Lala, A.P. Krishna, 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).
5. Jeganathan, C. and Saptarshi Mondal (2018). Pitfalls, Challenges and Opportunities in time-series remote sensing, International Conference on Environmental Challenges and Sustainability (ICECS 2018) during 31st October to 2nd November 2018. (Presentation only).
6. Jeganathan, C., Saptarshi Mondal, Sudhanshu Shekhar Jha and Beependra Singh (2018). Drought Modelling and Challenges. India-UK Water Centre Workshop on "Advancing Drought Monitoring, Prediction and Management Capabilities", 18th to 20th

September, 2018, Lancaster University, UK. (Presentation Only).

7. Jeganathan, C. (2018). Forest Phenology outlook from Space Observation. Two-days Brainstorming workshop on "Future Prospects of Space Technology in Forest and Environmental Applications". Space Application Centre (SAC), ISRO, Ahmedabad during 27-28 June, 2018. (Presentation only).
8. Shaheen F., Krishna A.P., Rathore V.S. (2019) Delineation of Mine Fire Pockets in Jharia Coalfield, India, using Thermal Remote Sensing. In: Sahana S., Bhattacharjee V. (eds) Advances in Computational Intelligence. Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore
9. Beependra Singh, C. Jeganathan, V.S. Rathore (2018). Remote Sensing Technology for Monitoring and Modelling Ecological Processes. In: Er. Yogesh Popat (ed.) Conference Proceedings of National conference for Education in Science, Mathematics and Technology (NCESMT/TGC/120917) vol.1 (1), pp. 62-69 held on 11 August 2018, Ranchi, India.
10. Mukhopadhy, U.K., Richa Sharma, N. K., Anwar, Shamama and Atmadeep Dutta (2019). Correlating Thermal Anomaly with Earthquake Occurrences using Remote Sensing Data, Advances in Intelligent Systems and Computing, vol 921. Springer, pp 863-875.
11. Rangarajan V G, Ghosh M, Seasonal Variations in SEB Components over Gale crater, European Planetary Science Congress (EPSC-2018), Organized by Europlanet Society at TU Berlin, Germany on 16-21st Sep, 2018 .
12. Rangarajan V G, Ghosh M,Localised seasonal dust deposition at Gale crater: Inferences from THEMIS thermal inertia, 50th Lunar & Planetary Science Conference (LPSC-2019), Organized by Lunar and Planetary Institute and NASA at The Woodlands, Texas on18-22nd Mar, 2019
13. Bose S,Krishna A.P and Ghosh M**,** Chandrayaan-1:India's maiden mission to Moon, National Conference for Education in Science, Mathematics & Technology(NCESMT), at Taurian Wo rld School, Ranchi, Jharkhand on 11th August 2018.
14. Nayama V S, Ghosh M and Krishna A.P, Mars Exploration: An overview of Indian and International Mars Missions, National Conference for Education in Science, Mathematics & Technology (NCESMT), at Taurian World School, Ranchi, Jharkhand on 11th August 2018.
15. Mukhopadhy,U.K., Sharma, Richa,N.K. ,Anwar, Shamama and Dutta,Atmadeep(2019). Correlating Thermal Anomaly with Earthquake Occurrences using Remote Sensing Data, Advances in Intelligent Systems and Computing, vol 921. Springer, pp 863-875. *https://doi.org/10.1007/978-3-030-14118-9_85*

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**Book:**

- Chapter(s) in Edited Book

1. Somak Das, C. Jeganathan, Saptarshi Mondal & Richa Sharma (2018). Geo-spatial modelling of Human-Elephant conflicts in Dalma Wildlife Santuary and its surroundings in India. In: Michael Campbell (eds.) Geomatics and Conservation Biology, Nova Science Publishers, Inc., USA, ISBN: 978-1-53614-469-7.

2. C. Jeganathan and Praveen Kumar (2019). Mapping Agriculture Dynamics and Associated Flood Impacts in Bihar using Time-series Satellite Data. In: Sheraz Mahdi, Syed (Ed.), Climate Change and Agriculture in India: Impact and Adaptation, DOI: 10.1007/978-3-319-90086-5_5.

## 8. 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.C.Jeganathan | Delivered an invited talk in the AICTE sponsored Quality Improvement Program "Developmental Path of Phytopharmaceuticals towards Future Perspective" | **Department of Pharmaceutical Sciences and Technology** | National | 14th Feb,2019 |
| 2. | Mrs.RNK Sharma | Chaired a session in on "Soft Computing Applications in Environmental and Earth Sciences" in 4th Int. Conf. on Adv. Machine Learning Tech. & Appli(AMLTA-19) | SRGE,Cairo University, Egypt | International | 28-30 th Mar, 2019 |
| 3. | Dr. V.S.Rathore | "SAMAJ BANDU AWARD in the category of RS, GIS and Space Sciences | Prantik Care the Earth a non-Governmental organisation, Birbhum West Bengal | National | August 2nd ,2018 |
| 4. | Dr. C. Jeganathan | Selected as "Associate Editor "in the Prestigeous "Journal of Indian Society of Remote Sensing", Springer. | Indian Society of Remote Sensing, Dehradun | International | 2nd August 2018 |
| 5. | Dr. C. Jeganathan | Selected as "Executive Committee member " | Indian Society of Agriculture Information Technology (INSAIT) | National | 25th Feb, 2019 |
| 6. | Dr. C. Jeganathan | Invited to be an external expert for Scientist selection committee | North-Eastern Space Application Center (NESAC, Dept. of Space), Shillong | National | 3rd April 2019 |

## *10.* Patents (Applied / Granted)Nil

| Sr. No. | Name of the Inventor | Title of the | Application / Patent No. | Year |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| | | Invention | (As applicable) | |
| 1. | | | | |
| 2. | | | | |

**10. MoUs / Collaborations**

| Sr. No. | Name of Organisation / University | Purpose / Area | Year / Duration |
|---|---|---|---|
| 1. | | | |
| 2. | | | |

SECTION 6 ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

***7.*** **Departmental Students' Activities**

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|
| 1. | Study Tour to Western Ghats | **-** | Mrs.RN.K.Sharma | 18-02-19 to 01-03-19 |
| 2. | Field Tour to Dipa Toli Cant | **-** | Dr.V.S.Rathore | **09-02-19** |
| 3. | **Internship by students** | | | |
| | Monalisa Nath | | | $10^{th}$ June to $9^{th}$ July, 2019 at National Crime Records Bureau, MHA, New Delhi |
| | Rakhee Banerjee<br>Vivek Rakshit<br>Saptoparni Ghosh | | | 17-12-18 to 15-01-19 at Geological Survey of India ,Kolkata |
| | Soumita Patra<br>Kaushik<br>Surojit Mandal<br>Moumita Das | | | 10-12-18 to 10-01-19 at CMPDI, Ranchi |
| 4 | **Project internship**<br>Subhadeep Maishal | | | 01-10-18 to 31-04-19 at Department of Ocean Engineering & Naval Architecture, IIT Kharagpur |
| | Rashmi Singh | | | July, 2018 to June, 2019 at IIT Mumbai |
| 5. | **Paper presentation in conferences** | | | |

| | | | | |
|---|---|---|---|---|
| | Farzana Shaheen | | | 29-31 Jan, 2019 at National Space Science Symposium, |
| | Swadhina Koley | | | 11th Aug, 2018 at National Conference for Education in Science, Mathematics & Technology, Organised by Taurian World School, **2nd Best paper award** |
| | Nayma Valsa Scariah | | | 11th Aug, 2018 at National Conference for Education in Science, Mathematics & Technology, Organised by Taurian World School |
| | Subhadyoti | | | 11th Aug, 2018 at National Conference for Education in Science, Mathematics & Technology, Organised by Taurian World School, 2nd |
| | Beependra | | | 11th Aug, 2018 at National Conference for Education in Science, Mathematics & Technology, Organised by Taurian World School |

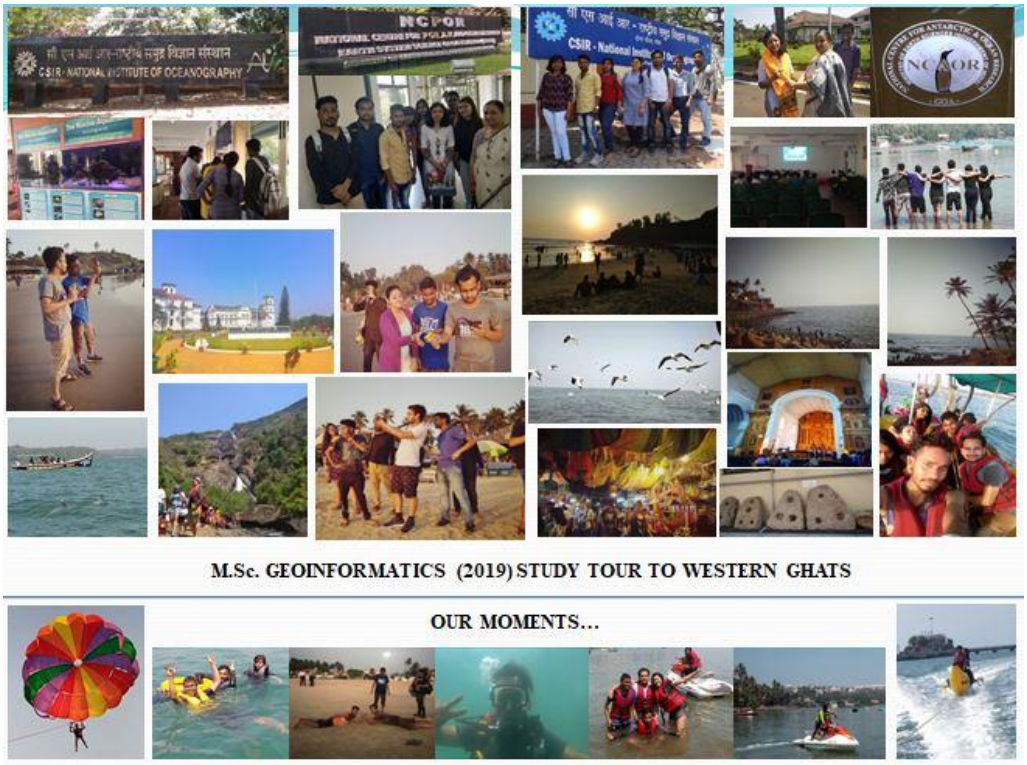


**Fig: Study Tour (18-02-19 to 01-03-19)**

**Fig: Field Tour (Feb,2019)**

**12. List of Faculties as on 30.6.2019**

| Sr. No. | Name | Designation | TEQIP Sponsored |
|---|---|---|---|
| 1. | Dr.C.Jeganathan | Professor & Head | No |
| 2. | Dr.A.P.Krishna | Professor | No |
| 3. | Dr.N.Patel | Professor | No |

| | | | |
|---|---|---|---|
| 4. | Dr.V.S.Rathore | Assistant Professor | No |
| 5. | Mrs.RNK Sharma | Assistant Professor | No |
| 6. | Dr.Mili Ghosh Nee Lala | Assistant Professor | No |

***14.*** **Board of Studies**

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | Dr. C. Jeganathan | Professor, DRS, BIT, Mesra | Chairman |
| 2. | Dr. A. K. Saraf | Professor, IIT-Roorkee | External Member |
| 3. | Dr. Dibyendu Dutta | Scientist-SG, NRSC, ISRO, Hyderabad | External Member |
| 4. | Dr. A. K. Sinha | Professor, CEE, BIT, Mesra | External member |
| 5. | Dr. Mrs. Manjari Chakraborti | Professor, DArch, BIT, Mesra | External member |
| 6. | Dr. A. P. Krishna | Professor | Internal member |
| 7. | Dr. N. Patel | Professor | Internal member |
| 8. | Dr. V.S. Rathore | Asst. Professor | Internal member |
| 9. | Dr. Mili Ghosh | Asst. Professor | Internal member |
| 10. | Mrs. Richa Sharma | Asst. Professor | Internal member |

***15.*** **Departmental Academic Committee**

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | Dr. C. Jeganathan | Professor, DRS, BIT, Mesra | Chairman |
| 2. | Dr. D. J. Biswas | Professor, DArch, BIT, Mesra | External Member |
| 3. | Dr. A. K. Sinha | Professor, CEE, BIT, Mesra | External Member |
| 4. | Dr. A. P. Krishna | Professor | Internal member |
| 5. | Dr. N. Patel | Professor | Internal member |
| 6. | Dr. V.S. Rathore | Asst. Professor | Internal member |
| 7. | Dr. Mili Ghosh | Asst. Professor | Internal member |

## SECTION 7 OTHER INFORMATION

***16.*** **Publication by students, if any**

1. **Saptarshi Mondal** and Jeganathan, C. (2018). Evaluating the performance of multi-class and single-class classification approaches for mountain agriculture extraction using time series NDVI. Journal of Indian Society of Remote Sensing, 46(12), 2045-2055. (Dec, 2018)
2. **Hazra, P** and Krishna, A P, 2019. Spatio-temporal change assessment of glacier extent in Sikkim Himalaya, India using geospatial techniques, Environmental Earth Sciences, DOI: 10.1007/s12665-019-8390-1;

3. **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
4. **Kumar, A**, Krishna, A P, 2018. Assessment of groundwater potential zones in coal mining impacted hard-rock terrain of India by integrating geospatial and analytic hierarchy process (AHP) approach, Geocarto International, Vol. 33, No. 2, pp. 105–129; DOI: 10.1080/10106049.2016.1232314;
5. **Amar Kumar Kathwas** and Nilanchal Patel, 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 (SCOPUS indexed)** (Accepted for Publication)
6. Gulab Singh, **Rashmi Malik**, Shradha Mohanty, **Virendra Singh Rathore**, Kanta Yamada, Maito Umemura, and Yoshio Yamaguchi (2019).Seven-Component Scattering Power Decomposition of POLSAR Coherency Matrix, IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING.

7. **Mukhopadhy,U.K.,** Sharma, Richa,N.K. , Anwar, Shamama and **Dutta,Atmadeep**(2019). Correlating Thermal Anomaly with Earthquake Occurrences using Remote Sensing Data, Advances in Intelligent Systems and Computing, vol 921. Springer, pp 863-875.

8. **Bose S**,Krishna A.P and Ghosh M,(2018). Chandrayaan-1:India's maiden mission to Moon, National Conference for Education in Science, Mathematics & Technology (NCESMT), at Taurian World School, Ranchi, Jharkhand on 11th August 2018.

9. **Nayama V S**, Ghosh M and Krishna A.P,(2018). Mars Exploration: An overview of Indian and International Mars Missions, National Conference for Education in Science, Mathematics & Technology (NCESMT), at Taurian World School, Ranchi, Jharkhand on 11th August 2018.

10. **Somak Das**, C. Jeganathan, **Saptarshi Mondal**& Richa Sharma (2018). Geo-spatial modelling of Human-Elephant conflicts in Dalma Wildlife Santuary and its surroundings in India. In: Michael Campbell (eds.) Geomatics and Conservation Biology, Nova Science Publishers, Inc., USA, ISBN: 978-1-53614-469-7. (Sep, 2018).
11. C. Jeganathan and **Praveen Kumar** (2019). Mapping Agriculture Dynamics and Associated Flood Impacts in Bihar using Time-series Satellite Data. In: Sheraz Mahdi, Syed (Ed.), Climate Change and Agriculture in India: Impact and Adaptation, DOI: 10.1007/978-3-319-90086-5_5. (January 2019).
12. **Shaheen F**., Krishna A.P., Rathore V.S. (2019) Delineation of Mine Fire Pockets in Jharia Coalfield, India, using Thermal Remote Sensing. In: Sahana S., Bhattacharjee V. (eds) Advances in Computational Intelligence. Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore
13. **Farzana Shaheen, Nayama Valsa Scariah**, Mili Ghosh Nee Lala, A.P. Krishna, 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. Mukhopadhy,U.K., Sharma, Richa,N.K. ,Anwar, Shamama and Dutta,Atmadeep(2019). Correlating Thermal Anomaly with Earthquake Occurrences using Remote Sensing Data, Advances in Intelligent Systems and Computing, vol 921. Springer, pp 863-875. *https://doi.org/10.1007/978-3-030-14118-9_85*
15.

## *16.* Achievements of Students

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | Swadhina Koley | 2nd Best paper award | Taurian World School, | 11th Aug, 2018 at National Conference for Education in Science, Mathematics & Technology |

## *17.* Distinguished Visitors from Industry/Academia/Research organizations

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| 1 | Dr. C.S.Dubey, Prof., Dept. of Geology, University of Delhi | 14-10-18 | |
| 2 | Dr. S.K.Ghosh, Prof. & Head, Dept. of Civil Engg., IIT Roorkee. | 18-04-19 | |
| 3 | Dr.D.Dutta, Scientist, NRSC | 31-01-19 | |

| | | | |
|---|---|---|---|
| 4 | Shri Mahesh P, Scientist, NRSC | 31-01-19 | |
| 5 | Shri A. Bhuvana Chandra, Scientist, NRSC | 31-01-19 | |
| 6 | Miss Shalu, Scientist, NRSC | 31-01-19 | |
| 7 | Mr. Sarvesh Singhal, Director, JSAC and Special Secretary (IT) | 31-01-19 | |
| 8 | Dr.Pradosh Nag and Dr.Atasi, Centre for Knowledge Ideas and Development Studies, Calcutta | 18-03-19 | |

| | | | |
|---|---|---|---|
| 9 | Dr. Harish Karnatak, Scientist/Engineer - SF & Head , Geoweb Services, IT & Distance Learning (GIT&DL) Department ,IIRS Dehradun | 9th to 10th April, 2019 | |
| 10 | Dr.Omkar Dixit, Professor, Department of Civil Engineering, IIT Kanpur | 19-11-18 | |
| 11 | Dr.Padmini Pani, **Associate Professor** Centre for the Study of Regional Development, School of Social Sciences,JNU, New Delhi | 17-05-19 | |

**Other Notable Achievements :**

1. Dr. C. Jeganathan has been selected as an Associate Editor in the Prestigeous "Journal of Indian Society of Remote Sensing", Springer.
2. Dr. C. Jeganathan has been selected as an Executive Committee member of "Indian Society of Agriculture Information Technology (INSAIT)".
3. Dr. C. Jeganathan visited Lancaster University, UK as he was one of the few selected Indian Delegates (fully sponsored) to participate and make presentation in India-UK Water Center Workshop on "Advancing Drought Monitoring, Prediction and Management Capabilities" organised during 18th to 20th September, 2018, Lancaster University, UK.
4. Ms. Swadhina Koley, Ph.D. student working under Dr. C. Jeganathan received 2nd best Paper Presentation award in the National Conference for Education in Science, Mathematics & Technology, Organised by Taurian World School, Ranchi, 11th August 2018.
5. Dr. C. Jeganathan was invited to be an external exprt for Scientist selction committee of North-Eastern Space Application Center (NESAC, Dept. of Space), Shillong.

6. Dr.A.P.Krishna and Dr.Mili Ghosh Participation in the Second Lunar Science Meet on Chandrayan-2 Mission at Antariksh Bhawan, Indian Space Research organisation(ISRO), Bangalore (June 13-14, 2019)
7. Dr.N.Patel has Editorship in Journals
    i. Member, Editorial Board, Arabian Journal of Geosciences (Springer), SCIE, Scopus.
    ii. Member, Editorial Board, International Journal of Sustainable Development and World Ecology (Taylor & Francis), Scopus.
    iii. Member, Editorial Board (Associate Editor), Journal of Forestry Research (Springer), SCIE, Scopus.
    iv. Journal of Ecology and Sustainable Development, Sweden.
    v. Member, Editorial Board, Journal of Earth Sciences and Climate Change, USA (IF=1.0).
    vi. Member, Editorial Board, International Journal of Agricultural and Statistical Sciences (ESCI, Scopus, NAAS rating 5.13).
    vii. Member, Journal of Environmental Geology, Pulsus Journals.
    viii. Member, Editorial Board, AMBIENCIA, Brazil.
    ix. Member, Advisory Board, Advances in Applied Research, NAAS Rating (2016) 3.22.
    x. Member, Editorial Board, Journal of Advanced Research in Remote Sensing and Geoscience, Advance Research Publications.
8. Dr. V.S.Rathore has been Conferred the "SAMAJ BANDU AWARD" in the category of RS, GIS and Space Sciences by Prantik Care the Earth a non-Governmental organisation, Birbhum West BengalonAugust 2nd ,2018.
9. Mrs.R N K Sharma attended and Chaired a session entitled "Soft Computing Applications in Environmental and Earth Sciences (SCAEES 2019)" in an international Conference, Advanced Machine Learning Technologies and Applications (AMLTA2019), Cairo , Egypt, March 2019.

**Fig : UK trip of Dr.Jeganathan(Sept, 2018)**

Egypt Visit of Mrs.R.N.KSharma(March,2019)

**Fig:2nd Lunar Science Meet attended by Dr.A.P.Krishna and Dr.Mili Ghosh(June,2019)**

***18.*** **List of Distinguished Alumni**

| Sr.No | Name, Batch and Affiliation | Short Description |
|---|---|---|
| 1 | Dr. C. P. Singh(1998-2000) | Scientist / Engineer - SF , Agriculture, Biosphere and Hydrology Group , Space Application Center |
| 2 | Mr. Amitabh Kumar(1998-2000) | Scientist / Engineer - SF & Deputy Project Director Chandrayaan-2 at SAC (ISRO) |
| 3 | Dr. Milap Punia (1997-99) | Professor, Centre for the Study of Regional Development, School of Social Sciences, JNU |
| 4 | Dr. Poonam S Tiwari (1997-99) | Scientist / Engineer – SF,Remote Sensing and Geoinformatics Group, IIRS Dehradun |
| 5 | Dr. Hina Pandey (1997-99) | Scientist / Engineer – SF, Photogrammetry and Remote Sensing IIRS |

**Department of Space Engineering and Rocketry**
**Annual Report 2018-19**

SECTION 1 DEPARTMENTAL PROFILE

*4.* **About the Department**:

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

The departmental facilities consist of laboratories housing equipment for 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 fire test stands for solid, liquid and hybrid rockets, propellant preparation and characterization facilities. Combustion laboratory is equipped with pressure-controlled combustion set ups, stereomicroscope, and optical pyrometer. A separate instrumentation laboratory is equipped with simultaneous thermal analyzer (DSC + TGA + DTG), UV-Vis spectrophotometer, bomb calorimeter, and Brookfield viscometer. 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.

## SECTION 2 RESEARCH PROJECTS

### *5.* **Sponsored Projects (Research and Consultancy)**

*e)* Ongoing Projects

| Sr. No. | Project Title | PI / Co PI / Collaborator, if any | Funding Agency | Date of Sanction | Sanctioned Amount | Duration of the Project |
|---|---|---|---|---|---|---|
| 1. | Open Cavity Studies at Supersonic Speed | Dr. Sudip Das, PI<br>Dr. Priyank Kumar, Co-PI | RESPOND, ISRO | June 2016 | 24.46 Lakhs | 3 years |
| 2. | Effect of protrusion on regression rate and combustion instabilities at varying L/D of hybrid rocket motor | Dr. Rajiv Kumar | SERB, DST, Govt. of India | 23rd August, 2016 | 31.20 Lakhs | 3 Years |
| 3. | Steady & Unsteady Investigation on Slender Body at High Angles of Attack | Dr. Priyank Kumar, PI<br>Dr. Sudip Das, Co-PI | AR&DB | 29.06.2018 | 26.86 Lakhs | 3 Years |

## SECTION 3 SEMINAR / CONFERENCE

### 3. Seminar / Conferences / Short – Term Courses Conducted by the Department/Campus

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| 1. | 32nd National Convention of Aerospace Engineers & National Seminar on Advances in Aerospace Sciences and Technologies | Dr. Sudip Das<br>Dr. Priyank Kumar | IE(I) and BIT Mesra | 27.10.2018 to 28.10.2018 |

**4. 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. Sudip Das | 32nd National Convention of Aerospace Engineers, | IE (I) | IE(I) and BIT | BIT Mesra, Ranchi | Oct. 27-28, 2018 |
| 2 | Dr. Mohan Varma | 32nd National Convention of Aerospace Engineers, | IE (I) | IE(I) and BIT | BIT Mesra, Ranchi | Oct. 27-28, 2018 |
| 3 | Dr. Priyank Kumar | 32nd National Convention of Aerospace Engineers, | IE (I) | IE(I) and BIT | BIT Mesra, Ranchi | Oct. 27-28, 2018 |
| 4 | Dr. Rajiv Kumar | 12th National Workshop on Recent Trends in Software Testing | TEQIP-III | Department of Computer Science and Engineering, BIT Mesra, Ranchi | BIT Mesra, Ranchi | May 20-24, 2019 |
| 5 | Dr. Rajiv Kumar | One day Workshop on "National Information System for Climate and Environment Studies Data Products" | NRSC, ISRO, Hyderabad | Department of Remote Sensing, BIT Mesra, Ranchi | BIT Mesra, Ranchi | Jan. 31, 2019 |
| 6 | Dr. Rajiv Kumar | One day workshop on "Intellectual Property Rights Management" | TEQIP- III | IPR Cell , BIT Mesra, Ranchi | BIT Mesra, Ranchi | June10, 2019 |
| 7 | Dr. Rajiv Kumar | One Day Workshop on "Awareness of Fire Safety" | TEQIP- III | Determent of Chemical Engineering, BIT Mesra, Ranchi | R&D Seminar Hall BIT Mesra, Ranchi | March29, 2019 |
| 8 | Dr. Rajiv Kumar | One-week workshop on "Emerging Techniques in Mechanical Engineering and Its Applications | TEQIP- III | Determent of Mechanical Engineering, BIT Mesra, Ranchi | R&D Seminar Hall, BIT Mesra, Ranchi | Feb. 25 to March 2, 2019 |
| 9 | Dr. Partha Mondal | 20th Annual AeSI CFD Symposium, Bangalore, | TEQIP-III | NAL, Bangalore | Bangalore | August 9-10, 2018. |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | India | | | | |
| 10 | Dr. Partha Mondal | 32nd National Convention of Aerospace Engineers | TEQIP-III | BIT Mesra, Ranchi | BIT Mesra, Ranchi | October 27 – 28, 2018 |
| 11 | Dr. Shelly Biswas | 32nd National Convention of Aerospace Engineers | TEQIP-III | BIT Mesra, Ranchi | BIT Mesra, Ranchi | October 27 – 28, 2018 |
| 12 | Dr. Shelly Biswas | Designing Learner-Centric MOOC, IITBombay | NA | an online learning initiative of Indian Institute of Technology Bombay | NA | Aug 2 to Sept6 2018. |
| 13 | Dr. Shelly Biswas | Pitfalls and Remedies under BIT & ICT Mumbai | TEQIP-III | BIT Mesra, Ranchi and ICT Mumbai | BIT Mesra, Ranchi | Dec17, 2018 |
| 14 | Dr. Shelly Biswas | Workshop on "National Information System for Climate and Environment Studies (NICES) Data Products | NRSC, ISRO Hyderabad | Department of Remote Sensing, BIT Mesra, Ranchi | CAAT Hall, BIT Mesra, Ranchi | January31, 2019 |
| 15 | Dr. Shelly Biswas | One Week Workshop onEmerging Trends in Mechanical Engineering and its Application | TEQIP-III | Department of Mechanical Engineering, BIT Mesra, Ranchi | R&D Seminar Hall, BIT Mesra, Ranchi | March5-9, 2019 |
| 16 | Dr. Shelly Biswas | NRB DRDO Sponsored workshop on Awareness of fire safety | NRB DRDO | NRB DRDO | BIT Mesra, Ranchi | March29, 2019 |
| 17 | Dr. Shelly Biswas | 12$^{th}$ National Workshop on Recent Trends in Software Testing | TEQIP-III | Department of Computer Science & Engineering, BIT Mesra, Ranchi | BIT Mesra, Ranchi | May 20-24, 2019 |
| 18 | Dr. Shelly Biswas | One day workshop prevention of harassment at work place | TEQIP-III | BIT Mesra, Ranchi | BIT Mesra, Ranchi | June 25, 2019 |

***8.*** **Publications in Journals :** (International/National) : **09**

1. Aravind, S. and Kumar, R. (2019). "Supersonic Combustion of Hydrogen Using an Improved Strut Injection Scheme", International Journal of Hydrogen Energy, 44, 257-6270.

2. Das, S., Kumar,P. and Prasad,J. K. (2019). "Hypersonic Flow over Hemispherical Blunt Body with Spikes", Scientia Iranica, 26(1), 358-366.

3. Dinesh M. and Kumar, R. (2018). "Development of EVA-SEBS based Wax Fuel for Hybrid Rocket Applications", Acta Astronautica, 152, 325-334.

4. Dinesh M. and Kumar, R., Utilities of Multi-Protrusion as the Performance Enhancer in Hybrid Rocket Motor" Journal of Propulsion and Power, 2019DOI:10.2514/1.B37491.

5. Kumar, B.A., Kumar, P., Das, S. and Prasad, J. K. (2018). "Effect of leading edge shapes on 81°/45° double-delta wing at low speeds" Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 232 (16), 3100-3107.

6. Kumar,P. and Prasad, J. K. (2018). "Effect of multiple rings on side force over an ogive-cylinder body at subsonic speed", Chinese Journal of Aeronautics, 31(6), 1181 - 1188.

7. Saranyamol, V. S., Kumar, P. and Das, S. (2018). "Influence of Impinging Wall Ramping Modification on the Flow Field of Open Cavity at M=2.0", J. Fluids Eng, Transactions of ASME, 140(7),, DOI: 10.1115/1.4039247.

8. RoyD., Kumar, P. and Das, S. (2019). "Effect of Anhedral/Dihedral angles on a 76/40° Double Delta Wing at Low Speeds", Journal of Aerospace Engineering, American Society of Civil Engineers, https://doi.org/10.1061/(ASCE)AS.1943-5525.0001079.

9. Padwal M. B., and Varma, M. (2018). Thermal Decomposition Behavior and Combustion Characteristics of HTPB- Coarse AP Composite Solid Propellants Catalyzed with $Fe_2O_3$, Combustion Science & Technology, 190 (9), 1614-1629.

**6**. **Publications in Proceedings:** (International/National)

International Conference : 05

1. Sahoo, D., Das, **S.,** and Cohen, J., "Effect of body nose fairing on the unsteady flow characteristics over spiked flat faced cylinder at supersonic speed", AIAA-2316-2019, AIAA SciTech Forum, San Diego, CaliforniaJan. 7-11, 2019.

2. Das, S., and Cohen, J., "Reducing cavity flow pressure oscillations by change in rear face geometries at transonic speed", 21st Australasian Fluid Mechanics Conference, Adelaide, Australia, Dec.10-13, 2018.
3. Dinesh, M. and Kumar,R. "Investigation on Performance of Hybrid Rocket Motor with Non-Conventional Protrusion Configuration", Proceedings of Seventh Asian Joint Workshop on Thermophysics and Fluid Science, , Trivandrum, Nov. 21-24, 2018.

4. Kumar, S. P., Pooja, V. V. and Kumar,R. "Effect of Injector Configuration on the Performance of Tribrid Rocket Engine", Proceedings of Seventh Asian Joint Workshop on Thermophysics and Fluid Science, Trivandrum, Nov. 21-24, 2018.

5. Mondal, P., "Application of Modified Discrete Vortex Method in Ground Effect Studies", 20th Annual AeSI CFD Symposium, Bangalore, India, Aug. 9-10, 2018.

National Conference : 12

1. Kumar,N., Dinesh, M. and Kumar,R. "Effect of Activated Charcoal on the Performance of Hybrid Rocket Motor" National Aerospace Propulsion Conference, IIT Kharagpur, Dec. 17-19, 2018.

2. Rajput, S. S., Dinesh, M. and Kumar,R., "Studies on the Effect of Protrusion in Liquefying and Non-Liquefying Hybrid Rocket Fuels" National Aerospace Propulsion Conference, IIT Kharagpur, Dec. 17-19, 2018.
3. Krishna, T. V., Kumar, P., Desikan, S. L. N., and Das, S., "Experimental investigation of cavity flows with rear corner and face modifications", Proceedings of the 2nd National Aero Propulsion Conference, NAPC-2018,IIT Kharagpur, Dec. 17-19 2018.

4. Krishna, T. V., Kumar, P., Desikan, S. L. N., and Das, S., "Experimental investigation of cavity flows with stepped impinging wall at Mach 2.0", CP 023, SAROD 2018, 8th Symposium on Applied Aerodynamics and Design of Aerospace Vehicles,Bengaluru Nov. 29-Dec 1, 2018.

5. Uma, V., Joshi, P. C., and Biswas,S., Regression rate and combustion characteristics of shellac based hybrid fuel, 32nd National Convention of Aerospace Engineers & National Seminar on Advances in Aerospace Sciences and Technologies, BIT Mesra, Ranchi, Oct. 27-28, 2018.

6. Mondal, P., "Euler Simulation Using a 3D Unstructured Compressible Solver", 32nd National Convention of Aerospace Engineers, BIT Mesra, Ranchi, Oct. 27-28, 2018.

7. Dinesh,M. and Kumar,R. "Performance Evaluation of Mg-Iron Based Wax Fuels for Hybrid Rocket Applications" 32nd National Convention of Aerospace Engineers &National Seminar on Advances in Aerospace Sciences and Technologies, Oct. 27-28, 2018.
8. Kumar, N., Bala. V. D. and Kumar,R. "Effect of Adding Ammonium Perchlorate on The Performance of Hybrid Rocket Motor" 32nd National Convention of Aerospace Engineers & National Seminar on Advances in Aerospace Sciences and Technologies, Oct. 27-28, 2018.

9. Arvind, S. and Kumar,R. "Numerical Investigation on the Effects of Velocity Gradient on Shear Layer in Scramjets" 32nd National Convention of Aerospace Engineers & National Seminar on Advances in Aerospace Sciences and Technologies, October 27-28, 2018.

10. Saranyamol, V. S., Kumar, P., and Das, S., "Influence of cavity floor on the unsteady characteristics of flow inside an open cavity at supersonic speed", 32nd National Convention of Aerospace Engineers, NCAE 2018, BIT Mesra, Ranchi, Oct. 27-28, 2018.

11. Swain, S. K., Mohanta, D. K., Das, **S.,** "Outcome Based Education Program Outcome Assessment for an Engineering Undergraduate Course", Poster Paper at 4th World Summit on Accreditation, Challenges and Opportunities in Outcome Based Accreditation (WOSA 2018), New Delhi, Sept.7-9 2018.

12. Sehajpal, J. and Varma, M., Thermal Decomposition and Burn Rate Studies of AP-HTPB Based Composite Solid Propellants with Added Surfactant, Proc. 32nd National Convention of Aerospace Engineers, BIT, Ranchi, Oct. 27-28, 2018.

**7. Book:**

- Chapter(s) in Edited Book
  1.Varma, M. and Lokeshwaran N. (2019).Catalytic Thermal Decomposition and Combustion of HTPB-AP Composite Solid Propellants in Presence of Nanosized Bimetallic TMOs in,Kalyna Jocosa Pace (Ed), Thermal Decomposition: Process and Effects, (pp. 29-68). Nova Publisher, New York.

## SECTION 5 AWARD / PATENT / COLLABORATIONS

**8. 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. Sudip Das | Eminent Engineering Personality Award 2018 | Aerospace Division Board, IE (India) at the 32ndNCAE - 2018 | National | Oct. 27-28, 2018 |
| 2. | Dr. Mohan Varma | Expert Panel Member | Gas Turbine Research Establishment (DRDO), | National | 2018-2019 |
| 3. | Dr. Rajiv Kumar | Jury Member | Inspire Project Exhibition and Competition | State | Jan. 08, 2019 |

***11.*** **Patents (Applied / Granted) : Nil**

**10. MoUs / Collaborations : Nil**

## SECTION 6 ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

***12.*** **Departmental Students' Activities**

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|
| 1. | Poster Presentation Competition for judging the best two Master's Thesis M.E. students (Batch 2017-19) of | - | Dr. Shelly Biswas | 03.05.2019 |

| | | | | |
|---|---|---|---|---|
| | the Department | | | |
| 2. | A team 14 students visited SDSC SHAR to witness the launch of GSLV MkIII scheduled on Nov. 14, 2018. | Nivetha A. | Dr. Partha Mondal | 14.11.2018 |

**12. List of Faculties as on 30.6.2019**

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

***17.*** **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 |

***18.*** **Board of Studies**

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | HOD/in-Charge | Chairman (Ex-officio) | Internal Member |
| 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. M. Mukherjee | Professor | Internal Member |
| Any two of the following | | | |
| 8. | Dr. M. K. Laha | Professor, Deptt. of Aerospace Engg. , IIT, Kharagpur | External Member |
| 9. | Dr. D. P. Mishra | Professor, Deptt. of Aerospace Engg. , IIT, Kanpur | External Member |
| 10. | Dr. Debopam Das | Professor, Deptt. of Aerospace Engg. , IIT, Kanpur | External Member |
| 11. | Dr. S. R. Chakravarthy | Professor,Deptt. of | External Member |

| | | | |
|---|---|---|---|
| | | Aerospace Engg., IIT Madras, Chennai | |
| 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 - 834002 | External Member |

***19.*** **Departmental Academic Committee**

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | HOD/in-Charge (Deptt. of SE&R) | Chairman (Ex-officio) | Chairman (Ex-officio) |
| 2. | Dr. Mohan Varma | Professor | Member |
| 3. | Dr. Sudip Das | Professor | Member |
| 4. | Dr. Priyank Kumar | Assistant Professor | Member |
| 5. | Dr. Partha Mondal | Assistant Professor | Member |
| 6. | Dr. Rajiv Kumar | Assistant Professor | Member |
| 7. | Dr. Shelly Biswas | Assistant Professor | Member |
| 8. | Dr. Swarupkumar Y. Jejurkar | Assistant Professor | Member |
| 9. | Dr. R. P. Sharma | Professor | Member |
| 10. | Dr. GautamSarkhel | Professor | Member |
| 11. | Guide(s) of the Candidate | Member & Guide | Member |

## SECTION 7 OTHER INFORMATION

***20.*** **Student Entrepreneurship activities/Start-ups if any : Nil**

*21.* **Publication by students, if any : Nil**

***22.*** **Achievements of Students**

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | Mr. Sidhharth Behal | 1st Prize in Poster Presentation Completion | Deptt. of SER, B.I.T. Mesra, Ranchi | 03.05.2019 SER, B.I.T. Mesra |
| 2. | Ms. Vempalli Vani Pooja | 2nd Prize in Poster Presentation Completion | Deptt. of SER, B.I.T. Mesra, Ranchi | 03.05.2019 SER, B.I.T. Mesra |

***23.*** **Distinguished Visitors from Industry/Academia/Research organizations**

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1. | Shri S. Somanath, Director<br>Vikram Sarabhai Space Centre<br>Trivandrum | 27.10.2018 | |
| 2. | Shri. S. Pandian, Director<br>Satish Dhawan Space Center,<br>Shriharikota, Nellore | 27.10.2018 | |
| 3. | Dr. (Mrs.) Tessy Thomas,<br>Director General,<br>Aeronautical Systems (DG-Aero) of Defence Research and Development Organisation (DRDO) | 27.10.2018 | |
| 4. | Padmashri R. M. Vasagam,<br>Retired Scientist<br>Vikram Sarabhai Space Centre<br>Trivandrum | 27.10.2018 | |
| 5. | Shri. S. K. Mishra,<br>Managing Director, Brahmos | 28.10.2018 | |

***24.*List of Distinguished Alumni**

| Sr. No | Name, Batch and Affiliation | Short Description |
|---|---|---|
| 1. | Shri E V S Namboodiry<br>Batch : 1967-1968 | Chairman<br>Cryogenic Project<br>Deputy Director<br>Liquid Propulsion Systems Centre (LPSC)<br>ISRO (1999) |
| 2. | Shri A. K. Chakrabarty<br>Batch : 1972-1974 | Director<br>Defence Research & Development Laboratory<br>DRDL (2012) |
| 3. | Shri Sibnath Som<br>Batch : 1983-1985 | Director<br>Defence Research and Development Laboratory<br>DRDL (2014) |
| 4. | Padma Shri M. C. Dathan<br>Batch : 1984-1986 | Director<br>Satish Dhawan Space Centre (2008)<br>Director<br>Vikram Sarabhai Space Centre (2014) |

| | | |
|---|---|---|
| 5. | Dr. D. Narayan<br>Batch : 1989-1991 | Scientist 'G'<br>Group Director<br>Aeronautical Development Agency (ADA) |

***25.*Any other relevant information**

1. **9** numbers of Invited Lectures have been arranged during AY 2018-2019.
2. **2** numbers of Special Course Lecture have been arranged during AY 2018-2019.
3. **5** numbers of New R&D Project Proposal have been submitted to various agencies during AY 2018-2019

## BIT MESRA OFFCAMPUSES AND UNIVERSITY POLYTECHNIC

Birla Institute of Technology has well established offcampuses at Deoghar, Lalpur (Ranchi), Patna, NOIDA, & Jaipur and a University Polutecnic at Mesra, Ranchi.

**Deoghar Off-Campus**

SECTION 1 CAMPUS PROFILE

*6.* **About the Campus**

BIT Mesra, Off-Campus Deoghar was established in 2007 with the financial and infrastructural supports from the Govt. of Jharkhand. This Off Campus has entered into 13th 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 instrumental and software facilities for the undergraduate engineering courses in CSE, ECE, EEE, Mechanical and Production Engineering with a total intake capacity of 270.

The campus has its own staff quarters, library (having more than 28,900 volumes), language lab, gymnasium, health centre, ambulance facility, ATM, canteen, play ground, two basket ball 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; organise conferences, workshops & seminars and regularly publish quality research articles in journals of international repute. The NSS members of the campus regularly arranges for blood donation camps and literacy drives in nearby villages as a part of the institute's social responsibilities.

The campus celebrates a number of 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. Over the years, the institute has witnessed its students to get well placed not only in Govt. sectors, like defence, ONGC, IOCL, power plants, renewable energy, electricity distribution etc., but the alumni of this campus are efficiently working in multi-national companies, like TCS, CTS, Wipro, Amdocs, IVP, Samsung etc. The institute has also produced a number of 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 in developing the moral characters of its students and thus regularly arranges for spiritual events in association with Art of Living, Ram Krishna Math and Mission, International Society for Krishna Consciousness etc.

SECTION 2 SEMINAR / CONFERENCE

**2. Seminar / Conferences / Short – Term Courses Conducted by the Department/Campus**

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| 1. | Workshop (5 Days Faculty Development Program) | Dr. Chinmay Chakraborty | Ministry of Electronics & Information Technology (MeitY), Government of India | 20.05.19 – 24.05.19 |
| 2. | Recent Advancement in Engineering Industry 4.0 Ready | Dr. Vinay Sharma (Convener) & Dr. Pankaj Mishra (Co-Convener) | BIT Deoghar | 14/02/2019 - 16/02/2019 |

**3. 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. Chinmay Chakraborty | Smart Sensors and Systems | AICTE | IIT BHU | IIT BHU | 22.10.18 – 27.10.18 |
| 2. | Mr. Akash Kumar Gupta | Application of Biomedical Signal Processing Techniques in Healthcare 2018 | - | MeitY, Govt. Of India | IIT Patna | 07th – 09th Sep 2018 |
| 3. | Mr. Akash Kumar Gupta | VLSI Design Trend using FPGA Implementation Verilog/VHDL | - | MeitY, Govt. Of India | NIT patna | 08th – 12th Oct 2018 |
| 4. | Mr. Akash Kumar Gupta | Wireless and Mobile Communication | - | MeitY, Govt. Of India | NIT patna | 03rd – 07th Dec 2018 |
| 5. | Mr. Akash Kumar Gupta | DSP and Sensors | - | MeitY, Govt. Of India | NIT patna | 10th – 14th Dec 2018 |
| 6. | Mr. Akash Kumar Gupta | AI and Machine Learning | - | MeitY, Govt. Of India | NIT patna | 17th – 21st Dec 2018 |
| 7. | Mr. Akash Kumar | Network Security | - | MeitY, Govt. Of India | BIT Mesra, Deoghar | 20th – 24th May 2019 |

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| | Gupta | | | | Campus | |
| 8. | Dr. Ram Krishna Sarkar | One-week Faculty development Program on Network Security | Ministry of Electronics and Information Technology | IIT Guwahati, NIT Patna and others | BIT Mesra, Off-Cmpus Deoghar | 20.06.2019 to 24.06.2019 |
| 9. | Dr. Soumen Karmakar | One-week Faculty development Program on Network Security | Ministry of Electronics and Information Technology | IIT Guwahati, NIT Patna and others | BIT Mesra, Off-Cmpus Deoghar | 20.06.2019 to 24.06.2019 |
| 10. | Dr. Manoj Kumar Dutta | One-week Faculty development Program on Network Security | Ministry of Electronics and Information Technology | IIT Guwahati, NIT Patna and others | BIT Mesra, Off-Cmpus Deoghar | 20.06.2019 to 24.06.2019 |
| 11. | Dr. Babu Lal Shahu | One-week Faculty development Program on Network Security | Ministry of Electronics and Information Technology | IIT Guwahati, NIT Patna and others | BIT Mesra, Off-Cmpus Deoghar | 20.06.2019 to 24.06.2019 |
| 12. | Dr. Manoj Kumar Dutta | 2nd International Conference on Computational Intelligence, ICCI 2018 | BIT Mesra & TEQIP-III | BIT Mesra | Dept. of Computer Science | 11.12.2019 to 12.12.2019 |
| 13. | Dr. Nishi Kant Kumar | One-week Faculty development Program on Network Security | Ministry of Electronics and Information Technology | IIT Guwahati, NIT Patna and others | BIT Mesra, Off-Cmpus Deoghar | 20.06.2019 to 24.06.2019 |
| 14. | Dr. Kamta Nath Mishra | IEEE Sponsored International Conference on Recent Innovations in Electrical Electronics and Communication Engineering (IEEE-ICRIEECE), Bhubaneshwar | B.I.T. Deoghar | KIIT Bhubaneshwar | Bhubaneshwar | July 27 – 28, 2018 |

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| 15. | Dr. Ranjan Chattaraj | AICTE sponsored Short-term course on Liner Algebra and Differential equations | AICTE | Department of Mathematics, IIT, Kharagpur | IIT, Kharagpur | 24th – 28th August, 2018 |
| 16. | Dr. Amit Kumar | "Recent Advancement in Engineering-Industry-4.0 Ready" | BIT Mesra, Tech Labs & Edgate & TI University | BIT Mesra Off-Campus Deoghar | BIT Mesra, Off-Campus Deoghar | 14th-16th February 2019 |
| | | One week FDP on Network Security | Electronics & ICT Academies | Electronics & ICT Academies | | 20th -24th May 2019 |
| 17. | Dr. Ritesh Kumar Upadhyay | FDP on Network Security | Government of India | Ministry of Electronics and Information Technology | BIT Mesra off campus Deoghar | 20th May- 24th May, 2019 |
| 18. | Mr. Ashutosh Kum ar | FDP on Students Induction | Government of India / AICTE | Ministry of HRD | Maharshi Dayanand University, Rohtak Haryana | 23May to 3 June 2019 |
| 19. | Mr. Ashutosh Kumar | GIAN Course on Entrepreneurship and Advanced Manufacturing | Government of India | Ministry of HRD | College of Engineering, Pune | July 2019 |
| 20. | Mr. Ashutosh Kumar | Workshop on Recent Advancement in Engineering Industry 4.0 | BIT Mesra off campus Deoghar | BIT Mesra off campus Deoghar | BIT Deoghar | February 2019 |
| 21. | Mr. Nilesh Kumar Rajalwal | Modelling & simulation of custom power devices for power quality improvement | | E&ICT Academy, MNIT Jaipur | MNIT, Jaipur, Rajasthan | 19th-23rd Nov. 2018 |
| 22. | Mr. Nilesh Kumar Rajalwal | International Conference on intelligent Systems and Green Energy | | IEEE Vizag Bay Sub-Section | Andhra Univercity Campus, Visakhapatnam, A.P. | 29th-30th June 2019 |
| 23 | Mr. | Renewable | TEQUIP-III | NIT, Patna | NIT, Patna | 19th-23rd Dec |

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| . | Prabhat Kumar Ranjan | Energy & Applications (REA-2018) | | | | 2018 |
| 24. | Mr. Prabhat Kumar Ranjan | Recent Advancement in Engineering Industry 4.0 Ready | | BIT, Deoghar | BIT, Deoghar | $14^{th}$-$16^{th}$ Feb 2019 |
| 25. | Mr. Prabhat Kumar Ranjan | IoT based Power Electronic Interface for Green Energy System | TEQIP-III | BIT, Mesra | BIT, Mesra | $20^{th}$-$24^{th}$ May 2019 |
| 26. | Mr. Piyush Kumar Ojha | Renewable Energy & Applications (REA-2018) | TEQIP-III | NIT, Patna | NIT, Patna | $19^{th}$-$23^{rd}$ Dec 2018 |
| 27.2 | Mr. Piyush Kumar Ojha | IoT based Power Electronic Interface for Green Energy System | TEQIP-III | BIT, Mesra | BIT, Mesra | $20^{th}$-$24^{th}$ May 2019 |
| 28. | Mr. Deep Shekhar Acharya | Recent Advancement in Engineering Industry 4.0 Ready | | BIT, Deoghar | BIT, Deoghar | $14^{th}$-$16^{th}$ Feb 2019 |
| 29. | Mr. Deep Shekhar Acharya | 5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON) | | IEEE UP Section | MMMUT, Gorakhpur | $2^{nd}$ – $4^{th}$ Novermber 2018 |
| 30. | Mr. Deep Shekhar Acharya | International Conference on Intelligent Computing and Smart Communication (ICSC-2019) | | Springer | THDC-IHET, Tehri, Uttarakhand | $19^{th}$ – $21^{st}$ April 2019 |
| 31. | Mr. Srihari Gude | Recent Advancement in Engineering Industry 4.0 | | BIT, Deoghar | BIT, Deoghar | $14^{th}$-$16^{th}$ Feb 2019 |

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| | | Ready | | | | |
| 32. | Mr. Srihari Gude | Advanced DSP Design Techniques | | IIT, Kharagpur | IIT, Kharagpur | 25th-29th Sept 2018 |
| 33. | Dr. Pankaj Mishra | Short Term Course on Component and Application of IoT (CAIoT) | | IIT Patna | IIT Patna | 24th – 28th September 2018 |
| 34. | Mrs. Payal Bhardwaj | One Week Faculty Development Programme on Network Security | AICTE | Electronics And Ict Academies, Nit Patna | BIT Deoghar | 20-24 May,2019 |
| 35. | Mrs. Payal Bhardwaj | Recent Advancement In Engineering Industry-4.0 Ready | BIT Mesra | BIT Deoghar | BIT Deoghar | 14-16 Feb, 2019 |
| 36. | Dr. Randhir Kumar | Environmental Performance of Manufacturing Systems: Modelling and Application | BIT Mesra Ranchi | IIT Kharagpur | IIT Kharagpur | 25 March 2019 to 29 March 2019 |
| 37. | Dr. Randhir Kumar | Network Security | BIT Mesra Ranchi Ministry of Electronics and Information Technology (MeitY), Government of India. | BIT Deoghar | BIT Deoghar | 20.05.2019 to 24.05. 2019 |
| 38. | Dr. Randhir Kumar | Recent Advancement in Engineering Industry 4.0 Ready | BIT Deoghar | BIT Deoghar | BIT Deoghar | 14/02/201916/02 2019 |
| 39. | Dr. Abhishek Kumar Singh | Environmental Performance of Manufacturing Systems: Modelling and | BIT Mesra Ranchi | IIT Kharagpur | IIT Kharagpur | 25 March 2019 to 29 March 2019 |

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| | | Application | | | | |
| 40. | Dr. Abhishek Kumar Singh | Network Security | BIT Mesra Ranchi Ministry of Electronics and Information Technology (MeitY), Governmen t of India. | BIT Deoghar | BIT Deoghar | 20.05.2019 to 24.05. 2019 |
| 41. | Mr. Prafulla Kumar Manoharan | Network Security | BIT Mesra Ranchi Ministry of Electronics and Information Technology (MeitY), Governmen t of India. | BIT Deoghar | BIT Deoghar | 20.05.2019 - 24.05. 2019 |
| 42. | Mr. Prafulla Kumar Manoharan | Recent Advancement in Engineering Industry 4.0 Ready | BIT Deoghar | BIT Deoghar | BIT Deoghar | 14/02/2019-16/02/2019 |
| 43. | Mr. Balaram Mandal | (i)Recent Advancement in Engineering-Industry4.0 Ready<br>(ii)Big Data Computing: A Practical Approach | (i) BIT, Deoghar<br>(ii) CEP | (i) BIT, Deoghar<br>(ii)IIT, Patna | (i)BIT, Deoghar<br>(ii)IIT, Patna | (i)February14-16, 2019<br>(ii)Dec 3-7, 2018 |
| 44. | Mr. Sridhar Chintala | Faculty Development for Student Induction | | MDU Rothak | MDU | 24-30 May ,2019 |
| | | Regional Workshop for "Orientation of Participating Institutes to Initiate Work in Adopted Village Clusters", under UBA | | IIT, Patna | IIT | 21/12/2018 |

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| 45. | Mr. Raja Ram Dutta | One week FDP on Network Security | Ministry of Electronics and Information Technology (MeitY) | BIT Deoghar with NIT Patna | BIT Deoghar | 20.5.2019 to 24.5.2019 |
| 46. | Mr. Raja Ram Dutta | Recent Advancement in Engineering – Industry 4.0 Rady | BIT Deoghar | BIT Deoghar | BIT Deoghar | 14.2.2019 to 16.2.2019 |
| 47. | Mr. Raja Ram Dutta | Workshop on Machine Learning | AICTE | CL Education Limited | AICTE HQ,New Delhi | 7.2.2019 to 8.2. 2019 |
| 48. | Mr. Raja Ram Dutta | Short Term Course / FDP on Bigdata Computing :A Practical Approach | BIT Deoghar | IIT Patna | IIT Patna | 3.12.2018 to 7.12.2018 |
| 49. | Mrs. Anita Kushwaha | Workshop on Data Analytics and Machine learning | | IIITA Allahabad | IIITA Allahabad | 25thMay till 31st May |
| 50. | Mrs. Anita Kushwaha | FDP on Network Security | | NIT Patna | BIT DEOGHAR | 20th May 2019 |
| 51. | Mrs. Anita Kushwaha | Recent Advancement in Engineering – Industry 4.0-ready | | BIT Mesra,Edgate Technologies Pvt. Ltd | BIT DEOGHAR | 14Th -16th February 2019 |
| 52. | Mrs. Anita Kushwaha | Workshop on Data Analytics and Machine learning | | IIITA Allahabad | IIITA Allahabad | 25thMay till 31st May |
| 53. | Dr. Sounak Paul | Academic Leadership, Innovative Pedagogy and Open Source Knowledge: Revisiting Teachers | AICTE | IIT Kharagpur | IIT Kharagpur | 10th - 16th December, 2018 |
| 54. | Dr. Sounak Paul | Network Security | MHRD | BIT Mesra Off Campus Deoghar | BIT Mesra Off Campus Deoghar | 20th May 2019-24th May, 2019 |

***4.*** **Publications in Journals:** (International/National)

1. Chinmay C. (2019). 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,
2. Kumar, NK, & Banerjee, S. (2019). Exploring Visual Analytics to measure reliability for IoT oriented pollution detection software perspectives. International Journal of Distributed Systems and Technologies, 10(2), 19.
3. Das, B. K., Kumar, B., Kuttippurath, J., & Chakraborty, A. (2018). Analyses of the oceanic heat content during 1980–2014 and satellite-era cyclones over Bay of Bengal. International Journal of Climatology, 38(15), 5619-5632.
4. Chakraborty, C. (2019). Computational approach for chronic wound tissue characterization. Informatics in Medicine Unlocked, 100162.
5. Singh, M., & Jha, R. C. (2019). Object-Oriented Usability Indices for Multi-Objective Demand Side Management Using Teaching-Learning Based Optimization. Energies, 12(3), 370.
6. Thangaiah, I. S. S., Sharma, V, & Sundharam, V. N. (2018) Internet of Things (IoT) Integration with Enterprise Resource Planning Application in Manufacturing Industries. International Journal of Mechanical Engineering and Technology 9(7), 877–884.
7. Oraon, M, & Sharma, V. (2018) Predicting Force in Single Point Incremental Forming by Using Artificial Neural Network, International Journal of Engineering Transaction A Basic, 31(1), 88-95.
8. Thangaiah, I. S., Sharma, V., & Sundharam, V. N. (2018). Analysing of customer feedback on critical quality parameters to improve productivity in manufacturing–a case study. International Journal of Productivity and Quality Management, 23(3), 349-368.
9. Oraon, M., & Sharma, V. (2018). Investigation of Electromagnetic Radiation Emission during Sheet Metal Incremental Micro Forming. Materials Research, 21(1).
10. Oraon, M., & Sharma, V. (2018). Prediction of surface roughness in single point incremental forming of AA3003-O alloy using artificial neural network. International Journal of Materials Engineering Innovation, 9(1), 1-19.
11. Rahman, M., Das, A. K., Chattopadhyaya, S., Bajpai, V., & Sharma, V. (2018). Investigation and Optimization of Micro-End-Milling of C-103 Nb-Alloy via Taguchi Design Method. Advanced Science, Engineering and Medicine, 10(3-4), 362-368.

**5. Publications in Proceedings:** (International/National)

*1.* Sravanth K.R., Anudeep P., Sudha S. and Chinmay C., Comparison of Attention and Meditation based Mobile Applications by using EEG signals, IEEE: Global Wireless Summit (GWS-SS), 260-265, 25-28 Nov. 2018. DOI: 10.1109/GWS.2018.8686634.

*2.* M.K.Dutta, "A Comparative Study among Different Signaling Schemes of Optical Burst Switching (OBS) Network for Real Time Multimedia Applications", Advances in Computational Intelligence. Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore. Print ISBN : 978-981-13-8221-5 Online ISBN : 978-981-13-8222-2

*3.* M.K.Dutta, "Performance Analysis of Deflection Routing & Segmentation Dropping Scheme in Optical Burst Switching (OBS) Network: A Simulation Study", Advances in Computational Intelligence. Advances in Intelligent Systems and Computing, vol 988. Springer, Singapore. Print ISBN: 978-981-13-8221-5, Online ISBN: 978-981-13-8222-2.

*4.* Kamta Nath Mishra, "An Efficient Palatal Patterns Based Methodology for Identity Verification of Identical Twins", Proc. of the Eighth International Conference on Advances in Bio-Informatics, Bio-Technology and Environmental Engineering – ABBE, Birmingham City University, UK, pp. 38 – 44, 2019. ISBN: 978-1-63248-167-2

*5.* Kamta Nath Mishra, "Verifying Identical Twins Identity Using Curves of Their Palatal Patterns", IEEE Sponsored International Conference on Recent Innovations in Electrical Electronics and Communication Engineering (IEEE-ICRIEECE), Bhubaneshwar, pp. 1-5, 2018. ISBN: 978-1-5386-0374-1

*6.* Mitra, Suman., Mahapatra, Gautam., Valentina E Balas, & Chattaraj, R., Public key cryptography using harmony search algorithm., Innovations in infrastructure; Proceedings of ICIIF 2018 (Springer); ISBN 978-981-13-1966-2.

*7.* Singh, M., Jha, R. C., & Hasan, M. A. (2019). Prediction of Energy Availability from Solar and Wind for Demand Side Management. In Applications of Artificial Intelligence Techniques in Engineering (pp. 303-311). Springer, Singapore. ISBN: 978-981-13-1819-1

*8.* Sahu, S. K., Khalkho, A. M., Mohanta, D. K., Reddy, M. J. B., Jha, R. C., & Ghosh, D. (2018, December). Fuzzy Reliability Analysis of Unit Commitment Problem Considering Uncertain Outage Replacement Rate and Load Representation. In 2018 20th National Power Systems Conference (NPSC) (pp. 1-6). IEEE.

*9.* Rajalwal, N. K. and Ghosh D., Adaptive Zone-III Relay Characteristic using System Integrity Protection Scheme. In IEEE International Conference on Intelligent System and Green Technology, IEEE Vizag Bay Sub-Section, Andhra University Campus, Visakhapatnam, A. P., 29$^{th}$ -30$^{th}$ June 2019,

*10.* Acharya, D. S., Mishra, S. K., Ranjan, P. K., Misra, S., & Pallavi, S., "Design of Optimally Tuned Two Degree of Freedom Fractional Order PID Controller for Magnetic Levitation Plant", In 2018 5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON) (pp. 1-6), November 2018

*11.* D. S. Acharya, S. K. Mishra (2019, April), "Parameter Optimization of a modified PID Controller using Symbiotic Organisms Search for Magnetic Levitation Plant", International Conference on Intelligent Computing and Smart Communication (ICSC-2019), THDC-IHET, Tehri, April 2019.

*12.* Ojha, Piyush Kumar, and P. R. Thakura. "Analysis of Voltage Source Boost Inverter." In Proceeding of the Second International Conference on Microelectronics, Computing & Communication Systems, pp. 9-16. Springer, Singapore, 2019.

*13.* Ojha, P. K., Barwar, M. K., Tripathi, P. R., & Thakura, P. R. "Hardware Implementation of Three-Phase Single Stage Boost Inverter for Higher Frequency". In 2018 Second International Conference on Electronics, Communication and Aerospace Technology (ICECA) (pp. 1934-1938). IEEE. 2018.

*14.* Ranjan, Prabhat Kumar & Thakura, P. R. (2019). "Analysis of Single-Stage Three-Phase DC–AC Boost Inverter For Distributed Generation System." In Proceeding of the Third International Conference on Nanoelectronics, Circuits and Communication Systems, Lectures notes in Electrical Engineering, vol 511, (pp. 245-254). Springer, Singapore, 2019.

15. Bhardwaj, P. & Badhai, R. K. Design of Planar Triple-Band Electrically Small Asymmetrical Antenna for ISM, WLAN, and X-Band Applications ,Optical and Wireless Technologies-2020, Proceedings of OWT 2018, DOI: 10.1007/978-981-13-6159-3_57, Print ISBN 978-981-13-6158-6 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.

16. Manish Oraon, Soumen Mandal, Vinay Sharma, "Statistical analysis of Single Point Incremental Forming for the Optimization of Force and Surface Roughness", 1st International Conference on Processing and Characterization of Materials, ICPCM-2018 Organized by Department of Metallurgy and Materials Engineering., NIT Rourkela, 06-08 Dec. 2018.

*17.* Sah, R. D., Dutta, R. R., Mohapatra, A. K., & Padhy, N. (2019, March). A Hybrid Mining Approach: Gender Prediction from Handwriting. In International Conference on E-Business and Telecommunications (pp. 772-784). Springer, Cham.

**6. Book:**

- **Edited Books**

1. Chinmay C. (Ed.) (2019), Advanced Classification Techniques for Healthcare Analysis, IGI Global Book Series - Advances in Medical Technologies and Clinical Practice (AMTCP). 1-405.

2. Chinmay C .(Ed.) (2019). Smart Medical Data Sensing and IoT Systems Design in Healthcare, IGI Global Book Series - Advances in Healthcare Information Systems and Administration (AHISA), 1-300. 10.4018/978-1-7998-0261-7.

- **Chapter(s) in Edited Book**

1. Sourav B., Chinmay C., Sumit C. (2018), A Survey on IoT based Traffic Control and Prediction Mechanism, Springer: Internet of Things and Big data Analytics for Smart Generation, Intelligent Systems Reference Library, Ch. 4, 154, (pp. 53-75), ISBN: 978-3-030-04203-5.
2. Chinmay C. (2019), Mobile Health (m-Health) for Tele-wound Monitoring, IGI: Mobile Health Applications for Quality Healthcare Delivery, Ch. 5, (pp. 98-116), ISBN: 9781522580218 DOI: 10.4018/978-1-5225-8021-8.ch005.
3. Sourav B., Chinmay C., Paul S. (2019), Programming Paradigm and Internet of Things, CRC: A Handbook of Internet of Things & Big Data, pp. (148-164), ISBN 9781138584204.
4. Sravanth, Chinmay C., Anudeep, Bharat G. (2019), Classification Algorithms for EEG-based Brain-Computer Interface: A Review, IGI, Ch. 3, (pp. 52-73), ISBN: 9781522577966, DOI: 10.4018/978-1-5225-7796-6.ch003.
5. Akash G., Chinmay C., Bharat G. (2019), Medical Information Processing Using Smartphone Under IoT Framework, Springer: Energy Conservation for IoT Devices, Studies in Systems, Decision and Control, 206, (pp. 283-308), 2019, ISBN 978-981-13-7398-5,
6. Mishra, K.N., & Chinmay C. (2019), A Novel Approach Toward Enhancing the Quality of Life in Smart Cities using Clouds and IoT-Based Technologies, Springer: Digital Twin Technologies and Smart Cities, Internet of Things (Technology, Communications and Computing), (pp. 19-35),
7. Oraon, M., & Sharma, V. (2019). Tool Wear Measurement in Single Point Incremental Forming. In Advances in Manufacturing Engineering and Materials (pp. 362-371). Springer, Cham. (Hloch S., Klichová D., Krolczyk G., Chattopadhyaya S., Ruppenthalová L. (Eds))
8. Neha Verma, Vinay Sharma "chapter 7: Energy Value Stream Mapping: A Tool to Develop Green Manufacturing Energy" book chapter of Manufacturing Techniques for Materials in CRC Press (pp-189-206)
9. Ananya Upadhyaya, Ved Prakash, Vinay Sharma, "Optimizing Material Removal Rate Using Artificial Neural Network for Micro-EDM," Accepted to be published as a book chapter of "Design and Optimization of Engineering Products" in IGI Global (pp-209-233)

## SECTION 4 AWARD / PATENT / COLLABORATIONS

### 7. 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. Chinmay Chakraborty | Global Peer Review Award | Publons | International | 2018 |

## SECTION 5 ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

### *8.* Departmental Students' Activities

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|
| 1. | Coding Activity | Mr. Arun Jugran, Mr. Vedant Tibrewal, Ms. Chandrika Deb, Mr. Shivam Goel | Dr. Sounak Paul, Mr. Balaram Mandal | 1.07.2018 to 30.06.2019 |

**9. List of Faculties**

| Sr. No. | Name | Designation | TEQIP |
|---|---|---|---|
| 1. | Prof. Rakesh Chandra Jha | Professor & Director | No |
| 2. | Prof. Vinay Sharma | Professor, & I/C, Prod. Eng. | No |
| 3. | Dr. Abhishek Kumar Singh | Assistant Professor | No |
| 4. | Dr. Anil Sharma | Assistant Professor | No |
| 5. | Dr. Randhir Kumar | Assistant Professor | No |
| 6. | Mr. Prafulla Kumar Manoharan | Assistant Professor | No |
| 7. | Dr. Sanjiv Kumar Tiwari | Assistant Professor | No |
| 8. | Mr. Vijay Kumar Mandal | Associate Lecturer | No |
| 9. | Dr. Mainak Mukhopadhyay | Assistant Professor & I/C, ECE | No |
| 10. | Dr. Chinmay Chakraborty | Assistant Professor | No |
| 11. | Dr. Babu Lal Sahu | Assistant Professor | No |
| 12. | Mr. Sridhar Chintala | Assistant Professor | No |
| 13. | Mrs. Sutapa Mondal | Assistant Professor | No |
| 14. | Mr. Akash Kumar Gupta | Assistant Professor | No |
| 15. | Mrs. Payal Bhardwaj | Assistant Professor | No |
| 16. | Mr. Mahendra Kumar Das | Associate Lecturer | No |
| 17. | Prof. Arbind Kumar | Professor & I/C, Mech. Eng. | No |
| 18. | Dr. Ashis Chakarborty | Associate Professor & ADSW | No |
| 19. | Mr. B. S. Choudhary | Assistant Professor | No |
| 20. | Dr. Ritesh Upadhayay | Assistant Professor | No |
| 21. | Mr. G. S. Rao | Assistant Professor | No |
| 22. | Mr. Ashutosh Kumar | Assistant Professor | No |
| 23. | Dr. Ram Krishna Sarkar | Assistant Professor & I/C, Physics | No |
| 24. | Dr. Soumen Karmakar | Assistant Professor | No |
| 25. | Dr. Manoj Kumar Dutta | Assistant Professor | No |
| 26. | Dr. Sandip Ghosh Hazra | Assistant Professor | No |
| 27. | Dr. Pankaj Mishra | Assistant Professor & I/C, EEE | No |
| 28. | Mr. Piyush Kumar Ojha | Assistant Professor | No |
| 29. | Mr. Deep Shekhar Acharya | Assistant Professor | No |
| 30. | Mr. Srihari Gude | Assistant Professor | No |
| 31. | Mr. Prabhat Kumar Ranjan | Assistant Professor | No |
| 32. | Mr. Nilesh Kumar Rajalwal | Assistant Professor | No |
| 33. | Mr. Surendra Kumar Mahto | Associate Lecturer | No |
| 34. | Dr. Kamta Nath Mishra | Assistant Professor & I/C, CSE | No |
| 35. | Dr. Sounak Paul | Assistant Professor | |
| 36. | Mrs. Anita Khushwaha | Assistant Professor | No |
| 37. | Mr. Rayees Ahmed | Assistant Professor | No |
| 38. | Mr. Balaram Mondal | Assistant Professor | No |
| 39. | Mr. Raja Ram Dutta | Assistant Professor | No |
| 40. | Mr. Soumya Ray | Assistant Professor | No |
| 41. | Mr. Swapan Kumar Borat | Associate Lecturer | No |
| 42. | Dr. Nishi Kant Kumar | Associate Lecturer | No |
| 43. | Mr. Saswata Mukherjee | Associate Lecturer | No |
| 44. | Mrs. Neena Jha | Associate Lecturer | No |

| | | | |
|---|---|---|---|
| 45. | Dr. S. S. Majhi | Assistant Professor & I/C, Chemistry | No |
| 46. | Dr. A. C. Singh | Assistant Professor | No |
| 47. | Dr. Ranjan Chattaraj | Assistant Professor & I/C, Mathematics | No |
| 48. | Dr. Amit Kumar | Assistant Professor | No |
| 49. | Dr. Bishnu Kumar | Assistant Professor | No |
| 50. | Mr. Vikash Sharma | Assistant Professor | No |
| 51. | Mr. Akhilesh Kumar Roy | Assistant Professor | No |
| 52. | Mr. Arbind Kumar Choudhary | Assistant Professor | No |

### *10.* Departmental Academic Committee

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | Director, BITEC, Deoghar | Chairman, (Ex-officio) | Chairman |
| 2. | Prof. Arbind Kumar, Prof. incharge Dept. of Mechanical Engg., BIT Deoghar | Member | Internal Member |
| 3. | Prof. Vinay Sharma, Prof. incharge Dept. of Production Engg., BIT Deoghar | Member | Internal Member |
| 4. | Dr. K N Mishra, I/C- Dept. of CSE, BIT, Deoghar | Member | Internal Member |
| 5. | Dr. Mainak Mukhopadhyay, I/C- Dept. of ECE, BIT Deoghar | Member | Internal Member |
| 6. | Dr. R K Sarkar, I/C, Dept. of Physics, BIT, Deoghar | Member | Internal Member |
| 7. | Dr. Ranjan Chattaraj, I/C, Dept. of Mathematics, BIT Deoghar | Member | Internal Member |
| 8. | Guide(s) | Invited Member | Internal/External Member |

## SECTION 6 OTHER INFORMATION

### *11.* Student Entrepreneurship activities/Start-ups if any

| Sr. No | Name of Student | Source of Funding | Title of Start up | Short Description |
|---|---|---|---|---|
| 1. | Pragya Gyani 2015 Batch<br>Vamika Parmar 2015 Batch | ABVIL Ranchi Jharkhand | The Dump | Start-up for garbage management |
| 2. | Vibhor Singh<br>Divya Bharti<br>Baishali Sarkar | Received incubation offer at Startup India Jharkhand Yatra | Advanced Railway Accident Prevention System | Was called at Delhi for establishing the start-up office, with some financial support from the BIMTECH |
| | | | | |

### *12.* Achievements of Students

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | Aman Sharma and | Start up India 2nd position | Govt. Of India & | Ranchi |

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|---|---|---|---|---|
| | Vedant Tibrewal | in State level Entrepreneur Development Start-up programme | Govt. Of Jharkhand | |
| 2. | Pragya Kumari | Received 1st position in State level Women Entrepreneur Development Start-up programme | Govt. Of India & Govt. Of Jharkhand | Ranchi |
| 3. | Aman Sharma and Vedant Tibrewal | Start up India 2nd position in State level Entrepreneur Development Start-up programme | Govt. Of India & Govt. Of Jharkhand | Ranchi |

## *13.* Distinguished Visitors from Industry/Academia/Research organizations

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| 1. | Mr. Ravi Tiwari,<br>CEO, Bizaugmenter, Global Services Private Ltd. SF-27, Eros Metro Complex, Sector-14, Dwarka, New Delhi-110078 | 14.02.2019 | |
| 2. | Dr. N. C. Murmu, Senior Principal Scientist,<br>Department Head, Project Monitoring and Evaluation Surface Engineering and Tribology,<br>CSIR - CMERI, Durgapur | 14.02.2019 | |
| 3. | Dr. Sanjoy Kr. Parida, Associate<br>Professor, Dept. of Electrical Engineering, IIT Patna | 15.02.2019 | |

## *14.* List of Distinguished Alumni

| Sr. No. | Name, Batch and Affiliation | Short Description |
|---|---|---|
| 1. | Abhishek Sharma, Dept of EEE BIT Deoghar | Indian Judicial Services, Uttar Pradesh |

| | | |
|---|---|---|
| 2. | Nupur Tiwary, Dept of EEE BIT Deoghar | Manager, Morgan Stanley |
| 3. | Kusum Kumari, Dept of EEE BIT Deoghar | Asst. Director at Bihar Renewable Energy Development Agency |
| 4. | Insia Zehra, Dept of EEE BIT Deoghar | Indian Army |
| 5. | Rashmi Kumari, Dept of EEE BIT Deoghar | Department of Revenue and Land Reform, Govt of Bihar. |

***15.*Any other relevant information**

***4.*** **Achievements by Dr. Chinmay Chakraborty, Asst.Prof. in ECE**

- TPC Member of ICICV , Jaipur, India- 2020
- Outreach Committee Member, ICCS, BKBIET, Pilani, Rajasthan, India, 2019.
- Advisory Committee Member, ICRTEMS, Faridabad, Haryana, India, 2019.
- Member, Editorial Review Board, Int. Journal of Strategic Engineering (IJoSE)
- Nominated as Global Goodwill Ambassadors, India, 2019
- Guest Editor, Journal Special Issue, Future Internet, 2019
- Advisory Committee Member, ICMPET, Andhra Pradesh, India, 2019.
- Member, Technical Committee, ICAESMT, Dehradun, India, 2019.
- Editor, Book – Smart Medical Data Sensing and IoT Systems Design in Healthcare, 2019.
- Member, Organizing Committee, WCASET, Conference at Kyriad Hotel, Goa, 2018.
- Editor, Book – IET: Advances in Telemedicine for Health Monitoring, 2019.
- Guest Editor – Special Session "Next Generation Networks for Smart Healthcare" ICICC – 2019.
- Member, National Advisory Committee, ICSTETM – 2018
- Editor, ICCPHPC, India, 2019
- Session Chair, Int. Conf. on CICBA, Kalyani Govt. Engg. College, India, 2018.
- Member, Int. Technical Programme Committee, CICBA, India, 2018.
- National Advisory Member of ICASET, Pondichery, India, 2018.
- Editor, Book – Advanced Classification Techniques for Healthcare Analysis, 2018.
- Member, Editorial Board, IOSRD, Int. Journal of Telecomm. Engg., 2018.
- Member, Advisory Committee, 5th Nat. Conf. on Comm. Information & Control Syst., Tamilnadu, 2018.
- Speaker for IIT Patna sponsored Teacher's Training Programme on "Internet of Medical Things" at ITM University, Gwalior, June 25, 2019.
- Speaker for DST sponsored FDP on "Advanced Healthcare Technology: IoT Perspective" at BIT Mesra, Patna, May 10, 2019.
- Speaker for workshop on "IoT, Networking, & Wireless Sensor Networks", at BIT Mesra, Deoghar, Feb., 2019.
- Speaker for CEP Short Term Course on "Applications of Biomedical Signal Processing Techniques in Healthcare", at IIT Patna, Sept., 2018.
- Delivered Guest Lecture on "Recent Advances in Communications and Networking" at ECE Department, JIS College of Engineering, Kalyani, 2018.
- Speaker for AICTE sponsored FDP on "Recent Developments in Artificial Intelligence & Robotics" at ECE Department, NiT, JIS University, Kolkata, 2018.

*5.* Dr. Ram Krishna Sarkar worked as an advisory member at National workshop on "Recent Advancement in Engineering-Industry 4.0 Ready" organized by EEE dept. at BIT Mesra, Deoghar Campus form Feb 14-16, 2019.

*6.* Dr. Soumen Karmakar & Dr. Manoj Kumar Dutta worked as an organizing committee member at National workshop on "Recent Advancement in Engineering-Industry 4.0 Ready" organized by EEE dept. at BIT Mesra, Deoghar Campus form Feb 14-16, 2019.

*7.* Dr. Nishi Kant Kumar (Associate Lecturer, CSE Department) completed his Ph.D. (Engg.) degree on the topic "Software Reliability Using Machine Learning" in the Month of February 2019

*8.* List of Techno-Cultural events organized during the period:

| S. No. | Name of the Event | Date | Club/Society | Description |
|---|---|---|---|---|
| 1. | Independence Day | 15th August, 2018 | All Clubs/Societies | Dance, Drama Music performance by students |
| 2. | Exuberance'18 | 13th August, 2018 | Literary Society | A one day fest of debate and extempore competition. |
| 3. | Spiritual Talk by ISKCON, Mayapur | 28th August, 2018 | Literary Society | Talk by delegates from ISKCON, Mayapur focusing the importance of meditation. |
| 4. | JAM ( Just A Minute) | 1st September 2018 | Literary Society | Express your views on given topic within One Minute |
| 5. | Antaragini '18 | 29th September, 2018 | Dramatic Society | One day fest, comprising of various acting/drama related activities and competitions for students. |
| 6. | Band Night | 29th September, 2018 | Music Club | A musical show comprising of solo, duet, band performance by students. |
| 7. | Dandiya Night | 30th September, 2018 | Dance Club | Dance event, comprising of performance by students. |
| 8. | Pareidolia | 30th September, 2018 | Photographic Society | An activity event held at Trikut Pahar, Deoghar. |
| 9. | Aurora'18 | 27-28 October, 2018 | Literary Society | Two day fest comprising of debate, extempore, just-a-minute, and other competitions. |
| 10. | Lecture by Mr. Nishant Kumar, Sr. Faculty of the Art of Living, Bengaluru | 17th January, 2019 | Literary Society | A talk addressing the various aspects of life and some tricks of Pranayama. |
| 11. | NIKON Workshop | 09th February, 2019 | Photographic Society | A workshop by NIKON providing photographic tips/training. |
| 12. | Automobile Prototyping | 12th to 13th March 2019 | Automobile Society | Workshop to enhance the skill and knowledge in the field automobile engineering |
| 13. | Utthaan '19 | 16 March 2019 TO 18 march 2019 | All Clubs/Societies | 3 Days Annual Techno-Cultural Fest |

***9.*** **Placement data:**

Placement Details (Total Job Offers = 96):

- Highest Packages: Rs. 10 LPA from Byju's Company & 9 LPA from Oracle Company.

- Average Package: Rs. 5.22 LPA.
- Students with single job offer: 39 & Students with multiple job offers: 22.
- Internship (8th Semester):
- Highest Stipend: Rs. 30,000/- per month from Here Technology.
- Average Stipend: Rs. 18,977/-

| Placement Data for 2k15 batch | | | | | | |
|---|---|---|---|---|---|---|
| **Branch** | **Total Number of students registered at T & P Portal** | **Total Number of Students Eligible for Placement** | **Total Number of Students NOT Eligible for Placement** | **Placed** | **Placed (%)** | **Not placed** |
| CSE | 42 | 36 | 06 | 30 | 83.33 | 06 |
| ECE | 19 | 09 | 10 | 08 | 88.88 | 01 |
| EEE | 16 | 12 | 04 | 09 | 75.00 | 03 |
| ME | 29 | 18 | 11 | 14 | 77.77 | 04 |
| **Total** | **106** | **75** | **31** | **61** | **81.245** | 14 |

***10.*Development in the Institute Library:**

(Library operations have been automated with the help of an integrated library software package, LIBSYS. The book database is accessible through OPAC (Online Public Access Catalogue). Circulation Services are executed through Barcode System.)

1. Added 1402 new books.
2. Setup student feedback mechanism (feedback/suggestion box) within the library.
3. Entire library had been come in the CCTV surveillance.
4. Started colour print out facility on payment of a nominal charge.
5. Renewal of subscription of on-line journals like IEEE, Science Direct etc.
6. Renewal of TURNITIN for plagiarism check.
7. Renewal of 30 print journals.

**8. Achievements in sports and games:**

| Sr. No. | Name of the Student | Name of the Game | Position | Period | Place | Tournament & Organiser |
|---|---|---|---|---|---|---|
| 1 | Ankur Raj (3rd year) | Chess | 3rd Position | 8-11h November, 2018 | Deoghar | Chess Tournament by Deoghar Foundation (Delhi) |
| 2 | Mayank raj (4th year) & Sanju (1st year) | Badminton Mix Double | Runners up | 15-17th February, 2019 | Patna | PRAKRIDA-19 by BIT, Patna |
| 3 | Ankur Raj (3rd year) | Chess | Winner | 15-17th February, 2019 | Patna | PRAKRIDA-19 by BIT, Patna |

**Jaipur Off Campus**

## SECTION 1 CAMPUS PROFILE

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 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.

**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.

**Academic Programmes:**

**Doctoral :**

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

**Undergraduate:**

B.Tech in following branches of Engineering :
i) Computer Science (CS)
ii) Electronics and Communication Engineering (ECE)
iii) Electrical & Electronics Engineering (EEE)

BBA , BCA & B.Sc. (Animation & Multimedia)

**Postgraduate:**

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

**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 Acadamic Reasearch 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 User

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

## SECTION 2 RESEARCH PROJECTS

*7.* **Sponsored Projects (Research and Consultancy)**

***f)*** **Ongoing Projects**

| Sr. No. | Project Title | PI / Co PI / Collaborator, if any | Funding Agency | Date of Sanction | Sanctioned Amount | Duration of the Project |
|---|---|---|---|---|---|---|
| 1. | Studies of High Z impurity behavior using VUV spectral emissions from the tokamaks in IPR | Dr. Anand Kumar Srivastava (P.I.)<br><br>Dr. M. B. Chowdhuri & Mrs. Ranjana Manchanda (Collaborator, IPR, Gandhinagar) | BRNS, DAE, Govt. of India | 23.01.2017 | 20.3 Lakh | 2 Years (Applied for 1 year extension) |
| 2. | Lightning Impact on ozone precursors over Indian region and its implication on tropospheric ozone | Dr. Swagat Payra (P.I.) | MoES, Govt. of India | 13.10.2017 | 34.64 Lakh | 3 Years |

| Sr. No. | Project Title | PI / Co PI / Collaborator, if any | Funding Agency | Date of Sanction | Sanctioned Amount | Duration of the Project |
|---|---|---|---|---|---|---|
| 3. | AERONET campaign | Dr. Swagat Payra (Collaborator) | GSFC, NASA | 09.11.2009 | Test Equipment shared by NASA | 10 Years |
| 4. | Rapid multiplex PCR based detection of water borne human bacterial pathogens | Dr. P.S. Solanki (P.I.),<br>Dr. R. K. Ghotwal (Co-P.I.) | DST, Govt. of Rajasthan | 27.03.2017 | 12.12 Lakh | 3 Years |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5. | Bacterial profiling of Bisalpur drinking water distribution system: A comparative study from the source to the tap. | Dr. R. K. Ghotwal (P.I.) | DST, Govt. of Rajasthan | 10.08.2016 | 5.632 Lakh | 3 Years |
| 6. | Increased guar gum production, disease suppression and plant development by treatment of rhizobacteria in cluster bean to enhance the economy of Rajasthan | Dr. R. K. Ghotwal (Co-PI) | DST, Govt. of Rajasthan | 10.08.2016 | 9.132 Lakh | 3 Years |

***g)*** **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. | Characterization of Land Cover using Ku with C band data and its applications - (SCATSAT-UP) | Mr. Binay Kumar Singh (P.I.)<br><br>Mr. Prateek Sharma (Co-P.I.) | Space Application Centre-ISRO, Ahmedabad | 07.06.2017 | 10.925 Lakh | April 2019 |

## SECTION 3 SEMINAR / CONFERENCE

**3. Seminar / Conferences / Short – Term Courses Conducted by the Department/Campus**

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| 1. | Workshop on Bioinformatics and Systems Biology | Dr P.S. Solanki | DBT, Govt of India | 6 -8 March, 2019 |
| 2. | Short Term Course on "Designing, Fabrication & Control of Power Electronic Circuits" | Dr. Deepak Verma, Mr. P S Rathore, Dr.Aparajita Pandey | An Institute Event | 19 February – 11 April, 2019 |

| | | | | |
|---|---|---|---|---|
| 3. | Seminar on Documentary Film Making and Screening of International Animation Films under Jaipur International Film Festival. Invited Session from internationally acclaimed Film Makers.<br>*1)* Harikrishna Anandan, from Switzerland<br>*2)* Hussain Nuri, from Iran<br>*3)* Arzu Qaderi, from U.K.<br>*4)* Amr Gamal, from Yeman | Dr. Vibhuti Pandya And Mr. Gaurav Chaudhary | Jaipur International Film Festival | 21st January, 2019 |
| 4. | Entrepreneurship Awareness Camp | Dr. Abinash Pankaj | Dept. of Science & Technology, Govt of India | 9 -11 January, 2019 |
| 5. | Systems Genomics in the age of Next Generation Sequencing | Dr. P. S. Solanki | DBT, Govt of India | 25 - 28 November, 2018 |
| 6. | Entrepreneurship Awareness Camp | Dr. Abinash Pankaj | Dept. of Science & Technology, Govt of India | 3-5 October, 2018 |

**4. 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 | Jyoti Sharma | Advanced School of Antennas 2019 | IEEE AP-MTTs Kolkata Chapter | IEEE AP-MTTs Kolkata Chapter | KIIT, Bhubaneshwar | 20-24 June, 2019 |
| 2 | Dr. Dheeraj Bhardwaj, Santosh Kumar Sharma & Puneet Sharma | 3-day Faculty Development Program (FDP) on Student Induction Program for AICTE approved institutions \| | AICTE, New Delhi | AICTE & Graphic Era Hill University, Bhimtal | Graphic Era Hill University, Bhimtal | 17 - 19 June, 2019 |
| 3 | Ankur Agarwal & Puneet Sharma | Wireless Communication and Signal Processing Techniques | MNIT, Jaipur | Deptt. Of ECE, MNIT, Jaipur | MNIT, Jaipur | 20-24 May, 2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | Dr. Alok Pandey | FDP On Network Security (1 Week) | MEITY | Electronics &ICT Academies at MNIT Jaipur, NIT Warangal, IIT Guwhati, IITD Jabalpur, NIT Patna | MNIT Jaipur | 20-24 May, 2019 |
| 5 | Dr. Ritu Pareek | Technical Writing with Advanced Computer Tools: Hands-on Training (Workshop) | MNIT, Jaipur | MNIT-Jaipur | MNIT-Jaipur | 14-18 May, 2019 |
| 6 | Mrs.Nidhi Singh & Dr. Ranjana Agrawal | National Workshop on Technical Writing with Advances Computer Tools : Hands-on Training and Life Sciences RAIPLS- 2018 | TEQIP-III | MNIT, Deptt. of Computer Science and Engg and Deptt. of Humanities and Social Sciences | MNIT, Jaipur | 14-18 May, 2019 |

| **Sr. No.** | **Name of the Faculty** | **Title of the Conference/ Seminar** | **Funding Agency** | **Organizers** | **Venue** | **Date** |
|---|---|---|---|---|---|---|
| 7 | Dr.Abinash Pankaj | Orientation Programme on Education Administration (Phase – B) | - | Birla Institute of Technology, Mesra Ranchi | BIT Jaipur Campus | 02 April- 16 May, 2019 |
| 8 | Dr. Vibhuti Pandya & Gautam Kumar Goswami | Panel Discussion on Art & Expression | Spaces for Good | Coffee Bean Media | Spaces for Good<br><br>8th Floor, SDC Vinay II, Calgary Road, Jaipur | 17th March, 2019 |
| 9 | Mrs. Pankaj Sharma & Dr. Priyanshu Sharma & | Workshop on Lets Make More Money | - | FOPP | The Fern-An Ecotel Hotel Jaipur | 22 February, 2019 |

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|---|---|---|---|---|---|---|
| 10 | Vishwambhar Pathak | Indo-German Spring School on Algorithms for Big Data | IIT- Mumbai and German Research Foundation | IIT-, Mumbai and German Research Foundation | IIT-, Mumbai | 18-22 February, 2019 |
| 11 | Dr. R. K. Gothwal | Regional Workshop on Biological Diversity Laws in Rajasthan | - | NLU Jodhpur and National Law School of India, Bengaluru | NLU, Jodhpur | 13-14 February, 2019 |
| 12 | Dr. Swagata Payra | 5th International Skynet workshop. Topic:- Aerosol properties and their influences over a semi arid zone over India | SKYNET, Japan and IMD, India | Ministry of Earth Sciences, Lodhi Road New Delhi | Prithvi Bhawan, Lodhi Road New Delhi | 13-15 February, 2019 |
| 13 | Dr. Swagata Payra (Invited talk) | Numerical Modelling and Forecasting of Desert Storms and Cloud Burst (NUMCLOUDS) | SERB, DST | SERB, DST and CURAJ | Central University Rajasthan, Rajasthan | 11 to 23 February, 2019 |
| 14 | Dr.Abinash Pankaj | Orientation Programme on Education Administration (Phase – A) | - | Birla Institute of Technology, Mesra Ranchi | BIT Jaipur Campus | 11 February-01 April, 2019 |
| **Sr. No.** | **Name of the Faculty** | **Title of the Conference/ Seminar** | **Funding Agency** | **Organizers** | **Venue** | **Date** |
| 15 | Puneet Sharma | Advances in Optical Communication | MNIT, Jaipur | Electronics and ICT Academics, MNIT Jaipur | MNIT and SKIT, Jaipur | 9-14 February, 2019 |
| 16 | Gautam Kumar Goswami, Mr. Gaurav Chaudhary, Mr. Manish Kumar & Dr. Rishika Sharma | Jaipur International Film Festival 2019 | JIFF | JIFF | Birla Institute of Technology, Jaipur Campus | 21st January, 2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 17 | Dr. Vibhuti Pandya | Jaipur International Film Festival 2019 | JIFF | JIFF | Gem Cinema, Golcha Theatre And. Birla Institute of Technology, Jaipur Campus | 20 – 22 January, 2019 |
| 18 | Dr. Vibhuti Pandya & Mr. Gaurav Chaudhary | National Exhibition, Live Demo, Art Discussion during Jaipur Kala Mahotsav 2019. Topic of Panel Discussion:. Decoding the Domestic and Foreign Markets | Jaipur Kala Mahotsav | Pratibha Research Society | Jawahar Kala Kendra, Jaipur | 17– 19 January, 2019 |
| 19 | Dr. R. K. Gothwal | Introductory Astronomy and Astrophysics | DST, Rajasthan | Amateur Astronomer's Society | BISR, Jaipur | 8-10 January, 2019 |
| 20 | Dr. Anand Kumar Srivastava | 106$^{th}$ Indian Science Congress | BIT Mesra | ISCA & LPU, Jalandhar | LPU, Jalandhar | 3-7 January, 2019 |

| **Sr. No.** | **Name of the Faculty** | **Title of the Conference/ Seminar** | **Funding Agency** | **Organizers** | **Venue** | **Date** |
|---|---|---|---|---|---|---|
| 21 | Dr. Aparajita Pandey | Blockchain Architecture Design & Use Cases | MHRD | NPTEL | Online Jaipur | January-April, 2019 |
| 22 | Dr. Alok Pandey | Introduction To Internet Of Things. (12 Weeks) | MHRD | NPTEL | Online | Jan to April, 2019 |
| 23 | Ankur Agarwal & Puneet Sharma | Scientific Techniques & Computational Approaches | Self | Deptt. Of ECE, MNIT Jaipur | MNIT, Jaipur | 24-28 December, 2018 |
| 24 | Dr. Ravindra Kumar | 63$^{rd}$ DAE Symposium on Solid State Physics | BRNS & DAE Govt. Of India | BARC | Guru Jamb. Uni. of Sci. & Tech., Haryana | 18-22 December, 2018 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 25 | Ankur Agarwal | 5G and IoT-The New Internt Perspective | *(a)* | LNM Institute of Information Technology, Jaipur | LNMIIT, Jaipur | 8-9 December, 2018 |
| 26 | Dr. Anand Kumar Srivastava | 33rd National Symposium on Plasma Science and Technology (PLASMA-2018) | BRNS, DAE | PSSI & University of Delhi | University of Delhi | 4-7 December, 2018 |
| 27 | Dr. Alok Pandey | All India Security Summit | NASSCOM & DSCI | NASSCOM & DSCI | Gurogram | 4 -6 December, 2018 |
| 28 | Ankur Agarwal | Wireless and Mobile Communication | - | Electronics and ICT Academics, MNIT Jaipur | MNIT, Jaipur | 3-7 December, 2018 |
| 29 | Dr. Rishika sharma | Painting workshop on Voting awareness Jaipur. | Rajasthan Lalit Kala Academy | Rajasthan election commission in association with Rajasthan Lalit Kala Academy, Jaipur. | Statue circle Park, Jaipur | 2nd December, 2018 |

| **Sr. No.** | **Name of the Faculty** | **Title of the Conference/ Seminar** | **Funding Agency** | **Organizers** | **Venue** | **Date** |
|---|---|---|---|---|---|---|
| 30 | Dr. Deepak Verma | Modelling and Simulation of Custom Power Devices for Power Quality Improvement | -- | Malviya National Institute of Technology Jaipur | Malviya National Institute of Technology Jaipur | 19- 23 November, 2018 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 31 | Dr. Swagata Payra (Lead Talk) | TROPMET 2018. Topic:- WRF-Chem model simulation during typical dust storm event over North West India | Ministry of Earcth Science ( MoES), Govt of India | Indian Meteorological Society | Banaras Hindu University (BHU), Varanasi | 24 – 27 October, 2018 |
| 32 | Dr. Anand Kumar Srivastava | 27th IAEA Fusion Energy Conference (FEC-2018). | BRNS, DAE | IPR, Gandhinagar | IPR, Gandhinagar, India | 22-27 October, 2018 |
| 33 | Dr. Swagata Payra (Invited Talk) | 6th Rajasthan Science Congress. Topic:- Aerosol properties and their influences over Jaipur, Rajasthan with a special emphasis on dust storm. | Rajasthan Science Congress | Central University Rajasthan, Rajasthan | Central University Rajasthan, Rajasthan | 13-15 October, 2018 |
| 34 | Dr.P.S. Solanki & Dr. R. K. Gothwal | Nextgen Genomics, Biology, Bioinformatics and Technologies Conference (NGBT2018) | DBT, New Delhi, GOI | Sci Genome Research Foundation (SGRF) | Fairmont Hotel, Jaipur | 30 September -2 October, 2018 |
| 35 | Dr. P.S. Solanki | 17th annual International Conference on Bioinformatics (InCoB 2018) | DBT, New Delhi, GOI | SCIS, JNU, New Delhi | JNU, New Delhi | 26-28 September, 2018 |
| **Sr. No.** | **Name of the Faculty** | **Title of the Conference/ Seminar** | **Funding Agency** | **Organizers** | **Venue** | **Date** |

| | | | | | | |
|---|---|---|---|---|---|---|
| 36 | Dr.Abinash Pankaj | HCFC Phase-out Management Plan (HPMP) on Refrigeration & Air-Conditioning (RAC) servicing Sector | GIZ--Proklima International. Deutsche Gesellschaft für.Internationale Zusammenarbeit (GIZ) GmbH | J K Laxmipat University, Jaipur | J K Laxmipat University, Jaipur | 24-28 September, 2018 |
| 37 | Gautam Kumar Goswami | 8th International Terracotta Wood fire Workshop. | West Zone Cultural Centre, Udaipur | West Zone Cultural Centre, Udaipur | Studio 25, Molela, Udaipur, Rajasthan | 23-27 September, 2018 |
| 38 | Dr. Anand Kumar Srivastava | STEM Teacher Training Workshop on Research Based Pedagogical Tools (RBPT), Level-1. | IISER, Pune | IISER, Pune | Fern Resort, Kolkata | 23-26 September, 2018 |
| 39 | Dr. Vibhuti Pandya | National Symposium, Exhibition, and Live Demo on Folk and Tribal Art Traditions Revival and Sustenance | - | Rajasthan Lalit Kala Academy and Indian Institute of Craft & Design | Rajasthan Lalit Kala Academy, Jaipur | 29-31 August, 2018 |
| 40 | Mr. Gaurav Chaudhary | National Symposium, Exhibition, and Live Demo on Folk and Tribal Art Traditions Revival and Sustenance | - | Rajasthan Lalit Kala Academy and Indian Institute of Craft & Design | Rajasthan Lalit Kala Academy, Jaipur | 29-31 August, 2018 |
| 41 | Puneet Sharma | Computational Techniques in Optica and Photonics | - | Electronics and ICT Academics, MNIT Jaipur | MNIT, Jaipur | 20-25 August, 2018 |

| Sr. No. | Name of the Faculty | Title of the Conference/ Seminar | Funding Agency | Organizers | Venue | Date |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 42 | Dr. Ranjana Agrawal | National Conference on Recent Advances at Interface of Physical and Life Sciences RAIPLS- 2018 | Department of Science and Technology | Department of Chemistry, University of Rajasthan, Jaipur | Department of Chemistry, University of Rajasthan, Jaipur | 6-7 July, 2018 |
| 43 | Dr. Alok Pandey | Skill Development Course On IoT. (225 Hours) | CSIR – CEERI Pilani | CEERI | Jaipur | 4 June – 12 July, 2018 |

## SECTION 4 RESEARCH PUBLICATIONS

***9.*** **Publications in Journals :**(International/National)

1. Patel, S., Srivastava, A. K., Chowdhuri, M.B., Manchanda, R., Ghosh, J., Bhattacharya, A., Raval, J. V., Nagora, U., Atrey, P.K., Tanna R. L. & Aditya Team (2019). Study of Iron impurity behaviour using VUV spectroscopy in ADITYA Tokamak. NUCLEAR FUSION, 59, 086019, 1-8.
2. Srivastava, Anand Kumar (2019). Selection of Dielectric Material for Producing Diffuse Dielectric Barrier Discharge Plasma at Atmospheric Pressure. Materials Today: Proceedings, Elsevier, 18, 1033-1038.
3. Sharma, Y. C., Ravindra Kumar, Vidyasagar, V., & Dheeraj Bhardwaj (2018). Low temperature plasma ion nitriding (PIN) of Inconel 690 alloy. Mater. Res. Express 6, 026559.

*4.* Kumawat Dharmendra & Sharma Roopali (2019) An empirical study for sustainable policy intervention in urban drinking water supply management using performance indicators. International Journal Business Continuity and Risk Management, Vol. 9, No. 4, (362-384).

*5.* Kumar Santosh & Sharma Roopali (2018) Key barriers in the growth of rural health care: an ISM-MICMAC approach. Benchmarking: An International Journal 25 (7), 2169-2183.

*6.* Mishra, G.P., Mishra, K. L. & Mishra, Rishabh (2019). Organizational change and effectiveness – A study of an overview of different authors, International Journal of Recent Advances in Multidisciplinary Research, Vol. 6, issue-1, 4366-4368.

*7.* Mishra, G.P. & Mishra, Kusum Lata (2018). "Role of cultural and status factors in Leadership style and organizational effectiveness - An overview", International Journal of Business and Management Invention, Volume 7 Issue 5 Ver. IV.

*8.* Singhal, M., Chaturvedi, P., Gothwal, R. K., Mohan, M. K. & Solanki, P.S. (2019) Comparative study of synonymous codon usage in bacteria growing at extreme temperatures.Int JBioinformatics ResAppl, ISSN Print: 1744-5485 (Accepted and In Press). DOI: 10.1504/IJBRA.2021.10022014.

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*13.* Bhargav, A. & Saini, J. K. (2019). A Review Article on Integrator Circuits Using Various Active Devices. Journal of Advance Research in Dynamical & Control Systems, 11(07), 26-32.

*14.* Bhargav, A., & Saini, J. K. (2019). A Novel Simple Differentiator Circuit Based on Carbon Nano Tube Field Effect Transistors Voltage Difference Transconductance Amplifier. Micro and Nanosystems, 11, 1-10.

*15.* Bhargav, A., & Saini, J. K. (2019). Simulation of optical ISL with 48 transponders and performance analysis using BER and Q-Factor. Journal of Optical Communications, 1-12.

*16.* Bhargav, A., & Saini, J. K. (2019). Analyzation of Q-factor and BER of OISL with 36 Transponders. Journal of Advanced Research in Dynamical and Control Systems, 10, 1453-1461.

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*20.* Sharma, Anju, & Sinha, Madhavi (2019). A differential evolution-based routing algorithm for multi-path environment in mobile ad hoc network, Int. J. Hybrid Intelligence 1(1), 23.

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*23.* Agarwal, M. M., Govil, M. C., & Saini H. (2019). Probabilistic and Fuzzy based Efficient Routing Protocol for Mobile Ad Hoc Networks. Recent Patents on Computer Science, 12

(E-pub Ahead of Print in 12 Volume).

**6**. **Publications in Proceedings:**(International/National)

*1.* Patel, S., Srivastava, A. K., Chowdhuri, M.B., Manchanda, R., Ghosh, J., Bhattacharya, A., Raval, J. V., Nagora, U., Atrey, P.K. and Tanna R. L., Study of Iron impurity behaviour using VUV spectroscopy in ADITYA and ADITYA-U Tokamak (EX-P4-3 (1-7)). In Proceedings of 27th IAEA Fusion Energy Conference, Ahmedabad, India, 2018. (ID-54171, CN-258).

*2.* Soni., M., **Payra. S.** and Verma., S.,: Radiative forcing estimation of aerosols at four locations in India and Pakistan using ground based remote sensing instruments, , IASTA - 2018, Center for Atmospheric Sciences. IIT Delhi, 26 – 28th November, 2018, ISSN 0971 - 45102.

**7. Book:**

- Single Authored NIL
- Co-Authored
  1. Bhargav, A. and Saini, J. K. (2019). Inter-Satellite Optical Wireless Communication System. LAP Lambert Academic Publishing. ISBN: 978-620-0-23018-8.
- Edited Books NIL
- Chapter(s) in Edited Book NIL

## SECTION 5 AWARD/ PATENT/ COLLABORATIONS

**8. 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. Anand Kumar Srivastava,<br><br>Assistant Prof. Physics | Received Outstanding Reviewer Award 2018 (Journal of Physics D: Applied Physics) | IOP Science Publishing, UK | International | 2018 |
| 2. | Jyoti Sharma, Assistant Prof. ECE | Designated as Member, Executive Committee | IEEE, APS Delhi Section | State Level | 2019 |
| 3. | Dr. Alok Pandey, Assistant Prof. CSE | Gold Certificate For Achieving 99% Marks | NPTEL | National Level | 2019 |

| | | | | | |
|---|---|---|---|---|---|
| 4. | Vibhuti Pandya, Assistant Prof. Animation | Designated as Jury Member of Jaipur International Film Festival 2019 | Jaipur International Film Festival | International | 18-22 January, 2019 |

## SECTION 6 ACTIVITIES/ FACULTY MEMBERS / DOS/DAS

**9. Departmental Students' Activities**

| **Sr. No.** | **Name of the Activity** | **Students' Co-Ordinator (If any)** | **Faculty Co-ordinator (if any)** | **Date / Duration** |
|---|---|---|---|---|
| 1 | An Invited Talk and interactive session by Mr. Sumit Srivastava, Founder of Gensus Design& Edutainers "On Development of Entrepreneurship Aptitude & Vision" | **-** | Dr. Roopali Sharma | April 12, 2019 |
| 2 | Art Exhibition on theme of Spaces for Good | Jyestha Arora & Ashi Jain | Dr. Vibhuti Pandya | March 10 –20, 2019 |
| 3. | Cultural Fest (Vibrations ) | *1.* Ms. Aakansha Pancholi BE – EEE, IV Sem<br>*2.* Mr. Sourabh Nagpal BE – EEE, IV Sem<br>*3.* Mr. Priyansh Jain BE – ECE, IV Sem<br>*4.* Ms. Unnati Shrivastav BE – CSE, IV Sem<br>*5.* Mr. Naman Jain BCA, III Semester | Dr Rajni Agarwal | 13 -15 February,2019 |
| 4 | An Invited Talk and interactive session by Mrs. Nupur Sandhu, An eminent Psychological Therapist on "Creativity & Psychological aspects in strengthening Emotional Quotient" | - | Dr. Ritu Pareek | January 22, 2019 |
| **Sr. No.** | **Name of the Activity** | **Students' Co-Ordinator (If any)** | **Faculty Co-ordinator (if any)** | **Date / Duration** |

| | | | | |
|---|---|---|---|---|
| 5 | Art Exhibition During Jaipur Kala Mahotsav at Jawahar Kala Kendra, Jaipur | Sunil Chirania & Bhaskar Tripathi ( B.Sc. Animation students ) | Dr. Vibhuti Pandya & Mr. Gautam Goswami | January 17 – 20, 2019 |
| 6 | Sports Fest ( Cavorts) | *1.* Mr. Rahul Jangir – BE – EEE, IV Sem<br>*2.* Mr. Kumar Eklavya – BE – ECE, IV Sem<br>*3.* Mr. Apoorv Jain – BE – CSE, IV Sem<br>*4.* Mr. Sanjay Singh Chouhan – MCA, III Sem<br>*5.* Mr. Arun Brijwasi – MCA, I Sem | Mr. Vikas Sanwan | November 17-18, 2018 |
| 7 | Blood Donation Camp at Institute under collaboration of HDFC Bank, Lions Club ,SDM Hospital and Pathology Society of Rajasthan | *1.* Utkarsh Mishra ( B.Tech V Sem),<br>*2.* Charu Agarwal ( B.Tech III Sem),<br>*3.* Jagriti Basa ( B.Tech I Sem),<br>*4.* Shivani Porwal ( BCA I) | Dr. Anand Kumar Srivastava | November 15, 2018 |
| 8 | Technical Fest ( TechVibes) | *1.* Mr. Raghav Pareek - BE – EEE, VII Sem<br>*2.* Ms. Daksha Govil - BE – ECE, VII Semester<br>*3.* Mr. Abhijeet Mohapatra – BE – CSE, VII Sem<br>*4.* Ms. Riddhi Johri – BE – CSE, VII Semester<br>***5.*** Mr. Hitik – BCA, V Semester | Dr Vishwambhar Pathak | October 25-26, 2018 |

| **Sr. No.** | **Name of the Activity** | **Students' Co-Ordinator (If any)** | **Faculty Co-ordinator (if any)** | **Date / Duration** |
|---|---|---|---|---|
| 9 | Vibhor Gandhi Memorial Creative Contest & Awards | Prerna Mittal & Dharmendra Singh ( B.Sc Animation Students) | Dr. Vibhuti Pandya | October 25, 2018 |
| 10 | Two Day Hands On Workshop on IoT | **-** | Dr. Alok Pandey | October 5 – 6 2018 |

**10. List of Faculties**

| S. No. | Name | Designation | TEQIP Sponsored (Yes / No) |
|---|---|---|---|
| **1.** | Dr.Abhinav Dinesh | Director | No |
| **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. Bimalendu Pathak | Assistant Professor | No |
| 5 | Dr.Vishwambhar Pathak | Assistant Professor | No |
| 6 | Dr.Piyush Gupta | Assistant Professor | No |
| 7 | Mr.Madan Mohan Agarwal | Assistant Professor | No |
| 8 | Mr.Vivek Gaur | Assistant Professor | No |
| 9 | Mr.Subhash Chand Gupta | Assistant Professor | No |
| 10 | Dr. (Mrs.) Archana Bhatnagar | Assistant Professor | No |
| 11 | Mrs.Seema Gaur | Assistant Professor | No |
| 12 | Mrs.Anju Sharma | Assistant Professor | No |
| 13 | Mr. Santosh Kumar Sharma | Assistant Professor | No |
| 14 | Dr. Alok Pandey | Assistant Professor | No |
| 15 | Mr.Santhosh Kumar Agarwal | Associate Lecturer | No |
| 16 | Mr. Khalid Ashraf | Associate Lecturer | No |

| S. No. | Name | Designation | TEQIP Sponsored (Yes / 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 |
| 7 | Mr.Jitendra Kumar Saini | Associate Lecturer | No |
| | | | |
| **Department of Electrical & Electronics Engineering** | | | |
| 1 | Mr. Prashant Singh Rathore | Assistant Professor | No |
| 2 | Dr.(Mrs.)Aparajita Pandey | Assistant Professor | No |
| 3 | Dr. Deepak Verma | Assistant Professor | No |
| | | | |

| | | | |
|---|---|---|---|
| **Department of Management** | | | |
| 1 | Dr.Roopali Sharma | Professor | No |
| 2 | Mr. G P Mishra | Professor | No |
| 3 | Mr. S C Mishra | Associate Professor | No |
| 4 | Dr.Ritu Arora | Assistant Professor | No |
| 5 | Mrs.Pankaj Sharma | Assistant Professor | No |
| 6 | Dr. Sandip Kumar Sengupta | Assistant Professor | No |
| 7 | Dr. Jyoti Kumar Chandel | Assistant Professor | No |
| 8 | Mr.Priyanshu Sharma | Associate Lecturer | No |
| 9 | Mrs.PurviMathur | Associate Lecturer | No |
| 10 | Mrs 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 |
| | | | |

| S. No. | Name | Designation | TEQIP Sponsored |
|---|---|---|---|
| **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 | Mr.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 |
| **S. No.** | **Name** | **Designation** | **TEQIP Sponsored** |
| **Department of Bio- Technology** | | | |
| 1 | Dr. M. Krishna Mohan | Professor (Presently Deputed to BISR, Jaipur) | No |
| 2 | Mr.P.S.Solanki | Asst. Professor (Presently Deputed to BISR, Jaipur) | No |
| 3 | Dr. R.K. Gothwal | Asst. Professor (Presently Deputed to BISR, Jaipur) | No |
| | | | No |
| **Department of Environmental Science** | | | |
| *1.* | Mrs. Nidhi Singh | Associate Lecturer | |

**11. Board of Studies**

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| 1. | Dr. Vibhuti Pandya | Assistant Professor – Animation & Multimedia | BOS- External Member at IIS University, Jaipur |
| 2. | Dr P S Solanki | Assistant Professor – Bio-Engineering | External Member (Amity Institute of Biotechnology (AIB) – Bioinformatics) |
| 3. | Dr P S Solanki | Assistant Professor – Bio-Engineering | External Member (Jaipur National University (JNU) Jaipur) |

***12.*Departmental Academic Committee**

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| *1.* | Dr Abhinav Dinesh | Director , Ex-Officio | Chairman |
| 1. | Dr. Roopali Sharma | Professor | Member |
| 2. | Dr. Madhavi Sinha | Associate Professor | Member |

## SECTION 7 OTHER INFORMATION

***13.*Student Entrepreneurship activities/Start-ups if any**

| Sr.No | Name of Student | Source of Funding | Title of Startup | Short Description |
|---|---|---|---|---|
| 1. | Anubhav Deep<br><br>( Founder)<br><br>( BE-EEE Student) | Y Combinator | ServX, Carbiqi | Founded by Akansh Sinha and Anubhav Deep , Carbiqi has four stores in Delhi-NCR. The Carbiqi team previously worked in the automotive services space under the brand name of ServX. |

| | | | | |
|---|---|---|---|---|
| | | | | https://www.vccircle.com/cardekho-acqui-hires-auction-portal-carbiqi/ |
| **Sr.No** | **Name of Student** | **Source of Funding** | **Title of Startup** | **Short Description** |
| 2. | Aish Khamesra**,** **(**Co- Founder) ( BE-ECE Students | Self | SKILLOVATE LEARNING | Skillovate Learning Pvt. Ltd. is on a mission to skill kids through Computer Science. http://www.skillovate.com |
| 3. | Abhijeet Vijaivargia (Founder) & Arushi Jain (Co-founder) ( BE-ECE Students | Self | *Global Lancers* | Global Lancers, combine proven methodologies, business domain knowledge and expertise of skilled professionals to deliver high quality solutions to run, manage and grow your business. https://lancersglobal.com/ |
| 4. | Anmol Deep, (Founder) (B.Sc. Animation & Multimedia Student) | Self | Unfold Craft | This start-up deals with animation content, Infographics, short films, documentary, biography, short videos etc. www.unfoldcraft.com |

***14.*Publication by students, if any**

- **Jain, P**. & Saini, J. K. (2019). Utilization of CNFET Technology for Low-Power High-Speed 12 Transistor Full Adder Circuit. Journal of Advance Research in Dynamical & Control Systems, 11(07), 161-168.
- **Bhargav, A**. & Saini, J. K. (2019). A Review Article on Integrator Circuits Using Various Active Devices. Journal of Advance Research in Dynamical & Control Systems, 11(07), 26-32.
- **Bhargav, A.,**& Saini, J. K. (2019). A Novel Simple Differentiator Circuit Based on Carbon Nano Tube Field Effect Transistors Voltage Difference Transconductance Amplifier. Micro and Nanosystems, 11, 1-10.
- **Bhargav, A.**, & Saini, J. K. (2019). A Novel Simple Differentiator Circuit Based on Carbon Nano Tube Field Effect Transistors Voltage Difference Transconductance Amplifier. Micro and Nanosystems, 11, 1-10.
- **Bhargav, A.,**& Saini, J. K. (2019). Simulation of optical ISL with 48 transponders and performance analysis using BER and Q-Factor. Journal of Optical Communications, 1-12.
- **Bhargav, A.,**& Saini, J. K. (2019). Analyzation of Q-factor and BER of OISL with 36 Transponders. Journal of Advanced Research in Dynamical and Control Systems, 10, 1453-1461.
- **Ahir, A**., Saini, J.K &A. Srinivasulu (2019). A Low Voltage Distinctive Source Based Sense Amplifier For Memory Circuits Using FinFETs. Advances in Intelligent Systems and Computing (Springer), 670,225-232.
- **Sunita Verma, Divya Prakash,** Manish Soni **and Kirpa Ram: Chapter :- Atmospheric Aerosols Monitoring: Ground and Satellite-based Instruments in book Environmental Monitoring and Assessment IntechOpen, Published: April 30th 2019, Doi:10.5772/intechopen.80489, https://www.intechopen.com/online-first**

**/atmospheric-aerosols-monitoring-ground-and-satellite-based-instruments.**

## *15.* Achievements of Students

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | Pravar Jain, Nirmit Parnami, Harsh Khatod, Aditya Roshan<br><br>(BE-ECE Students) | Winners of New Idea Factory Contest 2019 Cash Amount of 1 Lakh rupees and internship offer of 2 months | National Engineering Industries Ltd. (a C K Birla Group Company) | 18/04/2019, NEI, Khatipura Jaipur |
| 2. | Priyansh Jain<br><br>(BE-ECE Student) | 2nd runner up and prize of Rs. 25000/- | National Engineering Industries Ltd. (a C K Birla Group Company) | 18/04/2019, NEI, Khatipura Jaipur |
| 3. | Elvira Mishra ( B.Sc Animation & Multimedia student) | First Position in Inter College Art Contest & Exhibition | Spaces for Good | 10th to 20th March 2019, At Coffee Bean Media, Calgary Road, Jaipur |

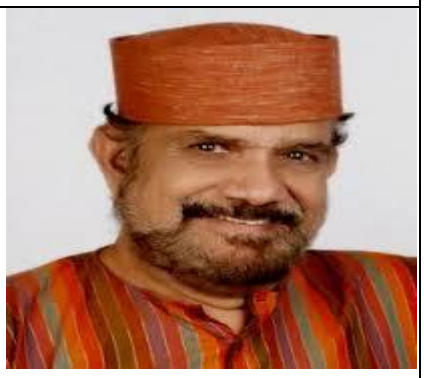
| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 4. | Shubhojit Das Gupta Shweta Kabra Archie Vijjayvargia Parkhi Sinha Anchal Khandelwal Devansh Saxena ( B.Sc Animation & Multimedia student) | Jury Mention Prize in Inter Collage Art Contest & Exhibition | Spaces for Good | 10th To 20th March 2019, At Coffee Bean Media, Calgary Road, Jaipur |
| 5. | Hemant Sharma<br><br>(BE-ECE Student) | Japan Special Tour as a reword of the prize. | Japanese Ministry of Economy, Trade and Industry, Japanese Government | 22-23/01/2019, Christ University, Bangalore |

## *16.* Distinguished Visitors from Industry/Academia/Research organizations

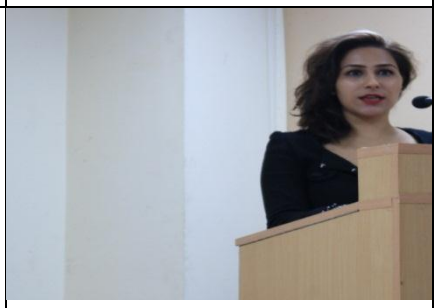
| Sr. No | Name of Visitor with Affiliation | Date of Visit & Purpose | Picture |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1 | **Professor Kusum Jain**<br>Internationally renowned scholar of Philosophy. Member , Governing body of Indian Council of Philosophical Research. Brought pride to the country with invited talk in Prestigious International Conference held in Geneva in 2015 on " The Big bang theory and experimentation on discovery of god particle to understand origin of Universe" | Invited session in Induction Programme for new students<br><br>July 26, 2018 | |
| 2 | **Mr. V K Surendra**<br>Deputy Director General , DoT, Govt. of India | Invited session in Induction Programme for new students<br><br>July 26, 2018 | |

| **Sr. No** | **Name of Visitor with Affiliation** | **Date of Visit & Purpose** | **Picture** |
|---|---|---|---|
| 3 | **Mr. Somesh Gupta**<br>COO , Infosys Jaipur Unit | Invited session in Induction Programme for new students<br><br>July 26, 2018 | |
| 4 | **Mr. Kaushlesh Mahehswari**<br><br>President (Sales & Marketing), Mangalam Cement Limited, a leading C K Birla Company. | Invited session in Induction Programme for new students<br><br>July 26, 2018 | |

| | | | |
|---|---|---|---|
| 5 | **Dr Deepak Saxena**<br><br>Director , Student Advisory Bureau, University of Rajasthan | Invited session in Induction Programme for new students<br><br>July 26, 2018 | |
| 6 | **Professor Chinmay Mehta**<br><br>a Learned Scholar and Renowned Artist in the area of fine arts . Chairman, Rajasthan Lalit Kala Academy,<br><br>Formerly, Professor and Dean, Faculty of Fine Arts University of Rajasthan | Invited session in Induction Programme for new students<br><br>July 26, 2018 |  |
| **Sr. No** | **Name of Visitor with Affiliation** | **Date of Visit & Purpose** | **Picture** |
| 7 | **Manisha Gulyani**<br><br>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<br><br>July 26, 2018 | |
| 8 | **Mr. Gunjan Saxena, ITS**<br>Principal General Manager , BSNL | Chief Guest in Inaugural Function of Technical Fest TechVibes<br><br>October 25, 2018 | |

| | | | |
|---|---|---|---|
| 9 | **Harikrishna Anandan**, from Switzerland Specialized in Documentary Film Making | Invited Speaker in a Session on Animation films held at BIT Jaipur Campus under Jaipur International Film Festival<br><br>21st Jan. 2019 | |
| 10 | **Hussain Nuri**, from Iran Specialized in Script Writing & Painting | Invited Speaker in a Session on Animation films held at BIT Jaipur Campus under Jaipur International Film Festival<br><br>21st Jan. 2019 | |

| Sr. No | Name of Visitor with Affiliation | Date of Visit & Purpose | Picture |
|---|---|---|---|
| 11 | **Arzu Qaderi**, from U.K. Specialized in Social Film Making & Acting | Invited Speaker in a Session on Animation films held at BIT Jaipur Campus under Jaipur International Film Festival<br><br>21st Jan. 2019 |  |
| 12 | **Amr Gamal**, from Yeman Specialized in Documentary Film Making | Invited Speaker in a Session on Animation films held at BIT Jaipur Campus under Jaipur International Film Festival<br><br>21st Jan. 2019 | |

| | | | |
|---|---|---|---|
| 13 | **Mr. Nishant Goel**<br>Founder and CEO, BOT Mantra | Delivered Invited talk and conducted workshop on Robotic Process Automation<br><br>24th January 2019 | |
| 14 | **Mr. Sumit J. Darak**<br>DST INSPIRE Faculty, IIIT Delhi | Delivered Invited talk and had interactive session on Emerging areas of research in wireless communication<br><br>28th January 2019 | |
| 15 | **Dr. Surendra Pal**<br>Dr. D.S. Kothari chair and advisor to Defence Research Development Organization (DRDO), Bangalore<br><br>Formerly, Vice Chancellor , Defence Institute of Advance Technology, Pune and Deputy Director , ISAC , ISRO Banagalore | Invited Lecture and interactive session on Emerging areas of Research in Space Technology<br><br>1st April 2019 | |

***17.*** **List of Distinguished Alumni**

| Sr.No | Name, Batch and Affiliation | Short Description |
|---|---|---|
| 1. | **Mr. Amrit Supriya**<br>(BE -CSE 2004-2008)<br>Working at CUMMINS, Minnesota, USA | Best Capstone Award for TLI's MS in Management of Technology, at University of Minnesota. |
| 2. | **Mr. Ankur Gupta**<br>(BE -ECE, 2005-2009) | An ITS Officer , Selected in Prestigious IES |

| | | |
|---|---|---|
| | Assistant Director General at Indian Telecommunication Service | |
| 3. | **Mrs. Shivaranjani Popli**<br><br>(BE-ECE , 2005-2009)<br>Working in Indian Railways | Gold Medallist of BIT in ECE 2009 batch<br><br>M.Tech from IIT Kanpur ( 2011), Gold Medallist in the batch, Dr Shankar Dayal Sharma award for overall best performance<br><br>Selected in IES and joined Indian railway services. Presently working on prestigious Bullet Train Project in collaboration of Japan |
| 4. | **Mr. Kapil Sharma**<br><br>(BE-ECE , 2005-2009)<br>working with DigitasLBi_US as Sr. Data Scientist | Gold Medallist of BIT in ECE 2012 batch ( Also had highest CGPA in all Engineering Branches at BIT)<br><br>Selected in Fellow Programme at IIM Ahmedabad but went for MS from University of Texas at Austin. Worked with prestigious NXP Semiconductors before joining DigitasLBi_US as Sr. Data Scientist. |

| **Sr.No** | **Name, Batch and Affiliation** | **Short Description** |
|---|---|---|
| 5. | **Mr. Nitin Jain**<br><br>( B. Sc. Animation in year 2009 &<br>Master in Animation Design, Year 2011)<br>Founder & CEO of his Start-up- Indibni, one of the leading Indian Indigenous Content Production company | An outstanding Entrepreneur<br>Felicitated with the prestigious Rajasthan Brand Leadership Award 2019 powered by ABP News and organized by World HRD Congress.<br>Contributed immensely in promoting Alumni interaction as Secretary, BITOSA Jaipur Chapter. |

***18.*Any other relevant information**

- Dr. Anand Kumar Srivastava delivered Invited talk entitled, "Stationary and Moving Pattern formation in Surface Dielectric Barrier Discharge Plasma" at 106$^{th}$ Indian Science Congress, LPU Jalandhar, 5$^{th}$ January 2019.
- Snehanshu Shekhar, Designated as member, Technical Program Committee, ICCT 2018 & 2019.
- Dr. Swagat Payra, Session Chair, in the National Conference on "Emerging Trends in Water Quantity and Quality Management-II" (ETWQQM-2019), Poornima University, 30$^{th}$ March, 2019.
- Dr. R. K. Gothwal, Chaired poster session rapporteur at HRMMV, Jalandhar during February 22-23, 2019

**Lalpur Off Campus**

SECTION 1 CAMPUS PROFILE

*1.* **About the Campus**

**BIT Lalpur Off Campus** started operations 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 to serve the needs of executives 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. 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. T.K. Banerjee | Digital Success Summit - 2018 | Indus Net Technologies | Indus Net Technologies | Hyatt Regency, Kolkata | 10th August 2018 |
| 2. | Dr Mili Dutta | 60th Annual Conference,ISLE | Indian Society of Labour Economics (ISLE), | Institute for Human Development | Indira Gandhi Institute of Development Research (IGIDR) Mumbai | 19-21 December 2018 |
| 3. | Dr.(Mrs.)Swati Priyadarshani | 60th Annual Conference,ISLE | The Indian Society of Labour Economics | IGIDR,Mumbai | Indira Gandhi Institute of Development Research (IGIDR) Mumbai | 19-21 December 2018 |
| 4. | Srabani Mukhopadhyaya | 13th International Conference and Workshops on Algorithms and Computation (WALCOM 2019) | Self-funded. Partially funded by IIT, Guwahati, Sc. & Engg. Research Board, DST, etc. | Indian Institute of Technology, Guwahati | IIT, Guwahati | Feb. 27-March 2, 2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5. | Kuntal Mukherjee | IEEE International Conference On Recent Innovations In Electrical, Electronics & Communication Engineering - (Conference ID: 44171XP | IEEE | Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar | KIIT, Bhubaneswar, India | 27 Jul - 28 Jul 2018 |
| 6. | Kuntal Mukherjee | Proceedings of the International Conference on Science, Technology, Engineering and Mathematics(STEM), Vibrant Gujarat Global Submit | Gujarat Government | Education Department Gujarat and Department of Science and Technology Gujarat Government | Gujarat, India | 18-20 January, 2019 |

## SECTION 3 RESEARCH PUBLICATIONS

**3. Publications in Journals**

1. Soumitro Chakravarty, Umesh Prasad, Amar Nath Jha (2018) Corporate Citizenship : Contextual Issues, Trends and the Road Ahead, in ICFAI University Jharkhand(IUJ) Journal of Management, 6(1), 2347
2. Soumitro Chakravarty, Umesh Prasad, (2018) Attrition, Retention and the Indian Knowledge Worker's Experiences – A qualitative enquiry, in International Journal for Research in Engineering Application & Management (IJREAM), 4(7)111
3. Soumitro Chakravarty, Umesh Prasad, (2018) Exploring the Underlying Issues In Employing Likert Scale For Social Sciences Research- A Primer For New Researchers, Journal of Emerging Technologies and Innovative Research (JETIR), 5(10), 624-626,
4. Mukherjee S. & Sahay E., (2019), A review on organic consumption in young India: A Push by leveraging subjective norms through effective communication in the age of social media; International Journal of Research Culture Society, Vol. 3(1).
5. Kumar, P & Mishra, A. (2019). Implication of tourism traits on Jharkhand tourism with special reference to perception of residents. Purusartha A Journal of Management, Ethics and Spirituality. XI (2)
6. Kumari, P. & Dutta, M. (2019). Impact of Work Ethics on QWL, Productivity and Corporate Image of an Organization. International Organization of Scientific Research, 24(4) .
7. Minz, Swati and Munda P, (2019), International Journal of Management and Business Studies, 8(4)
8. Kouser ,K. & Priyam,A.(2019) .Comparison between Subspace and conventional clustering for High Dimensional Data Analysis. International Journal of Engineering and Advanced Technology, 8(03), 101.
9. Kouser ,K. & Priyam,A.(2019) .Comparison between Subspace and conventional clustering for High Dimensional Data Analysis. International Journal of Engineering and Advanced Technology, 8(03), 101
.
10. S P Tiwari, V K Yadav, P Pal**, B K Sharma** (2018) Minimal Fuzzy Realization for Fuzzy

Behaviour: A bicategory-theoretic, Approach. Journal of Multiple-Valued Logic & Soft Computing, 31(2), 105.

11. Maurya, S., & Mukherjee, K. (2019). An Energy Efficient Architecture of IoT based on Service Oriented Architecture (SOA), An International Journal of Computing and Informatics, 43(01), 87

12. Bhattacharya, A., Goswami, R. T. & Mukherjee, K **(**2019**).** An Ensemble voted Feature Selection technique for Predictive Modeling of Malwares of Android. International Journal of Information System Modeling and Design (IJISMD),10(2), 24

13. Bhattacharya, A., Goswami, R. T., & Mukherjee, K **(**2018**).** 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.

14. Goswami, S., & Mukherjee, K (2019)**.** High Performance Fault Tolerant Resource Scheduling in Computational Grid Environment. International Journal of Web-Based Learning and Teaching Technologies (IJWLTT), 15(1) ,4

15. Das, D. & Mukhopadhyaya, S. (2018). Distributed Algorithm for Painting by a Swarm of Robots under Limited Visibility. Journal of Advanced Robotic Systems, 15(05),1

16. Mitra, S., Das, A. (2018), Adaptive Routing Model in Wireless Sensor. World Journal of Modelling and Simulation, 14 (04), 289

**4. Publications in Proceedings**

1. Priyadarshani Swati & Bhagat Manju. "World of Work and Women (An empirical study on factors affecting work life balance of women employees in organised sector)." World O Work & Women",60$^{th}$ Labour Economics Conference,19-21 December 2018, Mumbai (Conference Volume Pg 232-233).

**5. Book:**

1. P.S.Bishnu and Vandana Bhattacherjee (2019), Data analysis using probability and statistics using R Language, PHI publication. (ISBN Hard copy) 978-93-87472-65-5, (ISBN e-Book) 978-93-87472-66-2.

**6. Chapter(s) in Edited Book**

1. Bhagat, S., Mukhopadhyaya, K. & Mukhopadhyaya, S. (2019). Computing Under Restricted Visibility. In Flocchini, P., Prencipe, G. & Santoro, N. (Eds.), Distributed Computing by Mobile Entities, LNCS 11340 (pp. 134-183). Springer Nature Switzerland.

2.Sadhu, A. K., Sardar, M., Das, D. and Mukhopadhyaya, S. (July 2018). Gathering in Discrete Domain: State-of-the-Art. In Mandal J. K., Bhattacharyya, D. & Auluck, N. (Eds.), AISC series on Advanced Computing and Communication Technologies - 702 (pp. 11-18). Singapore: Springer

## SECTION 4 ACTIVITIES/ FACULTY MEMBERS / DOS/DAS

***7.* Student Activities**

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|
| 1. | Inter Society Dum Charades | Rashmi Rani | Dr. Anis Haider | 06-Apr-19 |
| 2. | Game Of The Year | Anurag Kumar | Dr.Umesh Prasad | 23-Feb-19 |
| 3 | Just Do It | Rishab Rituraj | Dr.Soumitro Chakrborty | 10-Feb-19 |

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|---|---|---|---|---|
| 4 | Flix Freak | Nisha Ranjan | Dr. Satrajeet Choudhury | 09-Feb-19 |
| 5 | Brain Drain | Rashmi Rani | Dr. Anis Haider | 09-Feb-19 |
| 6 | Inter Society Face | Nisha Ranjan | Dr. Satrajeet Choudhury | 09-Feb-19 |
| 7 | Nutshell | Ravleen Kaur | Dr. Soumitro Chakrborty | 29-Jan-19 |
| 8 | Break The Ice | Shubham | Dr. Jaya Pal | 26-Oct-18 |
| 9 | Coder Jam | Shubham | Dr. Jaya Pal | 25-Oct-18 |
| 10 | Binet Simon | Shubham | Dr. Jaya Pal | 24-Oct-18 |
| 11 | Tambola | Rishab Rituraj | Dr. Soumitro Chakrborty | 05-Oct-18 |
| 12 | Biztalk | Diksha Lath | Dr. Anis Haider | 05-Sep-18 |
| 13 | Montage | Diksha Lath | Dr. Anis Haider | 04-Sept-18 |
| 14 | App Challenge | Rashmi Rani | Dr. Anis Haider | 31-Aug-18 |
| 15 | Vaktaby | Rashmi Rani | Dr. Anis Haider | 30-Aug-18 |
| 16 | Code Hunt | Rashmi Rani | Dr. Anis Haider | 30-Aug-18 |
| 17 | Take-De-Bait | Parul Agarwal | Dr.Mili Dutta | 27-Aug-18 |
| 18 | Tech Quiz | Parul Agarwal | Dr.Mili Dutta | 27-Aug-18 |
| 19 | Mun | Nisha Ranjan | Dr. Satrajeet Choudhury | 23-Aug-18 |

**8. List of Faculty members**

| Sr. No. | Name | Designation | TEQIP Sponsored |
|---|---|---|---|
| *1.* | Dr.A.N.Jha | Professor | **No** |
| *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 | |
| *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 | |

### *9.* Achievements of Students

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | Geet Arora | 2nd position | Montage | Bizwit society, BIT Lalpur |
| | | 4th position | Take-de-bait | Debsoc society, BIT Lalpur |
| 2 | Yukta Goenka | 1st position | Montage | Bizwit society, BIT Lalpur |
| | | 3rd position | Tambola | Interact society, BIT Lalpur |
| 3 | Navnit Kr,Sharma | 2nd position | Tambola | Interact society, BIT Lalpur |
| 4 | Swapnil Roy | 4th position | Business quiz | Xiss, ranchi |
| | | 1st position | Tech quiz | Debsoc society, BIT Lalpur |
| 5 | Sumit Grover | 3rd position | Nutshell | Interact society, BIT |

| | | | | |
|---|---|---|---|---|
| | | | | Lalpur |
| 6 | Astha Shandilya | 3rd position | App challenge | Bitexl society, BIT Lalpur |
| 7 | Debarati Roy | 3rd position | Vaktaby | Bitexl society, BIT Lalpur |
| | | 2nd position | Code hunt | Bizwit society, BIT Lalpur |
| | | 2nd position | Rain drain | Bitexl society, BIT Lalpur |
| 8 | Chitra Kumari | 2nd position | Inter society dumb charades | Bitexl society, BIT Lalpur |
| 9 | Saurav Upadhayay | 2nd position | Code hunt | Bitexl society, BIT lalpur |
| 10 | Sefali Rani | 2nd position | Business case competition | Motarhaat, Ranchi |
| 11 | Kumari Harshita | 2nd position | Business case challenge | Motarhaat, Ranchi |
| 12 | Shalini Poddar | 2nd position | Business case challenge | Motarhaat, Ranchi |
| 13 | Sakshi agarwal | 1st position | Biztalk | Bizwit society, BIT Lalpur |
| 14 | Hansa sinha | 2nd position | Mun | Naps, BIT Lalpur |
| | | 1st position | Folk dance | Bihan, Ranchi |
| 15 | Arpit ayush | 2nd position | Flix freak | Naps, BIT Lalpur |
| 16 | Shivam singh | | Information security | K.a.t.d of India |
| 17 | Aman raj | 1st position | Online poster making | Naps, BIT Lalpur |
| 18 | Archit | 1st position | Online poster making | Naps, BIT Lalpur |
| 19 | Akshat | 2nd position | App challenge | Bitexl society, BIT lalpur |
| 20 | Ashna | 3rd position | App challenge | Bitexl society, BIT lalpur |
| | | 2nd position | Montage | Bizwit society, BIT lalpur |
| | | 3rd position | Alfaz-e-khuld | Naps BIT Lalpur |
| 21 | Priya singh | 3rd position | Mehfil-e-rangrez | Debsoc, BIT Lalpur |

***8.*** **Distinguished Visitors from Industry/Academia/Research organizations**

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1. | Shri R N Sahay, Principal Commissioner IT | 19-02-2019 | |
| 2. | Mr Anand Madhav Mishra, Regional Head (Jharkhand) Reliance Communication Ltd | 22.11.18 | |
| **3** | Mr. Abhijit Roy Regional Training Manager Himalayan Drug Company | 6.9.2018 | |

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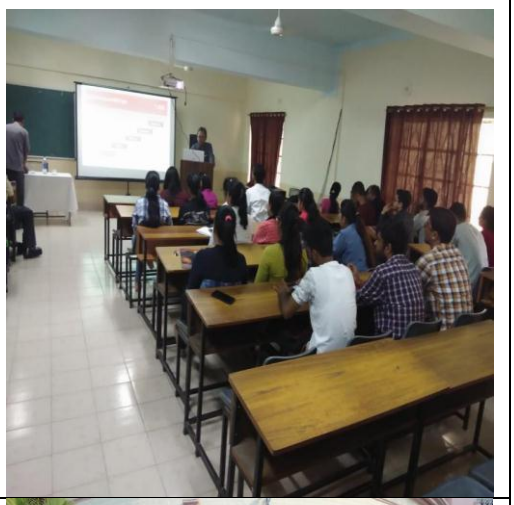
|---|---|---|---|
| **4** | Mr. Tuhin Das<br>Proficient Mind<br>Bangalore | 28.9.2018 |  |
| **5** | Visit of BIT Lalpur Campus by +2 students accompanied by the principal and other staffs of Sree Ayyappa Public School, Bokaro | 14.12.2018 | |
| **6** | Mr. Shivesh Singh<br>Head – Business HR<br>Bandhan Bank | 10.4.2019 | |

**NOIDA Off Campus**

## SECTION 1 DEPARTMENTAL PROFILE

1. **About the Campus** :

Birla Institute of Technology, Noida Campus is one of the leading Technical Institutions in the National Capital Region in the State of Uttar Pradesh. Established in the year 1998, 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 **O**utcome **B**ased **E**ducation that empowers the young generation with **K**nowledge, **S**kills, **R**esearch, **A**ptitude and **E**thical 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.

**Department of Animation & Multimedia**

The Department of Animation and Multimedia started as an UGC innovative programme in the year 2004 at the Noida Campus of BIT Mesra. The programme was offered as a 3 year B.Sc Degree Course and this was a national first in India. The popularity and the

escalating demand soon saw BIT respond with a Master's Degree programme in Animation and Multimedia in the Noida and Jaipur Campus in 2009 to be subsequently followed by a Doctoral Research programme. Apart from being the first institution to offer a degree programme in Animation in our country, the department has consistently been rated as the best Animation school in the NCR by the Hindustan Times and other survey engines since 2010. The department has very proactive teachers who constantly interface with the industry at large both in India and abroad. Many have been invited by even American and European Universities to interact and give consultations.

**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**

Since 1998, the Department of Management at BIT Noida Campus has set benchmarks in management education in Delhi NCR region with its focus on excellence in imparting practical knowledge to undergraduate, postgraduate and doctoral students. The department is enriched with highly acclaimed and dedicated faculties as most of them are doctorate in diversified areas. The department offers Ph. D. in management, Two years Masters of Business Administration (MBA) and Three years Bachelor of Business Administration (BBA) course. The course curriculum is based on latest Choice Based Credit System (CBCS) for developing world-class managers capable of solving complex managerial problems. Management Students Development Programmes (MSDP) (comprised of Guest Lecture Series, Career preparation sessions and Industry University interface sessions), Personality Development Programmes, Industrial Visits in corporate are regularly conducted to boost their career prospects and employability.

## SECTION 2 SEMINAR / CONFERENCE

### 2. Seminar / Conferences / Short – Term Courses Conducted by the Department/Campus

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| 1. | Workshop on "BIG DATA ANALYTICS" | Mr. Anil Kumar | BIT | 10.10.18 |
| 2. | Guest Lecture on "INTERNET OF THINGS" | Mrs. Seema Sharma | BIT | 01.11.18 |
| 3. | Google News Initiative India Training Networks Verification Workshop on Facts Checking & Online Verification on Social Media Platforms – By Nimish Kapoor (Google Certified Trainer | Dr Suparna Dutta, Partha Acharya | Vigyan Prasar | 14.02.19 |

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|---|---|---|---|---|
| | on Fact Verification) | | | |

**3. 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.* | Charu Wahi & Seema Sharma | Big Data and Analysis | NA | FICCI | FICCI Federation House, Delhi | August 13, 2018 |
| *2.* | Dr Niket Mehta | National seminar cum workshop on e-content, MOOCs ( SWAYAM | AICTE | Khalsa College, Delhi University | Khalsa College, New Delhi | August 31, 2018 |
| *3.* | Dr. Munish Makkad | Thrust and Challenges in The Indian Financial Sector: The Way Forward | Department of Financial studies, University of Delhi | Association of Finance and Control, Univ. of Delhi | Hotel Eros Shangrila | September 22, 2018 |
| *4.* | Dr. Vandna Sharma | Facets of Business Excellence 2018 | Self | IMT Ghaziabad | IMT Ghaziabad | 22-26 Nov 2018 |
| *5.* | Mr. Anil Kumar | Facets of Business Excellence 2018 | Self | IMT Ghaziabad | IMT Ghaziabad | 22-26 Nov 2018 |
| *6.* | Seema Sharma | FDP on Artificial Intelligence and Machine Learning | BIT | IIT Roorkee | C-DAC Noida | 17-21 Dec 2018 |
| *7.* | Dr. Suparna Dutta. & Dr. Niket Mehta | International Conference in Research in Business | Suchitra Publication | Suchitra Publication Allahabad | India International Centre, New Delhi | Feb 2019 |
| *8.* | Mrs Preety Bajaj, Mrs. Ritu Jain | Evolving HR Solutions in the Era of Disruption | IOCL | Indian Oil Corporation Ltd (Pipelines Division) Noida | Indian Oil Bhawan Noida | March 26, 2019 |
| *9.* | Charu Wahi & Seema Sharma | A.I. Readiness of India & Way Forward | NA | FICCI | FICCI Federation House, Delhi | May 1, 2019 |
| *10* | Dr. Smitha Jha | 12$^{th}$ National Workshop on Recent Trends in Software testing | TEQIP III | BIT MESRA | R & D building | 20$^{th}$-24$^{th}$ May 2019 |
| *11* | Dr. Suparna | Indo-Global Multidisciplinary | Confederation of Indian | Confederation of Indian | BANGKOK | 1-4 June 2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Dutta | Educational Conference 2019 | Universities, Common Wealth Vocational University, Commonwealth Society for Innovation & Research, Confederation Internation Benevolent Research Foundation | Universities, Common Wealth Vocational University, Commonwealth Society for Innovation & Research, Confederation Internation Benevolent Research Foundation | | |

SECTION 3 RESEARCH PUBLICATIONS

***4.*** **Publications in Journals:**

1. Jha, P., Makkad, M. and Mittal, S. (2018). Performance-oriented factors for women entrepreneurs – a scale development perspective. International Journal of Entrepreneurship in Emerging Economies. 10 (02) 329-360.

*2.* Puri S. & Singh, S.P. (2018). Hindi Text Document Classification System using SVM and Fuzzy – A Survey, International Journal of Rough Sets and Data Analysis (IJRSDA) IGI Global, Volume 5, issue 4, page 1-131.

3. Sharma, K. & Sharma, V. (2018). Evaluating knowledge management practices in Indian manufacturing and service industry: an overview, International Journal of Knowledge Management Studies, Vol.9, N0.3, pp. 222-242.
4. Sharma, M. (2018). Development of a 'Green building sustainability model' for Green buildings in India, Journal of Cleaner Production 190, 238-551.

*5.* Alam, M., Mohd., Sikdar, P., Kumar, A., Mittal, A. (2018). Assessing adherence and patient satisfaction with medication: Validation of TSQM in emerging markets, International Journal of Pharmaceutical and Healthcare Marketing 12(6), Pp. 409-432.

*6.* Suryanarayana Ch, S., Singh, S.P. (2018). An Efficient Framework for Test Case Optimization based on the Flower Pollination Algorithm, Jour of Adv Research in Dynamical & Control Systems, Vol. 10, 10-S.

*7.* Wahi, C. (2019). Secured AODV to prevent Single and Collaborative Black Hole Attack in MANETs, International Journal of Innovative Technology and Exploring Engineering (IJITEE), Vol. 8, Issue -8S3. (Scopus Indexed).

*8.* Wahi, C., Bhattacherjee, V. & Chakraverty, S. (2019). Current Taxonomy of Trust based Secure Routing in MANETs, Journal of Advanced Research in Dynamical & Control Systems, Vol. 11, 04-S, 2019. (Scopus Indexed).

*9.* Puri, S. & Singh, S.P. (2019). Advanced Applications on Bilingual Document Analysis and Processing System, International Journal of Applied Methaheuristic Computing, IGI Global, volume 12, Issue 4, Article 6.

*10.* Puri S. & Singh, S.P. (2019). A Hybrid Hindi Printed Document Classification System using SVM and Fuzzy – An Advancement, Journal of Information Technology Research (JITR), IGI Global, volume 12, Issue 4, Article 6.

11. Agarwal, P. & Singh, S.P. (2019). A Novel Cryptographic System for Efficient User Revocation in Dynamic Groups of Cloud Computing Environment, Journal of Advance Research in Development and Control System, Page no. 353-363, Volume 11, 07-special issue.
12. Misra, Y. & Sharma, V. (2019). Adoption of competency frameworks- Comparative analysis of Public and Private Sector Organisations in India, International Journal of Public Sector Performance Management (IJPSPM), Vol.5, No.1, pp.81-104.

5. **Publications in Proceedings:**

1. Sharma, Vandna and Kumar, Anil. Assessing the contribution of Internship in developing Management Competencies amongst b-school Interns at IOCL, Proceedings of the International Conference on Facets of Business Excellence (FOBE 2018), IMT Ghaziabad, 22-26 Nov 2018, ISBN: 978-93-88630-05-4.

2. Dhir, Richa and Sharma, Vandna. Are we missing something in B-school education? Developing positive psychology in students through Psychological Capital, Proceedings of the International Conference on Facets of Business Excellence (FOBE 2018), IMT Ghaziabad, pp.258-267, 22-26 Nov 2018, ISBN: 978-93-88630-05-4.
3. Mehta Niket, Dutta Suparna (2019), Overcome the Challenges of Social Message Communication in Digital Age through Games, 16th International Conference on Remote Engineering and Virtual Instrumentation, 3-6 Feb 2019, Indian Society for Remote Engineering and Data Science (INSOREDS), Bangalore.

**6. Book:**

- Chapter(s) in Edited Book
  1. Dutta Suparna, Mehta Niket (2019), Relevance of Behaviour Change Communication in the Mahatma Gandhi and Pandit Deendayal Upadhyay Legacy, Edited Book: Mahatma Gandhi and Pandit Deendayal Upadhyay: Concurrence on Economic Intellection, ISBN Number 978-81-934842-2-7, Swaranjali Publications, Ghaziabad, Uttar Pradesh, India

## SECTION 4 AWARD / PATENT / COLLABORATIONS

**7. 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. Arun Mittal | Award for Professor with Excellence in Teaching in Higher Education & Research | Managalmay Institute of Management Technology, Greater Noida | National | Feb'2019 |
| 2. | Suparna Dutta | Best Film (Producer) | Ministry of Science & Technology, Vigyan Prasar, DBT, Vigyan Bharaty | INTERNATIONAL Science Festival | Oct 2018 LUCKNOW |

## SECTION 5 ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

***8.* Departmental Students' Activities**

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|
| *1.* | Print-Ad Competition | Dramatics, Literary, & News Publication Society – President - Ayushi Gupta (BBA VI), Nilansha Bansal (MBA IV) | Dr. Arun Mittal | 16.04.19 |
| *2.* | Entrepreneurial Orientation Session by Mr. Manan Sharma, Founder & CEO DevstringX Technologies | Entrepreneureship Development Programme Cell- President - Md. Ikhtedar Khan | Dr. Monika Bisht | 16.04.19 |
| *3.* | CORPORATE ROADIES | HR Club- President- Yogita Singh (MBA IV) | Mrs. Preety Bajaj | 12.04.19 |
| *4.* | Swachh Bharat Club BIT Noida organised a movie show of 'Halkaa' movie to create awareness about cleanliness practises | - | Dr. Niket Mehta | 12.04.19 |
| *5.* | Poster Making Competition: Save Water | Environment Protection and Awareness Club – President --Ms. Mansi (BBA VI) | Dr. Meenakshi Sharma | 10.04.19 |
| *6.* | Mock Parliament | Dramatics, Literary, & News Publication Society – President - Ayushi Gupta, (BBA VI), Nilansha Bansal (MBA IV) | Dr. Arun Mittal | 09.04.19 |
| *7.* | MBA IV/MCA IV Industrial Visit to Orient Electric Ltd. , Noida | Shrestha Dutt | Dr. Monika Bisht | 29.03.19 |
| *8.* | MBA/MCA IInd Industrial Visit to Yakult Danone India Pvt. Ltd., Sonepat | Padmakshi | Dr. Monika Bisht | 28.03.19 |
| *9.* | Inter PG Department Debate Competition on "Artificial Intelligence: A Boon or Bane to Mankind | President, Business Research & Gaming Club- Ms. Nilansha Bansal, MBA IV SEM | Dr. Vandna Sharma | 27.02.19 |
| *10.* | Career Preparation session on Verbal Ability, Times Group | Subheshwar Jha, Ginni Malik - BBA IV | Dr. Vandna Sharma, Mr. Anil Kumar | 22.02.19 |
| *11.* | Career Preparation session on Quant Techniques by Mr. Praveen Chandra, | Subheshwar Jha, Ginni Malik - BBA IV | Dr. Vandna Sharma, Mr. Anil Kumar | 13.02.19 |

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|---|---|---|---|---|
| | Times Group | | | |
| *12.* | National & International Career Options after Graduation<br>Mr. Avinashi Sharan, Co-Founder, Cinque | Priya Bhardwaj, Aditya Deshpande, Mansi - BBA VI | Mrs. Pramila Joshi | 06.02.19 |
| *13.* | Expert Talk on Wealth Management by Mr. Puneet Arora, Founder & CEO Cyan Advisors | Swati Das (BBA VI) | Dr. Monika Bisht | 31.01.19 |
| *14.* | Lecture on Goal Setting by Mr. Navdeep Singh , Senior buyer British Telecom | Ginni Malik, Mayank Bellani- BBA IV | Dr. Arun Mittal | 30.01.19 |
| *15.* | Lecture on "Stock Prediction Via Machine Learning & Artificial Intelligence | President, Business Research & Gaming Club- Ms. Nilansha Bansal, MBA IV SEM | Dr. Vandna Sharma | 21.01.19 |
| *16.* | AICTE- MHRD Innovation Cell Webinar Workshop on IPR | Shreshtha Dutt, Nilansha Bansal - MBA IV | Dr. Vandna Sharma, Mr. Anil Kumar | 10.01.19 |
| *17.* | AICTE- MHRD Innovation Cell Webinar Workshop on India first Leadership Talk series | Shreshtha Dutt, Nilansha Bansal - MBA IV | Dr. Vandna Sharma, Mr. Anil Kumar | 08.01.19 |
| *18.* | Lecture on Cancer Prevention & Early Detection, By Dr. Savera Ahmad, Dharamshila Cancer Hospital | Leo & Rotaract Club- President- Aditya Deshpanade (BBA V), Karnik Sharma, Haravindh (BBA III) | Dr. Asha Prasad | 16.11.18 |
| *19.* | Expert Talk on Mutual Fund by Ms. Ruchira Bajaj , HDFC Bank | Deepak Kumar | Dr. Monika Bisht | 04.10.18 |
| *20.* | Orientation Workshop on Soft Skills | Shreshtha Dutt (MBA IV) | Dr. Vandna Sharma, Dr. Suparna Dutta, Mr. Anil Kumar | 20.08.18 - 21.08.18 |
| *21.* | Career Decision Making workshop by Mr. Avinashi Sharan, Co-Founder, Cinque | Subheshwar Jha, Ginni Malik, Rimjhim Sharma - BBA III | Mrs. Pramila Joshi | 10.07.18 |

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|---|---|---|---|---|
| *22.* | Orientation Lecture on Expectations of Industry from Future Professionals | | Dr. Vandna Sharma, Mr. Anil Kumar | 09.07.18 |

## 9. 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. S. Mallika | Assistant Professor | No |
| *4.* | Dr. S.P. Singh | Assistant Professor | No |
| *5.* | Mr. Anil Kumar | Assistant Professor | No |
| *6.* | Mr. Pankaj Gupta | Assistant Professor | No |
| *7.* | Mrs. Mrinalini Mehta | Assistant Professor | No |
| *8.* | Dr. (Mrs.) Vibha Kaw | Assistant Professor | No |
| *9.* | Mrs. Soma Sircar | 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.* | 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. Munish Makkad | Professor | No |
| *25.* | Dr. (Mrs.) Asha Prasad | Professor | No |
| *26.* | Dr. (Mrs.) Vandna Sharma | Associate Professor | No |
| *27.* | Dr. (Mrs.) Meenakshi Sharma | Associate Professor | No |
| *28.* | Mrs. Rachana Pratik | Assistant Professor | No |
| *29.* | Ms. Harpreet Charanjit | Assistant Professor | No |
| *30.* | Mrs. Ritu Jain | Assistant Professor | No |
| *31.* | Mrs. Preety Bajaj | Assistant Professor | No |
| *32.* | Dr. Arun Mittal | Assistant Professor | No |
| *33.* | Dr. K.B. Singh | Assistant Professor | No |
| *34.* | Dr. (Ms.) Monika Bisht | Assistant Professor | No |
| *35.* | Dr. Abhishek Singh | Assistant Professor | No |
| *36.* | Dr. (Mrs.) Suparna Dutta | Associate Professor | No |
| *37.* | Dr. Soumendra Bhattacherjee | Assistant Professor | No |
| **Department of Animation & Multimedia** | | | |
| *38.* | Mr. Niket Mehta | Assistant Professor | No |
| *39.* | Mr. Partha Acharya | Assistant Professor | No |
| *40.* | Mr. Aroop Kerketta | Assistant Professor | No |
| *41.* | Mr. Kiran A. Shetti | Sr. Animation Trainer | No |
| *42.* | Mr. Lalit Mohan Bhatt | Editor | No |

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|---|---|---|---|
| *43.* | Mr. Rahul Dora | Tech. Superintendent | No |
| *44.* | Mr. Das Mohan Singh | Designer | No |
| *45.* | Mr. Obed H. Longvah | Cinematographer | No |
| *46.* | Mr. Manoj Kumar | Animator | No |

### 10. Departmental Academic Committee

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| *1.* | Prof.(Dr) Munish Makkad | Chairman (Ex-Officio) | Director BIT Noida |
| *2.* | Dr. Asha Prasad | Prof. BITEC Noida, | Internal Faculty |
| *3.* | Dr. Meenakshi Sharma | Associate Prof. BITEC Noida, Coordinator PhD. Programme | Internal Faculty |
| *4.* | Dr. Vandna Sharma | Associate Prof. BITEC Noida, In-charge Management | Internal Faculty |
| *5.* | Dr. Peeyush Tewary | Associate Prof. BITEC Noida | Internal Faculty |
| *6.* | Dr. Suparna Dutta | Associate Prof. BITEC Noida | Internal Faculty |
| *7.* | Dr. B.B. Sagar | Assistant Prof. BITEC Noida | Internal Faculty |
| *8.* | Prof. Sanjeev Mittal | Dean, University School of Management Studies, GGIPSU, New Delhi(eminent person in the area of Management) | External Faculty |
| *9.* | Guide(s) of the Candidate | | |

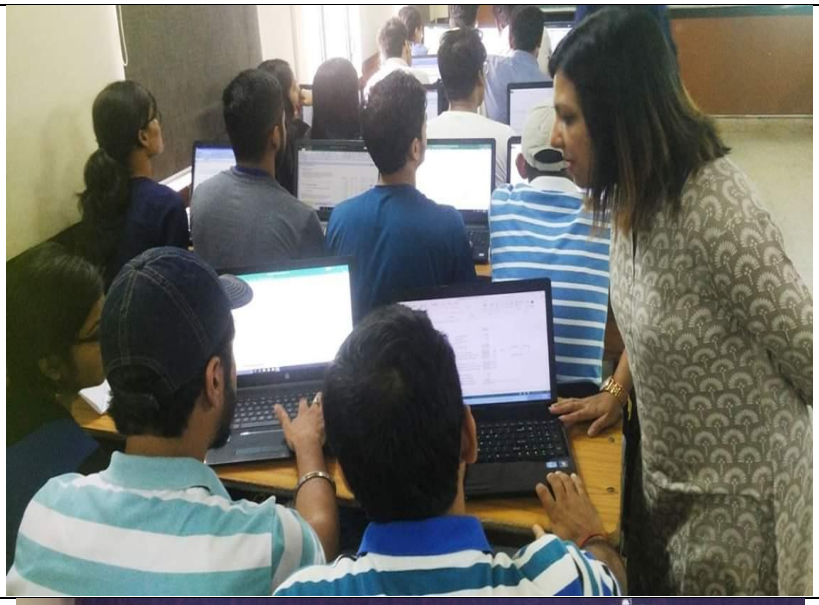
## SECTION 6 OTHER INFORMATION

### 11. Achievements of Students

| Sr. No | Name of Student | Achievement/Position/ Award etc | Organised by | Date and Venue |
|---|---|---|---|---|
| 1. | Aniket Ray & Shubham Kumar, BBA IV | Certificate Of Excellence in Startup Battelfield | Tomorrow's India Global Summit: Edition IV | 06.10.18 At Indira Gandhi Indoor Stadium, New Delhi |

### *12.* Distinguished Visitors from Industry/Academia/Research organizations

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|

| | | | |
|---|---|---|---|
| *1.* | Mrs. Nidhi Verma, Sales Manager (North East India), FUJIFILMS, India | 06.07.18 |  |
| *2.* | Mr. Avinashi Sharan, Co-Founder, Cinque | 11.07.18 | |
| *3.* | Ms. Ruchira Bajaj, HDFC Asset Management Company Ltd. | 04.10.18 | |

| | | | |
|---|---|---|---|
| *4.* | Dr. Savera Ahmed, Consultant - Preventive Oncology, Dharamshila Cancer Foundation and Research Centre | 15.11.18 | |
| *5.* | Mr. Navdeep Singh, Founder, "Yugandhar-Aadhar Naye Bharat Ka" & Senior Buyer at British Telecom | 30.01.19 | |
| *6.* | Mr. Puneet Arora, Founder & CEO Cyan Advisors | 31.01.19 | |

| | | | |
|---|---|---|---|
| *7.* | Mr. HIMANSHU BANSAL , Software Engineer, JPMorgan Chase & Co. | 21.01.19 | |
| *8.* | Mr. Pankaj Goel, Sr. Business Analyst, IBM | 27.02.19 | |
| *9.* | Mrs. Shweta, IBM | 27.02.19 | |

***13.*** **List of Distinguished Alumni**

| Sr.No | Name, Batch and Affiliation | Short Description |
|---|---|---|
| *1.* | Neeti Kesarwani, MBA 2016-2018 Batch, Manager at Thomas Assessments Pvt. Ltd. (India & SAARC Region) | She is Manager at Thomas Assessments Pvt. Ltd. (India & SAARC Region) Central Delhi, India, Self-driven, result oriented with over a decade of managerial experience into diverse industries like e-learning, pharmaceutical, assessments and learning and development. Have built and managed large teams and projects with CXO level stakeholder management across sectors. |
| *2.* | Bikram Sachdeva, MBA 2009 -2011 Batch, Regional Finance Controller at Ashok Leyland Ltd. Ahmedabad | He is Regional Finance Controller at Ashok Leyland Ltd. Ahmedabad, an MBA professional with more than 7 years of experience in finance and logistic cost control and accounting. He worked in Accounts payable, receivable, budgeting and forecasting for sales and marketing |

| | | |
|---|---|---|
| | | activities. I have an experience in AR & AP, reconciliation, SAP Hana FI and SD module at user level. |
| *3.* | Indira Wadhawan, MBA 2009-2011 Batch, Manager-HR at ABP News Network | She is Manager-HR at ABP News Network, A certified OD practitioner and currently an HR partner with experience in talent management (Acquisition, Engagement, Development & Retention) Organizational Development, Manpower Planning & Budgeting and HR Policies, Process and Practices. |
| *4.* | Prerna Khaitan, MBA 2013-2015, Research Associate S& P Global Market Intelligence | She is Regional Head Key Engagement – Make My Trip & Goibibo. She is into designing and executing strategies around PAN india hotels to gain competitive advantage. Experienced in research & analytics, consulting, business development & deal making. Currently in client acquisition and strategy building, revenue management, category management of chain hotel partners, demand supply analysis and inventory management for hotel partners. |
| *5.* | Sumit Prasad, MCA 2010-13, Lead Engineer, Samsung | He is working as Project Lead at Samsung Research Institute, Noida for North America Region. He is currently into project planning, scheduling management and planning sessions for new recruits, calculating man power requirements for project. |

***14.*Any other relevant information**

- Details of Placement 2018-19:

| Discipline | Branch | Total No. of Students | Placed | Average Salary |
|---|---|---|---|---|
| MCA | MCA | 17 | 13 | 3.75 LAC |
| MBA | MBA | 31 | 12 | 3.5 LAC |

- Ph. D. Degree awarded to Smitha Jha (PhD/142/09) on the topic "Scheduling problem in Grid heterogeneous system", Pankaj Gupta (PhD/140/09) on the topic "Temporal data mining" and Niket Mehta (PhD/145/09) on the topic "21$^{st}$ Century approach to communication: Gaming as a prime tool of new media communication".

**Patna Off Campus**

SECTION 1 DEPARTMENTAL PROFILE

**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** is well equipped with LIBSYS software and enriched with IEEE, ASCE, ASME, EBSCO, J-GATE, SCIENCE DIRECT etc online resources. Currently a total number of titles available in the library are 3483, whereas book volume is 40, 514 and total number of national, international and E-books are 49, 9397 and 1, 34,000 respectively.

**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 Microcontroller 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. An **average package of Rs 5.70 lakhs** per annum with the **highest at Rs.9.00 lakhs** per annum has been offered last year. A detailed placement report of 2018-19 batch is appended below:

**PLACEMENT REPORT 2018-19**

| Name of Company | CIVIL | CSE | EEE | ECE | IT | Mech | Prod | Total | CTC |
|---|---|---|---|---|---|---|---|---|---|
| Affine Analytics | | 1 | | | | | | 1 | 6 |
| Amadeus Software Labs | | 1 | | | | | | 1 | 8.35 |
| Amdocs | | 5 | | | | | | 5 | 6.3 |
| Byjus | | | | 1 | | 1 | | 2 | 8 |
| Cognizant | | 5 | | 9 | 4 | 1 | | 19 | 3.3 |
| Edvizo | | 1 | | | | | | 1 | 8 |
| **Ericsson** | | 2 | | | 1 | | | 3 | 5.25 |
| EXL Service | | 1 | | 3 | | | | 4 | 5 |
| **Gandhi Fellowship** | | | 1 | | | | 1 | 2 | 3.6 |
| **Graveiens Eduservices** | | | | 1 | | | 2 | 3 | 3.6 |
| Infosys Ltd.(System Engg.) | | 6 | 1 | 3 | 5 | | 1 | 16 | 3.6 |
| Infosys Ltd.(Specialist Prog.) | | 1 | | | | | | 1 | 8 |
| Lowes India Services | | 1 | | | 1 | | | 2 | 8.5 |
| Maq Software | | 2 | | | 2 | | | 4 | 7 |
| Oracle FBGBU | | 1 | | | | | | 1 | **9** |
| **Pie Infocomm Pvt. Ltd.** | 1 | 2 | | 2 | | 5 | | 10 | 3.2 |
| **Polestar Solutions** | | 1 | | | | | | 1 | 5.01 |
| PORT STREAM | | 1 | | | | | | 1 | 3.7 |
| Prism Johnson | 1 | | | | | | | 1 | 4.83 |
| **Reliance JIO** | | 2 | | 2 | | | | 4 | 4.5 |
| Teg Analytics Internship | | 1 | | | | | | 1 | |
| Teqforce | | 1 | | | 1 | | | 2 | **3** |
| Vodafone | | 2 | 2 | 5 | | | | 9 | 4.25 |
| Wheelseye Technologies | | 1 | | | | | | 1 | 8 |
| **ZS Associates India Pvt. Ltd.** | | 2 | | | | | | 2 | 6.83 |
| **Grand Total** | **2** | **40** | **4** | **26** | **14** | **7** | **4** | **97** | |
| **Average CTC Offered: 5.70 Lacs** | | | | | | | | | |

| | BE |
|---|---|
| Lowest CTC Offered: | 3 |
| Highest CTC Offered: | 9 |

## SECTION 2 RESEARCH PROJECTS

*34.* **Sponsored Projects (Research and Consultancy)**

***h)*** **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<br>Co- PI-Mr.Kumar Nikhil | BREDA | 03-10-2012 | 4.75 Lacks | 2012-2019 |

*i)* **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.* | Design and drawing vetting of saharsa storm water drainage project | Prof. Balram Singh, Dr. Syed Tabin Rushad and Ms. Badana Mahto | Project director BUIDCo, Patna | 10.05.18 | 180000.00 | 20.11.18 |
| *2.* | Concrete Mix Design (M25) for retaining wall at Chapra bahas POL Terminal Motihari | Dr. Anish and Dr. Angshuman Mandal | M/s Ram Baran Singh Apex Pvt. Ltd. | 29.08.18 | 59000.00 | 29.10.18 |
| *3.* | Compressive strength test of paver block | Dr. Syed Tabin Rushad | M/s T & G Associates Kothwan, RupaspurPatna | 07.09.18 | 2950.00 | 11.09.18 |
| *4.* | Testing of disturbed soil sample collected at Sugav and Hardidhi | Dr. Anish ,Dr. Angshuman Mandal and Ms. Bandana Mahto | SHAARC PROJECTS LIMITED | 06.09.18 | 69600.00 | 12.03.19 |
| *5.* | Compressive strength of cubes (M25)for CNG facility in BIT Patna for GAIL India | Dr. Syed Tabin Rushad | M/s Gail Through M/S Mecon | 19.11.18 | 4720.00 | 14.12.18 |
| *6.* | Compressive strength of 3 no of cubes and 5 no of 100A bricks (DMCH campus) | Dr. Syed Tabin Rushad | M/S Cohesive Infrastructure Dev. Pvt. Ltd | 04.12.18 | 5900.00 | 14.12.18 |
| *7.* | Compressive strength test of Paver Block (fan shape) | Dr. Syed Tabin Rushad | M/s T & G Associates Kothwan, Rupaspur,Patna | 27.02.19 | 2950.00 | 01.03.19 |
| *8.* | Compressive strength of 3 no | Dr. Syed Tabin Rushad | M/S Cohesive Infrastructure | 14.01.19 | 5900.00 | 23.01.19 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | of cubes and 5 no of 100A bricks(Jhanjarpur campus) | | Dev. Pvt. Ltd | | | |
| *9.* | Compressive strength of 3 no of cubes and 5 no of 100A bricks (DMCH campus) | Dr. Syed Tabin Rushad | M/S Cohesive Infrastructure Dev. Pvt. Ltd | 05.03.19 | 5900.00 | 07.03.19 |
| *10* | Compressive strength of 3 no of cubes and 5 no of 100A bricks(Jhanjarpur campus) | Dr. Syed Tabin Rushad | M/S Cohesive Infrastructure Dev. Pvt. Ltd | 05.03.19 | 5900.00 | 07.03.19 |

SECTION 3 SEMINAR / CONFERENCE

**3. Seminar / Conferences / Short – Term Courses Conducted by the Department/Campus**

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| *1.* | Innovation in Technology | Dr. Upendra Kumar | BIT,Patna | 19 January 2019 |
| *2.* | Pre Incubation Interaction training program | Dr. Upendra Kumar | Bihar Startup | 22 to 27 April 2019 |
| *3.* | Development of Android Application | Ratnesh Mishra | BIT Mesra Patna Campus | 5 to 9 March 2018 |
| *4.* | Green Building and Energy Simulation (Workshop) | Ar. Ashutosh Kumar | Bihar Renewable Energy Development Agency | 11 &12 February 2019 |
| *5.* | Pre-incubation Interaction Training Programme for Applicants of Start-up | Dr. Upendra Kumar &Dr. Vijay Agrawal | Department of Industries, Govt. of Bihar | 22 to 27 April 2019 |
| *6.* | Financial Literacy for financial Inclusion – JaaduGinniKa | Dr. Vijay Agrawal | AICTE | 24 Aug 2018 |
| *7.* | StartAb workshop | Dr. Vijay Agrawal | StartAb | 31 Oct 2018 |
| *8.* | An Academic Workshop on "Finite Element Analysis" by Professor P.C. Pandey (Ex Professor IISC Bangalore) | Dr. Anish | BIT Mesra, Patna Campus | 08/05/2019-10/05/2019 |
| *9.* | An Academic Seminar on "Are We Ready to Take Up Challenges in Water Resources?" by Professor Ashok K. Keshari, Civil | Prof. Balram Singh | BIT Mesra, Patna Campus | 26/07/2019 |

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|---|---|---|---|---|
| | Engineering Department, IIT Delhi. | | | |
| *10.* | Short Term Training Programme on IOT | Dr. Megha Dadel | DST, Govt. of India | 8 to 18 May 2019 |
| *11.* | Short Term Training Programme on NBA Accreditation | Ms. Trisha Kumar | NITTTR Kolkata | 4 to 14 February 2019 |

**4. Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:**

| Sr. No. | Name of the Faculty | Title of the Conference/ Seminar | Funding Agency | Organizers | Venue | Date |
|---|---|---|---|---|---|---|
| *1.* | Dr. S.K Pradhan | ICNSMD-2018 | Delhi University | Delhi University | Delhi University | 17 & 18 Dec. 2018 |
| *2.* | Dr. S.K Pradhan | NBA Accreditation | NITTTR Kolkata | NITTTR Kolkata | BIT Patna | 4 to 14 Feb. 2019 |
| *3.* | Kumar Nikhil | Emerging Techniques in Mechanical Engineering and its Application | TEQIP-III | Mechanical Engineering Dept. | B.I.T, Mesra, Ranchi | 5 to 9 March 2019 |
| *4.* | Adhishree | Microgrid Stability, Protection And Control | QIP, CEP | Electrical Engineering Dept. | IIT Roorkee | 27 to 31 May 2019 |
| *5.* | R K Mishra | NBA Accredition | MHRD | NITTR KOLKATA | BIT Patna | 4 to 14 Feb. 2019 |
| *6.* | Md. Asif Hasan | NBA Accredition | MHRD | NITTR KOLKATA | BIT Patna | 4 to 14 Feb. 2019 |
| *7.* | Mayank Singh | NBA Accredition | MHRD | NITTR KOLKATA | BIT Patna | 4 to 14 Feb. 2019 |
| *8.* | DR. Ayan Kumar Das | 1. International Conference on Computational Intelligence<br>2. 2nd International Conference on Computational Intelligence in Pattern Recognition (CIPR) | BIT Mesra<br><br>BIT Mesra | CSE Department, BIT Mesra<br><br>IIEST, Shibpur | BIT Mesra, Ranchi<br><br>IIEST, Shibpur, Kolkata | 10-11 Dec 2018<br><br>19-20 January, 2019 |
| *9.* | Dr. Subhash Chandra Pandey | International Conference on Computational Intelligence and Data Analytics | Computer Society of India, IET | Gandhi Institute for Technology, Bhubaneswar, Odisa | Bhubaneswar | 26-27 Oct, 2018 |
| *10.* | Ratnesh Mishra | Advance in wireless optical networks | TEQIP MNNIT Allahabad | MNNIT Allahabad | Department of Electronics and | 27.5.2019 to 01.6.2019 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | Communication Engineering, MNNIT, Allahabad | |
| *11.* | Ratnesh Mishra | Internet Of Things | Department of Science And Technology Bihar | BIT Patna Campus Bihar | Department of Electronics and Communication Engineering, BIT Patna Campus | 8th May,2019 to 18th May, 2019 |
| *12.* | Ratnesh Mishra | National Board Of Accreditation | NITTTR Kolkata | NITTTR Kolkata | NITTTR Kolkata BIT Mesra Patna Campus | 4 to 14 Feb. 2019 |
| *13.* | Ratnesh Mishra | International conference on rural livelihood improvement for enhancing farmer's income through sustainable innovative agri and allied enterprises | ICAR Patna | BIT Patna Campus | ICAR Patna And BIT Patna Campus | 30.10.2018 to 01.11.2018 |
| *14.* | Sweta Kumari | A closed loop robust controller for SSHI based piezoelectric energy harvester | NA | CADEC-2019, VIT Amaravati, India | Amaravati, India | 2-3 March 2019 |
| *15.* | Dr.Ritesh Kumar Badhai | NBA Accreditation | BIT Patna | NITTTR Kolkata | BIT Patna | 4 to 14 Feb. 2019 |
| *16.* | Dr.Shahir uddin | NBA Accreditation | BIT Patna | NITTTR Kolkata | BIT Patna | 4 to 14 Feb. 2019 |
| *17.* | Dr K.P.Tiwary | International conference on Advance Materials | BIT Mesra | Centre for Nanoscience and Nanotechnology, Jamia Millia Islamia, New Delhi | Jamia Millia Islamia, (Central Univ.) New Delhi | 6-7 March, 2019 |
| *18.* | Dr P.Kour | XVIII –School on Neutron as Probes of Condensed Matter (NPCM- | BIT Mesra | UGC-DAE Consortium for Scientific Research,M | BARC Mumbai | 28/10/18 to 1/11/18 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 2018) | | umbai Center and Solid State Physics Division ,BARC,Mumbai | | |
| *19.* | Dr P.Kour | UGC-sponsored 82st orientation programme | BIT Mesra | UGC-Human Resource Development Center (HRDC),Patna University | Patna | 22/01/19 to 18/02/19 |
| *20.* | Dr P.Kour | ICMAGMA2018 | BIT Mesra | NISER ,BHUBANESWAR | Bhubneshwar | 9/12/18 to 13/12/18 |
| *21.* | Dr. K. Sharma | International conference on Advanced Material- 2019 | B.I.T. | Centre of Nanoscience and Technology | JamiyaMilliya Islamia , (Central University) New Delhi | 6-7 March 2019 |
| *22.* | Dr. Anamika Nandan | NBA Accreditation | NITTTR, Kolkata | NITTTR, Kolkata | BIT Patna | 4 to 14 Feb. 2019 |
| *23.* | Ar. Ashutosh Kumar | Disaster risk mitigation and management for the built enviornment | BIT Patna | Council of Architecture | MEASI Academy of Architecture, Chennai | 7th January 2019 11th January 2019 |
| *24.* | Dr. Rajnish Kumar | NBA Accreditation | NITTTR Kolkata | NITTTR Kolkata and B.I.T Mesra (Patna Campus) | B.I.T Mesra (Patna Campus) | 4 to 14 Feb. 2019 |
| *25.* | Dr. Rajnish Kumar | Finite Element Method | B.I.T Mesra (Patna Campus) | B.I.T Mesra (Patna Campus) | B.I.T Mesra (Patna Campus) | 08.05.2019 to 10.05.2019 |
| *26.* | Dr.Prakash Chandra Srivastava | Finite Element Method | B.I.T Mesra (Patna Campus) | B.I.T Mesra (Patna Campus) | B.I.T Mesra (Patna Campus) | 08.05.2019 to 10.05.2019 |
| *27.* | Dr. Prem lata Singh | Finite Element Method | B.I.T Mesra (Patna Campus) | B.I.T Mesra (Patna Campus) | B.I.T Mesra (Patna Campus) | 08.05.2019 to 10.05.2019 |
| *28.* | Dr.Sweta | Kano Model Analysis of Customer Needs and QFD Parameter | TEQIP | BIT-Mesra | BIT-Mesra | 18-19 February 2019 |

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|---|---|---|---|---|---|---|
| | | Selection for Prosthetic Sockets | | | | |
| *29.* | Dr. Vijay Agrawal | Bihar Ideathon-2018 | Department of Information Technology, Govt. of Bihar | CII | Sardar Patel Bhawan, Shastri Nagar, Bailey Road Patna | 3-4 December 2018 |
| *30.* | Manish Oraon | Processing and Characterizatio n of materials | BIT Mesra | NIT Rourkela | NIT Rourkela | 06-08 Dec. 2018 |
| *31.* | Manish Oraon | Role of Industrial Engineering in Industry 4.0 Paradigm | BIT Mesra | Siksha O anusandhan | IIIE Odisha Chapter Bhubaneswar | 27-30 Sep. 2018 |
| *32.* | Manish Oraon | Advances in Materials and Manufacturing Engineering | BIT Mesra | KIIT, Bhuabnesw ar | KIIT, Bhuabneswar | 15-17 March 2018 |
| *33.* | Manish Oraon | NBA Accreditation | NITTTR, Kolkata | NITTTR, Kolkata | BIT Patna | 4 to 14 Feb. 2019 |
| *34.* | Manish Oraon | Internet of Things | DST | BIT Patna | BIT Patna | 08-18 May. 2019 |
| *35.* | Dr. Anish | Training Programme " NBA Accreditation" | NITTTR Kolkata | NITTTR Kolkata | BIT Patna | 04-02-19 to 14-02-19 |
| *36.* | Mrs. Bandana Mahto | Training Programme " NBA Accreditation" | NITTTR Kolkata | NITTTR Kolkata | BIT Patna | 04-02-19 to 14-02-19 |
| *37.* | Dr. S.T. Rushad | Training Programme " NBA Accreditation" | NITTTR Kolkata | NITTTR Kolkata | BIT Patna | 04-02-19 to 14-02-19 |
| *38.* | Dr. Chhaya Yadav | Orientation programme on Education Administration | ------ | BIT, Mesra Ranchi | BIT, Mesra Ranchi | 11.02.2019 to 16.05.2019 |
| *39.* | Dr. Chhaya Yadav | STTP on NBA Accreditation | NITTTR Kolkata | NITTTR Kolkata | BIT, Mesra Patna Campus | 4 to 14 Feb. 2019 |
| *40.* | Mr. Santosh Upadhyay a | STTP on NBA Accreditation | NITTTR Kolkata | NITTTR Kolkata | BIT, Mesra Patna Campus | 4 to 14 Feb. 2019 |
| *41.* | Dr. Rajni Singh | Workshop cum Training | --- | IIT, Patna | IIT, Patna | 17.09.2018 to |

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|---|---|---|---|---|---|---|
| | | program on" Institutional Digital Repository" | | | | 18.09.2018 |

## SECTION 4 RESEARCH PUBLICATIONS

**5. JOURNAL:**

- Mayank Singh, R. C. Jha, "Object-Oriented Usability Indices for Multi-Objective Demand Side Management Using Teaching-Learning Based Optimization", Energies, 2019, 12(3), 370.
- K.P. Tiwary, F. Ali, R. K. Mishra ,S. Kumar, K .Sharma " Study of structural, morphological and optical properties of cu and ni doped cds materials prepared by microwave assisted solvo thermal method", Digest Journal of nanomaterials and bio informatics, Vol 14,Number 2, April-June 2019.

**CHAPTER**:

- Singh, Mayank & Jha, R. & Hasan, . (2019). Prediction of Energy Availability from Solar and Wind for Demand Side Management: SIGMA 2018, Volume 1. 10.1007/978-981-13-1819-1_29.

**PROCEEDING:**

- Adhishree Srivastava, Jayant Mani Tripathi, Abhinav, S.K. Parida, "Protection Coordination in Grid Connected and Islanded mode of Microgrid ", IEEE 8th Power India International Conference(PIICON), 10-12 Dec, 2018, NIT Kurukshetra.
- Adhishree Srivastava, Ritu Meena, S.K Parida, "Effect of PV and FACTS on Small Signal Stability", IEEE 20th National Power System Conference (NPSC), 14-16 Dec, 2018, NIT Trichy.

***6.*** **Publications in Journals :**(International/National)

1. Dhiman, S. K., Kumar, Arbind, Kumar. & Prasad, J. K. (2019). Heat Transfer by satellite cluster of cylinders at subcritical Reynolds number. Heat and Mass Transfer (Springer), ISSN 0947-7411, 55 (3) 595-612, 2019.
2. Pradhan,S.K,. Kumar ,A. , Kour,P., Pandey, R., Kumar,Pawan, Kar, M.. and Sinha, A.N. (2018) Tuning of Dielectric and impedance properties of PVDF by incorporation of Mg doped PZT , J Mater Sci: Mater Electronics 29: 16842,0957-4522
3. Kour, P , Pradhan, SK, Kumar, P, Sinha, SK and Kar M(2018), Effect of Nd Doping on Dielectric and Impedance Properties of PZT Nanoceramics Journal of Electronic Materials, 47(5), 2861-2870, 0361-5235.
4. Keshri, A. K., Mishra, B. K., & Mallick, D. K. (2018). A predator–prey model on the attacking behavior of malicious objects in wireless nanosensor networks. Nano communication networks, 15, 1-16.
5. Subhash Chandra Pandey (2018). Can Artificially Intelligent Agents Really be Conscious? Sadhana, 43(7), 110. (SCI, IF: 0.769)
6. Ratnesh Mishra et al (2019) "Energy Efficient Wireless Network Security with Using Block Cipher Technique "paper has been published in to IJMTE, DOI:16.10089.IJMTE.2019.V9I5.19.28441.
7. Ratnesh Mishra et al (2019) " Energy Optimization on Symmetric Key Encryption and Decryption Algorithm using Genetic Algorithm" International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-8 Issue-10, August 2019
8. Ratndesh Mishra et al(2019) "Medical Expert System for Diagnosis of Assorted Diseases Using AI" paper has been published in to UGC Approved Journal IJMTE, DOI:16.10089.IJMTE.2019.V9I5.19.28453,Page no 3802-3808

9. Kumari, S., Sahu, S., & Gupta, B. (2018). Efficient SSHI circuit for piezoelectric energy harvester uses one shot pulse boost converter. Analog Integrated Circuits and Signal Processing, December 2018, Volume 97, Issue 3, pp 545-555.
10. Kumar, A. Kumar, A. Badhai, R.K. and Suraj, P. "Design of a printed symmetrical CPW-fed monopole antenna for on-body medical diagnosis applications", Journal of Computational Electronics, (2018), 17 (4), pp 1741–1747
11. Mishra Shipra, Chandra M., "Wavelet based power normalized spectrum for Hindi Speech recognition," April 2019 Circuits Systems and Signal Processing.DOI:10.1007/s00034-019-01113-1, (SCI, I.F.=1.9)
12. Kumara S,Sinha S.K., Chaudhary R.K.,Preparation of PbTi0.8-xTb0.2MgxO3 nano ceramics by high energy ball milling,Digest Jr of nanomaterials and Biostructure,13(4)2018,1249 (SCI Indexed)
13. Sinha S.K.,Kumari S,Chaudhary R.K, Dielectric and piezoelectric properties of $PbTi_{0.8-x}Se_{0.2}Sm_xO_3$ nanoceramics prepared by high energy ball milling, Applied Physics A,125(3)2019,171 (SCI indexed)
14. Sinha S.K.,Kumari S,Chaudhary RK, 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)
15. Kumari S,.Sinha S.K,Chaudhary R.K, Studies of modified lead titanate by HEBM method, Wul,25(11)2018,59
16. Bala Neha,Raj SWATI,Shikha Deepkumari,Ali Furdaus,Singh Anjali,KourP and Sinha S.K.,(2019)Synthesis and Study of Zirconium DopedLithium Titanate Ceramics,Material Today Proceeding18,1459-1464 (Scopus Indexed)
17. Tiwary, K. P., Ali, F., Mishra, R. K., Kumar, S., and Sharma, K. (2019) Study of Structural, Morphological And Optical Properties Of Cu And Ni Doped Cds Nanoparticles Prepared by Microwave Assisted Solvo Thermal Method. Digest Journal of Nanomaterials and Biostructures, 14 (2), 305 (SCI Indexed)
18. Pradhan,S.K,. Kumar ,A. , Kour,P., Pandey, R., Kumar,Pawan, Kar, M.. and Sinha, A.N. (2018) Tuning of Dielectric and impedance properties of PVDF by incorporation of Mg doped PZT , J Mater Sci: Mater Electronics 29: 16842,0957-4522 (SCI)
19. Kour, P , Pradhan, SK, Kumar, P, Sinha, SK and Kar M(**2018)**, Effect of Nd Doping on Dielectric and Impedance Properties of PZT Nanoceramics Journal of Electronic Materials,47 (5), 2861-2870, 0361-5235 (SCI)
20. TiwaryK.P., Ali F, Mishra R.K,Kumar S., Sharma K. (2019) , Study of Structural, Morphological and Optical properties of Cu and ni doped CdS Nanoparticles prepared by Microwave AssistatedSolvo Thermal Method . Digest Journal of Nanomaterial and Biostructures, 14 (02), 305
21. Prakash Chandra Srivastava, AnjuChaurasia, Yogesh Gupta & Anuj Bhardwaj (2019) Composite non polynomial spline solution of boundary value problems in plate deflection theory .International journal for computational methods in engineering science and mechanics (Taylor & Francis) 1550-2295.
22. Prakash Chandra Srivastava, AnjuChaurasia, Yogesh Gupta(2019) Solution of Higher Order Boundary Value Problems by Spline Method. American journal of Applied Mathematics.7(2).
23. Sehgal R, Dubey AM. (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
24. S. Ashutosh, P.K. Sunil & D.M. Ashish (2018), "Determinants of Organizational Learning in a Firm: An Empirical Analysis of Indian IT Industry" Global Business Review, 21(3), 1- 14
25. Sheel Shalini, and Kanhaiya Lal "Incremental Mining of Temporal High Utility Itemsets in Dynamic Databases" DOI:16.10089.IJMTE.2019.V9I5.19.28446, Page No:3744-3758
***26.*** Mandal A., & Maity D. (2019). **Non-linear transient analysis of soil domain under variable soil properties with spring-dashpot type local absorbing boundaries.**

**Geomechanics and Geoengineering, An International Journal. Taylors & Francis Group. Published online 16th April, 2019. https://doi.org/10.1080/17486025.2019.1601266**

27. Anish, Chaubey, A. K., Vishwakarma, S., Kumar, A., & Stanis. (2019). Transient response of rhombic laminates. Structural Engineering and Mechanics, 70(5), 551. https://doi.org/10.12989/SEM.2019.70.5.551
28. Anish, Chaubey, A., Kumar, A., Kwiatkowski, B., Barnat-Hunek, D., & Widomski, M. K. (2019). Bi-Axial Buckling of Laminated Composite Plates Including Cutout and Additional Mass. Materials, 12(11), 1750. https://doi.org/10.3390/ma12111750
29. Anish, Kumar, A., & Chakrabarti, A. (2018). Influence of openings and additional mass on vibration of laminated sandwich rhombic plates using IHSDT. Journal of Thermoplastic Composite Materials, 89270571878568. https://doi.org/10.1177/0892705718785682
30. Anish, Kumar, A., & Chakrabarti, A. (2019). Failure mode analysis of laminated composite sandwich plate. Engineering Failure Analysis, 104, 950–976. https://doi.org/10.1016/j.engfailanal.2019.06.080
31. Kumar, M., & Sahay, R. R. (2018). Wavelet-Genetic Programming Conjunction Model For Flood Forecasting In Rivers. Hydrology Research, (49.6), 1880-1889

**7.Publications in Proceedings :**

1. Ayesha Tabassum, Sayema Sadaf, Ditipriya Sinha, Ayan Kumar Das, "Secure Anti-Void Energy-Efficient Routing (SAVEER) Protocol for WSN-Based IoT Network", In Proceedings of Second International Conference on Computational Intelligence, doi: **https://doi.org/10.1007/978-981-13-8222-2_11**, ISBN: 978-981-13-8221-5, pp. 129-142, Springer, 2018.
2. Ditipriya Sinha, Sreemana Datta, Ayan Kumar Das, "Secure Data Sharing for Cloud-Based Services in Hierarchical Multi-group Scenario", In Proceedings of Second International Conference on Computational Intelligence, doi: https://doi.org/10.1007/978-981-13-8222-2_19, ISBN: 978-981-13-8221-5, pp. 229-244, Springer, 2018.
3. Ayan Kumar Das, Ayesha Tabassum, Sayema Sadaf, Ditipriya Sinha, "Attack Prevention Scheme for Privacy Preservation (APSP) Using K Anonymity in Location Based Services for IoT", In 2nd International Conference on Computational Intelligence in Pattern Recognition (CIPR), doi. https://doi.org/10.1007/978-981-13-9042-5_23, ISBN: 978-981-13-9041-8, pp. 267-277, Springer, 2019.
4. Vikash Kumar, Ayan Kumar Das, Ditipriya Sinha, "Statistical Analysis of the UNSW-NB15 Dataset for Intrusion Detection", In 2nd International Conference on Computational Intelligence in Pattern Recognition (CIPR), doi. https://doi.org/10.1007/978-981-13-9042-5_24, ISBN: 978-981-13-9041-8, pp. 279-294, Springer, 2019.
5. Sweta Kumari, Subrat Kumar Swain, Sitanshu Sekhar Sahu, Aditya Kumar, Prashant Kumar & Bharat Gupta, _A Closed loop Robust Controller for SSHI based Piezoelectric Energy Harvester, Proceedings of first annual conference on Computer-Aided Developments: Electronics and Communication (CADEC-19), (978-0-429-34071-0).
6. A. Kumari, R. K. Badhai and P. Suraj, "A Compact Polygon Shape Ultra Wideband Antenna for Portable Devices," 2018 International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET), Chennai, 2018, pp. 1-4. https://doi.org/10.1109/WiSPNET.2018.8538728

7. S. Kumar, P. Suraj and R. K. Badhai, "Triple-band Compact Monopole Antenna Using Defected Ground Plane," 2018 International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET), Chennai, 2018, pp. 1-4.https://doi.org/10.1109/WiSPNET.2018.8538624
8. A. Utsav, A. Kumar, R. K. Badhai and P. Suraj, "A Dual Band on Body Monopole Antenna for WiMAX and X-Band Applications," 2018 3rd International Conference for Convergence in Technology (I2CT), Pune, 2018, pp. 1-5. https://doi.org/10.1109/I2CT.2018.8529681
9. Shahhli Tabassum, Shahiruddin, M A Hassan, D K Singh, "Dispersion over All Telecommunication Bands with Hexagonal Photonic Crystal Fiber", 2018 4th International Conference on Recent Advances in Information Technology (RAIT), 2018, **DOI:** 10.1109/RAIT.2018.8388974

**8. Book:**

- **Chapter(s) in Edited Book:**

1. Subhash Chandra Pandey (2019). Recent Developments in Big Data Analysis Tools and Apache Spark, Big Data Processing Using Spark in Cloud (pp. 217-236). Springer Nature Singapore.
2. Subhash Chandra Pandey (2019). The Rudiments of Energy Conservation and IoT, Energy Conservation for IoT Devices (pp.1-17). Springer Nature Singapore.
3. Bhardwaj, P. and Badhai, R.K., (2019). Design of Planar Triple-Band Electrically Small Asymmetrical Antenna for ISM, WLAN, and X-Band Applications. In Optical and Wireless Technologies (pp. 539-549). Springer, Singapore.
4. Shahli Tabassum, Shahiruddin, Dharmendra K. Singh and M. A. Hassan(2019). Low Confinement Loss Solid Core Rectangular Photonic Crystal Fiber. In Optical and Wireless Technologies (PP. 271-277). Springer Nature Singapore Pte Ltd.

## SECTION 5 AWARD/ PATENT/ COLLABORATIONS

**9. 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. Anamika Nandan | Nation Builder Award | Rotary, Patna | State | 5th September 2018 |
| 2. | Dr. Anish | Editorial Board Member | International Journal of Statistical Analysis | International | 2019- Till date |

## SECTION 6 ACTIVITIES/ FACULTY MEMBERS / DOS/DAS

***10.*Departmental Students' Activities**

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|
| 1. | SAE BAJA | Sheetanshu Shekhar | Dr.Soumen Mandal | 7.03.19 to 11.03.19 |

| | | | | |
|---|---|---|---|---|
| *2.* | IEEE Student Chapter, BIT Patna | | Mr. Mayank Singh | 30.07.19 to 31.07.19 |
| *3.* | Xordieum, Electrical Club | | Mr Mayank Singh | 24.08.19 |
| *4.* | Training And Placement | | Ratnesh Mishra as Advisor | 1.07.18 to till date |
| *5.* | ACM Society | | Dr. Upendra Kumar | Nov,2018 |
| *6.* | Heritage walk Patna by Ministry of Tourism, Govt, of Bihar | Mohit Kumar Mangala | Ar. Ashutosh Kumar | 16.09.18 |
| *7.* | Career option in Banking & Finance Sector | Priti | Dr. Vijay Agrawal | 24.10.18 |
| *8.* | Personality Development | Shubhangi Suman | Dr. Vijay Agrawal | 29.08.18 |
| *9.* | The Art of Stress Management | Prakreeti Mehrotra | Dr. Vijay Agrawal | 26.09.18 |
| *10.* | Prakrida-19 | | Core Committee members – Dr. Manish Oraon, Dr. Prashant Prakash, Mr. T.A.Amar | 15-17 Feb. 19 |
| *11.* | KAIZEN SPORTS (AIIMS PATNA)<br>*1.* Winner of Volleyball<br>*2.* Runner of Football | Saket Kumar and Ankit Sharma | SS Yadav | 1st to 3rd March'19 |
| *12.* | CNLU SPORTS FEST (CNLU PATNA)<br>*A.* Winner of Volleyball | Saket Kumar | SS Yadav | 18th to 20th Feb'19 |
| *13.* | PRAKRIDA (BIT PATNA)<br>*A.* Winner of Volleyball (M), Football, Carom (M), Chess (M)<br>*B.* Runner of Basketball (M/W), Lawn Tennis, Kabaddi, Table Tennis, Badminton (M/W) | Swami Ranjan, Saket Kumar, Ankit Sharma ,Avinash, Pawan Kumar, Shreshi Singh | SS Yadav | 18th to 20th Feb'19 |

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|---|---|---|---|---|
| *14.* | MARATHON<br>(PRAKRIDA) | Preman Sharma | SS Yadav | 17th Feb'19 |
| *15.* | SOCIAL PREMIER LEAGUE<br>(CRICKET)<br>Winner of Cricket | Swami Ranjan | SS Yadav, Dr. K Lal, Dr. Prashant Prakash, Dr.Amit Raghuwanshi | 7th to 9th Feb'19 |
| *16.* | ANNUAL ATHLETICS MEET (BIT PATNA) | Vivek Kumar | SS Yadav, Dr.K Lal | 18th to 20th Jan'19 |
| *17.* | VAJRA (BIT MESRA)<br>*A.* Participated in Volleyball (M), Cricket, Badminton and Basketball (M/W) | Swami Ranjan, Saket Kumar, Ankit Sharma and Avinash | SS Yadav, Dr.K Lal | 2nd to 4th Nov'18 |
| *18.* | SPARDHA (IIT BHU)<br>*A.* Bronze Medal in Javelin Throw (M)<br>*B.* Participated in Volleyball, Cricket and Football | Swami Ranjan, Saket Kumar and Ankit Sharma | SS Yadav, Dr.Amit Raghuwanshi | 26th to 28th Oct'18 |
| *19.* | INFINITO (IIT PATNA)<br>*A.* Winner of Volleyball(M)<br>*B.* Winner of Football<br>*C.* Gold in 100,200 M Race | Saket Kumar and Ankit Sharma | SS Yadav, Dr. K Lal, Dr. Prashant Prakash, Dr.Amit Raghuwanshi | 12th to 14th Oct'18 |
| *20.* | INTER BRANCH VOLLEYBALL TOURNAMENT (M & W) | Sudanshu Jha and Shefali | SS Yadav | 4th to 9th Sep'18 |
| *21.* | INTER BRANCH FOOTBALL TOURNAMENT | Vineet and Ritu Raj | SS Yadav | 4th to 9th Sep'18 |
| *22.* | INTER BRANCH CRICKET TOURNAMENT | Ayush | SS Yadav | 25th Aug'18 to 2nd Sep;18 |
| *23.* | "Cultural Night-2019"<br>Organised by Civil Engineering Society | General Secretary: Saket Kumar | Dr. Angshuman Mandal | 01 Day (02.05.19) |
| *24.* | "Survey camp-2019"<br>Organised by Civil Engineering Department | Saket Kumar | Prof. R. R. Sahay<br>&<br>Dr. B. N. Singh | 6 Days (10.03.19 - 15.03.19) |
| *25.* | "Technical Event Edifice 2018"<br>Organised by Civil Engineering Society | General Secretary: Saket Kumar | Prof. R. R. Sahay | 3days (04.08.18-06.08.18) |

**11. List of Faculties**

| Sr. No. | Name | Designation | TEQIP Sponsored |
|---|---|---|---|
| *1.* | Dr. B.K. Singh | Professor & Director | No |
| *2.* | Dr. S.P. Lal | Professor | No |
| *3.* | Mr. Kapil Deo Prasad | Assistant Professor & In-Charge | No |
| *4.* | Dr. Manish Oraon | Assistant Professor | No |
| *5.* | Mr. Thakur A. Amar | Assistant Professor | No |
| *6.* | Dr. Prashant Prakash | Assistant Professor | No |
| *7.* | Dr.Arbind Kumar | Professor & In-Charge | No |
| *8.* | Prof.Girish Pathak | Assistant Professor | No |
| *9.* | Dr.Soumen Mandal | Assistant Professor | No |
| *10.* | Dr.S. K. Pradhan | Assistant Professor | No |
| *11.* | Dr. Ravi Shankar Anand | Assistant Professor | No |
| *12.* | Dr. Anand Kumar | Assistant Professor | No |
| *13.* | Prof. Chandan Kumar | Assistant Professor | No |
| *14.* | Prof. Amit Kumar | Assistant Professor | No |
| *15.* | Mr Sanjay Kumar | Assistant Professor & In-Charge | No |
| *16.* | Mr Kumar Nikhil | Assistant Professor | No |
| *17.* | Mr Mayank Singh | Assistant Professor | No |
| *18.* | Mr Raj Kumar Mishra | Assistant Professor | No |
| *19.* | Mrs Shraddha Kishor | Assistant Professor | No |
| *20.* | Mr Md. Asif Hasan | Assistant Professor | No |
| *21.* | Ms Adhishree | Assistant Professor | No |
| *22.* | Dr. Kanhaiya Lal | Assistant Professor & In-Charge | No |
| *23.* | Mr. Subho Chaudhuri | Assistant Professor | No |
| *24.* | Dr. Upendra Kumar | Assistant Professor | No |
| *25.* | Dr. Subhash Chandra Pandey | Assistant Professor | No |
| *26.* | Mrs. Sheel Shalini | Assistant Professor | No |
| *27.* | Mr. Shridhar Kumar | Assistant Professor | No |
| *28.* | Mr. Ajit Kumar Keshri | Assistant Professor | No |
| *29.* | Mr. Ratnesh Mishra | Assistant Professor | No |
| *30.* | Dr. Ayan Kumar Das | Assistant Professor | No |
| *31.* | Mr. S. K. Chatterjee | Assistant Professor | No |
| *32.* | Mr. Madhup Kumar | Associate Lecturer | No |
| *33.* | Mr. Adnan Mahmood | Associate Lecturer | No |
| *34.* | Dr. Partha Paul | Assistant Professor | No |
| *35.* | Dr. Shahiruddin | Assistant Professor & In-Charge | No |
| *36.* | Dr. Ritesh Kumar Badhai | Assistant Professor | No |
| *37.* | Dr. Megha Dadel | Assistant Professor | No |
| *38.* | Dr. Poonam Priyadarshini | Assistant Professor | No |
| *39.* | Mr. Atul Kumar Pandey | Assistant Professor | No |
| *40.* | Ms. Shipra Mishra | Assistant Professor | No |
| *41.* | Ms. Shweta | Assistant Professor | No |
| *42.* | Dr. Priyadarshi Suraj | Assistant Professor | No |
| *43.* | Dr. S. K. Sinha | Associate Professor & In-Charge | No |
| *44.* | Dr. K. P. Tiwary | Assistant Professor | No |
| *45.* | Dr. Binay Bhushan | Assistant Professor | No |

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|---|---|---|---|
| *46.* | Dr. Paramjit Kour | Assistant Professor | No |
| *47.* | Dr. Kaushlendra Sharma | Assistant Professor & In-Charge | No |
| *48.* | Dr.Anubha Singh | Assistant Professor | No |
| *49.* | Dr. Rajnish Kumar | Assistant Professor & In-Charge | No |
| *50.* | Dr. Premlata Singh | Assistant Professor | No |
| *51.* | Dr. P.C. Srivastava | Assistant Professor | No |
| *52.* | Dr. Anamika Nandan | Assistant Professor & In-Charge | No |
| *53.* | Ar. Ashutosh Kumar | Assistant Professor | No |
| *54.* | Ar. Jaya Zambad | Assistant Professor (on contract) | No |
| *55.* | Dr. Vijay Agrawal | Associate Professor & In-Charge | No |
| *56.* | Dr. Iftekhar Ahmad | Assistant Professor | No |
| *57.* | Dr. A.K. Mahanty | Assistant Professor | No |
| *58.* | Dr. Sunil Kumar Pandey | Assistant Professor | No |
| *59.* | Dr. A. M. Dubey | Assistant Professor | No |
| *60.* | Dr Amit Raghuvanshi | Assistant Professor | No |
| *61.* | Dr. Sushil Kumar | Assistant Professor | No |
| *62.* | Ms. Sohini Ghosh | Assistant Professor | No |
| *63.* | Dr.Sweta | Assistant Professor | No |
| *64.* | Dr. Sultan Khan | Assistant Professor | No |
| *65.* | Dr. Balram Singh | Professor & In-Charge | No |
| *66.* | Dr. R. R. Sahay | Professor | No |
| *67.* | Dr. Anish | Assistant Professor | No |
| *68.* | Dr. S. T. Rushad | Assistant Professor | No |
| *69.* | Dr. Angshuman Mandal | Assistant Professor | No |
| *70.* | Mr. Bandana Mahto | Assistant Professor | No |
| *71.* | Mr. B. N. Singh | Associate Lecturer | No |
| *72.* | Mr. Suresh Singh Yadav | Associate Lecturer & In-Charge | No |
| *73.* | Mr. K. C. Bajpai | Visiting Professor & In-Charge | No |

**12. Board of Studies**

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| *1.* | Dr Anamika Nandan (In-charge, Department of Architecture, BIT Patna) | Ex-Officio | Internal Member, Board of studies, Department of Architecture, BIT Mesra |
| *2.* | Mr. Kapil Deo Prasad | Assistant Professor & In-Charge | Internal Member |

***26.*** **Departmental Academic Committee (PhD)**

| Sr. No. | Name of the Member | Designation | Role |
|---|---|---|---|
| *1.* | Director, BIT Patna | Ex-Officio | Chairman |
| *2.* | Prof. (Dr.) Balram Singh | Professor; Dept. of Civil Engg., BIT Patna | Member |

| | | | |
|---|---|---|---|
| *3.* | Dr. Vijay Agrawal | Associate Professor; Dept. of Management, BIT Patna | Member |
| *4.* | Dr. Kanhaiya Lal | Asst. Professor; Dept. of CSE, BIT Patna | Member |
| *5.* | Dr. S. C. Pandey | Asst. Professor; Dept. of CSE, BIT Patna | Member |
| *6.* | Dr. Shahiruddin | Asst. Professor; Dept. of ECE, BIT Patna | Member |
| *7.* | Dr. Ritesh Kumar Badhai | Asst. Professor; Dept. of ECE, BIT Patna | Member |

## SECTION 7 OTHER INFORMATION

***27.*** **Student Entrepreneurship activities/Start-ups if any**

| Sr.No | Name of Student | Source of Funding | Title of Startup | Short Description |
|---|---|---|---|---|
| *1.* | Mr. PREM PRABHAT | Start up,Bihar | Amplitec Automation Private limited | It is IoT based project,which control Office,Homes,Buildings from any types of accidents like safty from thieft, fire in home due to sort circuit,Gas leakage etc |

***28.*** **Publication by students, if any**

1. Ayesha Tabassum, Sayema Sadaf, Ditipriya Sinha, Ayan Kumar Das, "Secure Anti-Void Energy-Efficient Routing (SAVEER) Protocol for WSN-Based IoT Network", In Proceedings of Second International Conference on Computational Intelligence, doi: **https://doi.org/10.1007/978-981-13-8222-2_11**, ISBN: 978-981-13-8221-5, pp. 129-142, Springer, 2018.
2. Ayan Kumar Das, **Ayesha Tabassum, Sayema Sadaf, Ditipriya Sinha**, "Attack Prevention Scheme for Privacy Preservation (APSP) Using K Anonymity in Location Based Services for IoT", In 2nd International Conference on Computational Intelligence in Pattern Recognition (CIPR), doi. https://doi.org/10.1007/978-981-13-9042-5_23, ISBN: 978-981-13-9041-8, pp. 267-277, Springer, 2019.

***29.*** **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.* | Priyanka | Worked on Conceptual Drawing for Kilkari- A Project by UNICEF | UNICEF, Patna Office | 7th August, 2019, Kilkari Bhawan Rajendra Nagar Patna |

| | | | | |
|---|---|---|---|---|
| *3.* | Dibyank Darshi | Prepared Conceptual Drawing for Kilkari- A Project by UNICEF | UNICEF, Patna Office | 7th August, 2019, Kilkari Bhawan Rajendra Nagar Patna |
| *4.* | Shalini | Prepared Conceptual Drawing for Kilkari- A Project by UNICEF | UNICEF, Patna Office | 7th August, 2019, Kilkari Bhawan Rajendra Nagar Patna |
| *5.* | Krish | Prepared Conceptual Drawing for Kilkari- A Project by UNICEF | UNICEF, Patna Office | 7th August, 2019, Kilkari Bhawan Rajendra Nagar Patna |
| *6.* | Mohit Kumar Mangla | Design competition "PARIKLPANA" 3rd Prize | Architects Association of Gaya | 25th February, Gaya |
| *7.* | Vibhanshu | Design competition "PARIKALPNA" 3rd Prize | Architects Association of Gaya | 25th February, Gaya |
| *8.* | Anindita | AIR -14 GATE, 2019 | IIT, Madras | March, 2019 |
| *9.* | Anurag | AIR -14 GATE, 2019 | IIT, Madras | March, 2019 |
| *10.* | Shubhangi Suman | Won First Prize in State level Poster Competition | National Productivity Council & BIA | 11th February, BIA building Patna, 2019 |
| *11.* | ShivashishTek | Won Gold Medal in Basketball Tournament | BIT-Patna Prakrida-2019 | 16-18 February,2019 |
| *12.* | Shantanu Mohan | Won Gold Medal in Basketball Tournament | BIT-Patna Prakrida-2019 | 16-18 February,2019 |
| *13.* | Ashish Kumar | International Diana Awardee | The Diana Award | 30 April 2019 |
| *14.* | Ashwin Harsh | Won Silver Medal in Bihar State Snooker Championship | Bihar Sports Federation | 20th October 2018 |
| *15.* | Saket Kumar | "Player of the tournament" in Kaizen 19. | AIIMS, PATNA | (21.03.2019-24.03.2019), AIIMS PATNA |
| *16.* | Saket Kumar | Winner of Jeevatva 19 (As volleyball Captain), | Sports fest organized by Chanakya National Law University, Patna | (15.02.2019-17.02.2019), Chanakya National Law University, Patna |
| *17.* | Saket Kumar | Best Spiker of the tournament in Prakrida 19 (As volleyball Captain), | Inter Annual Sports fest organized by Birla Institute of Technology | (15.02.2019-17.02.2019), Birla Institute of Technology Mesra, Patna |

| | | | | |
|---|---|---|---|---|
| | | | Mesra, Patna Campus | Campus |
| *18.* | Saket Kumar | Winner of Infinito 18 (As Volleyball Captain), | Sports fest organized by IIT-Patna | (12.10.2018-14.10.2019) At IIT PATNA |
| *19.* | Premen Sharma | Winner of Infinito 18 ( As Football Player), | Sports fest organized by IIT-Patna | (12.10.2018-14.10.2019) At IIT PATNA |
| *20.* | Premen Sharma | Winner of the Football tournament in Prakrida 19 ( As Football Player), | Inter Annual Sports fest organized by Birla Institute of Technology Mesra, Patna Campus | (15.02.2019-17.02.2019), Birla Institute of Technology Mesra, Patna Campus |
| *21.* | Premen Sharma | Secured 3rd Position in High Jump in Intra Annual Athletic Meet, BIT Patna (As individual participant) | Intra Annual Athletic Meet organized by Birla Institute of Technology Mesra, Patna Campus | (23.01.2019-25.01.2019), Birla Institute of Technology Mesra, Patna Campus |
| *22.* | Ankita Kiran | Secured 2nd Position in Table Tennis Doubles at BIT Patna | Inter Annual Sports fest organized by Birla Institute of Technology Mesra, Patna Campus | (15.02.2019-17.02.2019), Birla Institute of Technology Mesra, Patna Campus |
| *23.* | Archisha and Subham Kumar | Secured 2nd Position in "House of Cards" Samnibesha-2019 at IIT PATNA | "Technical Event Samnibesha-2019" Organised by IIT PATNA | 3 days (08-02-2019 -10-02-2019) |
| *24.* | Ravi Kumar | Participated in AUTO CAD Training Program and Qualified the Certification Exam | Computer Foundation Private Limited | One Month (10-12-2018 -10-01-2019) |
| *25.* | Ankit Sharma | Winner of Infinito 18 (As the Vice Captain of the Football Team), | Sports fest organized by IIT-Patna | (12.10.2018-14.10.2019) At IIT PATNA |
| *26.* | Ankit Sharma | Winner of the Football tournament in Prakrida 19 (As the Vice Captain of the Football Team), | Inter Annual Sports fest organized by Birla Institute of Technology Mesra, Patna Campus | (15.02.2019-17.02.2019), Birla Institute of Technology Mesra, Patna Campus |
| *27.* | Abhishek Krishnan, and Shreya | Secured 2nd Position in "Float the Boat" Technika-2019 at BIT | Technical Event "Technika-2019" at BIT PATNA | 29.03.2019-31.03.2019, Birla Institute |

| | | | | |
|---|---|---|---|---|
| | | PATNA | | of Technology Mesra, Patna Campus |
| *28.* | Abhishek Krishnan and Shreya | Secured 2nd Position in "Spagity Bridge" Technika-2019 at BIT PATNA | Technical Event "Technika-2019" at BIT PATNA | 29.03.2019-31.03.2019, Birla Institute of Technology Mesra, Patna Campus |
| *29.* | Amarjeet Shah | Secured 1nd Position in "House of Cards" Technika-2019 at BIT PATNA | Technical Event "Technika-2019" at BIT PATNA | 29.03.2019-31.03.2019, Birla Institute of Technology Mesra, Patna Campus |
| *30.* | Amarjeet Shah | Secured 1nd Position in "Float the Boat" Technika-2019 at BIT PATNA | Technical Event "Technika-2019" at BIT PATNA | 29.03.2019-31.03.2019, Birla Institute of Technology Mesra, Patna Campus |
| *31.* | Amarjeet Shah | Secured 1nd Position in "Spagity Bridge" Technika-2019 at BIT PATNA | Technical Event "Technika-2019" at BIT PATNA | 29.03.2019-31.03.2019, Birla Institute of Technology Mesra, Patna Campus |

## *30.* Distinguished Visitors from Industry/Academia/Research organizations

| Sr. No | Name of Visitor with Affiliation | Date of Visit | Picture |
|---|---|---|---|
| *1.* | Dr. Kamini Sinha | 19th August, 2019 | |

| | | | |
|---|---|---|---|
| *2.* | Ar. C.S. Sinha | 12th February, 2019 | |
| *3.* | Ar. Mohit Kumar | 27th Septemer, 2018 | |
| *4.* | Prof. Manoj Kumar | May 2019 | |
| *5.* | Ar. R. R. Raje | 7th Dec, 2018 | |

| | | | |
|---|---|---|---|
| 6. | Mr. Dilip Kumar Sharma | 30th and 31st January 2019 | |
| 7. | Mr. Rameshwar Singh, DGM (Customer Technical Services) J K Cement Ltd. Guest Talk on | 22.02.2019 | |

| | | | |
|---|---|---|---|
| *8.* | Ms. Ananya Kumari, Executive Business Development, Scanpoint Geomatics Limited Company, | 30/08/2019 | |
| *9.* | Professor Ashok K. Keshari, Civil Engineering Department, IIT Delhi. | 26/07/2019 | |

| | | | |
|---|---|---|---|
| *10* | Professor P.C. Pandey (Ex Professor IISC Bangalore ) | 08/05/2019-10/05/2019 | |

***31.*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 public 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 | Woking in Infineon at package of 13 LPA |
| *5.* | Shreya Kumar | Studying MS in Arizona State University |
| *6.* | Er. (Ms.) Tanushre | 2k7, DVC |
| *7.* | Er. Manish Kumar | 2k7, IR |
| *8.* | Er. Siddharth Bhardwaj | 2k10, IES |
| *9.* | Er. Bimal Kumar | 2k12, RITES |
| *10.* | Er. Anjenaya | 2k12, Ph.D. Scholar, IIT KGP |

***32.*Any other relevant information**

| Sr. No. | Particulars | Date | Distinguished Guest | Department/ Faculty Coordinator |
|---|---|---|---|---|
| *1.* | International Yoga Day | 21.06.2019 | Yoga Guru Shri Pankaj Kumar (Art of Living) | NSS/ Mr. Shridhar Kumar |
| *2.* | World Environment Day | 05.06.2019 | Mr. Shyam Rajak (Minister; Dept. Of Industries, Govt. of Bihar) | |
| *3.* | Blood Donation Camp | 15.03.2019 | Mr. Vinay Kumar (Regional Head NSS) and team of Doctors from PMCH | |
| *4.* | Youth Parliament 2019 | 24.01.2019 | Dr. Satya Pal Singh (Hon'ble Minister of State MHRD, Govt. of India) | |
| *5.* | Surgical Strike Day | 29.09.2018 | Rtd. Wing Commander Mr. Narendra Kumar and Col SNP Sinha (Ex VC Patna University) | |
| *6.* | World Population Day | 11.07.2018 | Mr. Vinay Kumar (Regional Head NSS) | |
| *7.* | World Cancer Day | 04.02.2019 | Mr. Shyam Rajak (Minister; Dept. Of Industries, Govt. of Bihar) and team of Doctors from PMCH | |

## UNIVERSITY POLYTECHNIC

SECTION 1 DEPARTMENTAL PROFILE

*1.* **About the Department / Campus:**

University Polytechnic offers Diploma in Engineering program in six different disciplines and BMLT program. The University Polytechnic is fully residential. It has well equipped library, laboratories, T&P cell, NSS, sports, games facilities and other amenities. Most of the faculty at University polytechnic are doctorate and have well expertise in their respective areas. University polytechnic function as a genuine laboratory of ideas and innovative solutions to produce globally competent technical manpower. University polytechnic recently established an Institution Innovation Council as per norms of MHRD's innovation cell.

SECTION 2 RESEARCH PROJECTS

*2.* **Sponsored Projects (Research and Consultancy)**

A). Ongoing Projects

| Sr. No. | Project Title | PI / Co PI / Collaborator, if any | Funding Agency | Date of Sanction | Sanctioned Amount | Duration of the Project |
|---|---|---|---|---|---|---|
| 1. | Unnat Bharat | Mr. Manoj kumar | MHRD | 01-09-18 | 1.0 lakh | *2* years |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Abhiyan | | | | | |

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. | NA | | | | | |

## SECTION 3 SEMINAR / CONFERENCE

**3. Seminar / Conferences / Short – Term Courses Conducted by the Department/Campus**

| Sr. No. | Title of Seminar/ Conference/ Short Term Courses/ Workshop | Coordinator | Funding / Sponsoring Agency | Date of Event |
|---|---|---|---|---|
| 1. | Induction program | Mr. Rakesh, Mr. Ramnish Sinha and Mr. Abhay Kumar. | Institute | 30–07-18 to 14-08-18 |
| 2. | Session on "Surgical Strike day" by Col. Rajesh Warke | Dr. Chanchal Mishra | Institute | 26-09-18 |
| 3. | Two-day workshop on Application of IoT (Internet of Things) | Md. Maqubool Hosain, Dr. Sumana Kumari and Mr. Manoj Kumar | Institute | 06-10-18 to 07-10-18 |
| 4. | Seven-day workshop in collaboration with Renforcer motorsports and ARC on Vehicle dynamics and design for go-kart fabrications | Mr Shankar kumar, P.R. Mahto and R.K. Prasad | Institute | 30-10-18 to 05-11-18 |
| 5. | Six days workshop on Entrepreneurship awareness camp | Dr. S.S Kumar, Mr. Manoj Kumar, and Dr. Meena Singh | EDII, NSTEDB, Dept. of Science and Technology (DST), | 28-01-19 to 03-02-19 |
| 6. | One-week Workshop on "Web-Development tools" | Mr. Niraj Kumar | Institute | 29-04-19 to 03-05-19 |

**4. 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. Chancha | 3rd International Conference on | ICMR | GNITC (Autonomous | GNITC (Autonomou | 03-08-18 to 04-08- |

| | | | | | | |
|---|---|---|---|---|---|---|
| | l Mishra | Innovations in Pharmaceutical Sciences (ICIPS) workshop | | ), Hyderabad, Telangana | s, Hyderabad, Telangana | 18 |
| 2. | Dr. Mohd Neyaz Ahsan | Orientation Program | UGC | UGC-HRD center | Academic Staff College, Ranchi University | 05-09-18 to 02-10-18 |
| 3 | Dr. Shambhu Sharan Kumar and Mr. Manoj Kumar | "Entrepreneur development programme | DST Government of India | DST Government of India | Xavier Institute of social science, Ranchi | 24-09-18 to 06-10-18 |
| 4 | Dr. Meena Singh | 4th International conference on NCCS-2018 | | IETE & ISVE | Advanced regional telecom training centre, BSNL, Ranchi | 03-11-18 to 04-11-18 |
| 5 | Dr. G M Ansari | 9th International Conference on Quality, Reliability, Infocom Technology and Business Operations | | Delhi University | Delhi University | 27-12-18 to 29-12-18 |
| 6. | Dr. Chanchal Mishra | Quality Improvement Programme on "Cutting Edge and Emerging Technologies in Pharmaceutical Education and Research | AICTE | Department of Pharmaceutical Sciences and Technology, BIT Mesra, Ranchi. | Department of Pharmaceutical Sciences and Technology, BIT Mesra, Ranchi. | 11-01-19 to 24-01-19 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7 | Mr. Sanjay Jha | QIP on "Developmental Path of Phytopharmaceuticals" (Division of Pharmacognosy | AICTE | Department of Pharmaceutical Sciences and Technology, BIT Mesra, Ranchi | Department of Pharmaceutical Sciences and Technology, BIT Mesra, Ranchi | 01-02-19 to 15-02-19 |
| 8 | Mr. Rakesh, Mr. Manoj kumar, Mr. Prabhat Ranjan Mahto | National conferences on Recent advancement in Mechanical Engineering | TEQIP III | Department of Mechanical engineering, BIT Mesra | Department of Mechanical engineering, BIT Mesra | 18-02-19 to 19-02-19 |
| 9 | Dr. Satish Kumar | Workshop on Intellectual Property Rights & Patent Filing | TEQIP | IPR CELL | BIT, MESRA | 28-06-19 |

## SECTION 4 RESEARCH PUBLICATIONS

***5.*** **Publications in Journals:** (International/National)

1. Kumar S.S (2018). Novel Synthesis of Nano-particles modified Stoving Top-coats for Dev. in Weathering and Corrosion Resistance", Anveeksha Research Journal of SSKGDC, 1(1), 28-37.
2. Hosain, M., Kumari, S., & Tiwary, A.K. (2019). Compact Filtenna for WLAN Applications. Journal of Microwaves, Optoelectronic.s and Electromagnetic Applications, 18(1), DOI:10.1590/2179-10742019v18i11220
3. Kumar, A. (2019). Blockchain Technology, Challenges and Opportunities, International journal of Computer Trends and Technology, 67(4) 1-5.
4. Kumar, A. (2019). Architecture of Indian Healthcare Information Management System based on Blockchain. International journal of Computer Trends and Technology, 67(4) 6-8.

**6. Book:**

- Chapter(s) in Edited Book
  1. Singh, N. (2019). Application of QbD Framework for Development of Self Emulsifying Drug Delivery Systems" (chapter 14). In Pharmaceutical Quality by Design (pp. 297-350). Elsevier, Academic Press.

## SECTION 5 ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

**7. Departmental Students' Activities**

| Sr. No. | Name of the Activity | Students' Co-Ordinator (If any) | Faculty Co-ordinator (if any) | Date / Duration |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1. | UNIFESTO 2019 | | Dr. Chanchal Mishra<br>Mr. P R Mahto<br>Mr. Shankar Kumar | 03-03-19 |
| 2. | Saraswati puja | Students of last semester | - | 10-02-19 |

**8. List of Faculties**

| Sr. No. | Name | Designation | TEQIP Sponsored |
|---|---|---|---|
| 1. | Dr. S.S Solanki | Professor and Director | |
| 2. | Mr. Devendra Kumar Jain | Senior Lecturer | No |
| 3. | Dr. Shambhu Sharan Kumar | Assistant Professor | No |
| 4. | Mr. Ramkesh | Assistant Professor | No |
| 5. | Dr. (Mrs.) Meena Singh | Assistant Professor | No |
| 6. | Dr. G.M. Ansari | Assistant Professor | No |
| 7. | Mr. Abhay Kumar | Assistant Professor | No |
| 8. | Dr. (Mrs.) Sandhya Rani | Assistant Professor | No |
| 9. | Dr. Satish Kumar | Assistant Professor | No |
| 10. | Dr. T. K. Parashar | Assistant Professor | No |
| 11. | Mr. Pradeep Toppo | Assistant Professor | No |
| 12. | Mr. Ramnish Sinha | Assistant Professor | No |
| 13. | Mr. Rajendra Mahto | Assistant Professor | No |
| 14. | Dr. (Mrs.) Sumana | Assistant Professor | No |
| 15. | Dr. (Mrs.) Neeru Singh | Assistant Professor | No |
| 16. | Mrs. Rekha Kumari | Assistant Professor | No |
| 17. | Dr. Mohd. Neyaz Ahsan | Assistant Professor | No |
| 18. | Dr. Chanchal Kumar Mishra | Assistant Professor | No |
| 19. | Mr. Manoj Kumar | Assistant Professor | No |
| 20. | Mr. Niraj Kumar | Assistant Professor | No |
| 21. | Mrs. Nirupam | Assistant Professor | No |
| 22. | Mr. Rohit Kamal Chatterjee | Assistant Professor | NO |
| 23. | Mr. Rakesh | Associate Lecturer | No |
| 24. | Mr. N. K. Mukherjee | Associate Lecturer | No |
| 25. | Mr. Maqubool Hossain | Associate Lecturer | No |
| 26. | Mr. Narendra Kumar Singh | Physical Training Instructor | No |
| 27. | Mr. Sanjay Jha | Teaching Assistant | No |
| 28. | Mr. Shankar kumar | Teaching Assistant | No |
| 29. | Mr. P.R.mahto | Teaching Assistant | No |

**9. Board of Studies**

| **Sr. No.** | **Name of the Member** | **Designation** | **Role** |
|---|---|---|---|
| *1.* | Dr. S. 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 | 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 |
| *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.* | Mr. R.K. Chatterjee | Assistant Professor | Internal Member |
| *34.* | Ms Sada Firdaus Alam | Guest Faculty | Guest Faculty |

**10. Any other relevant information**

- **MHRD, Government of India certified an Institution Innovation Council at University polytechnic on 11 Sep 2019.**
- Mr. Abhay Kumar was invited from Department of IT & e-Gov. Govt. of Jharkhand as a "Mentor" to take part in the "Start-up India Jharkhand Yatra", on August 13, 2018 event and as a Judge on August 28, 2018 event for Grand Finale.
- Dr. Satish Kumar Appointed as reviewer of International Journal 'Environmental Monitoring and Assessment' published by Springer.
- Dr. Satish Kumar appointed as REVIEWER of International 'Journal of Colloid and Interface Science' published under ELSEVIER (Impact factor-6.361)
- Dr. Satish Kumar served as Jury member in Inspire award Manak Scheme (science exhibition) organized by Dept. of Science & Technology, Govt. of India at Hazaribag on January 08, 2019 & in state level program at Ranchi on12-13 January, 2019.
- Dr. Shambhu Sharan Kumar appointed as reviewer and member of International Journal "Journal of Research in Engineering and Applied Science".
- Dr. Sandhya rani Nominated as Mentor for Atal Tinkering Lab, an approach to create an environment of Scientific temperament, innovation and creativity amongst Indian students under Atal Innovation Mission at NITI Aayog, Govt. of India
- Dr. Satish Kumar invited as Special Guest & Resource Person in inaugural function of ATAL TINKERING LAB established under Niti Aayog, Government of India at Dr. B. R. Ambedker Memorial School, Piska-Nagri, Ranchi on 22 June, 2019.

**NSS**

- On the Occasion of Independence Day 15 Aug 2018 and Republic day 26 Jan 2019, NSS organised Prabhat Pheri.
- Teacher's day was celebrated on September 5, 2018.
- NSS day was celebrated on September 24, 2018 wherein students and faculty have taken oath for selfless work for the nation.
- Swachh Bharat Abhiyan and School Chalo Abhiyan conducted at Village NEORI, TUKU TOLA, CHUTTU and Naya Toli on 30-09-2018.
- Dr. G.M. Ansari, Incharge, NSS, University Polytechnic organised Personality Development classes along with Mr. Abhay Kumar, Dr. Neeru Singh and Dr. Chanchal Kumar Mishra for University Polytechnic 3$^{rd}$ and 5$^{th}$ semester student from 9$^{th}$ August 2018 to 21 October 2018.
- On the occasion of Birth Anniversary of Sardar Vallabh bhai Patel (National Unity Day), NSS has organised a Poster Making Competition on 31-10-18.

**Sports Activities**

- Volleyball tournament was held in the month of September 2018 between Boys hostel. Hostel 1 won the match.
- Inter hostel Football Tournament held in the month of November 2018. In Girls category BMLT won the Match and in the Boys category, 2K18 batch won the match.
- A Cross Country Race was organized on February 03, 2019 for boys and girls. In boy's category, Eshwar Munda (Mechanical) stood First followed by Vivek Kumar Ohdar (EEE) and Sanjeev Mahto (EEE). In Girls category Sunita Kumari of BMLT stood first followed by Priyanka Kumari (Electronic) and Rani Kumari (Electronic).
- 12$^{th}$ Annual Athletic Meet was Held on February 07 and 08, 2019. In the meet 200 students participated in 26 Athletic events. The Individual Championship for Girls Category was awarded to Kumari Diksha of BMLT. In Boys category the individual Championship was awarded to Himanshu Nayak of EEE. Electronic Branch won the overall Team Championship.

## 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.

**i. Details of Activities Carried out:**

- **<u>Improvement in Teaching, Training and Learning Facilities:</u>**
  - ***Up gradation of Existing laboratory facilities:***

    Various Softwares has been purchased through TEQIP-III for Remote Sensing, Civil & Env. Engg., Electronics & Communication Engg. and Central Instrumentation Facility. The list of Softwares are:
    - Watersh modelling system, Voxler 4, TerrSet Geospatial Monitoring and Modeling Software"
    - 3-D Modelling (UAV) processing S/w"
    - Plaxis Software "
    - SPSS Statistical Software"
    - CST STUDIO SUITE

- ADS Software University License for 5 users"
- ANSYS softwares for HPC Environment"

❖ Various Equipment's has been purchased through TEQIP-III for EEE, ECE, Production,CSE, Chemistry, Physics and Remotes Sensing Departments. The list of equipment's are:

- EDS detector"
- Digital storage Oscillosope
- Wireless Sensor Networks (WSN) Lab Solution
- Desktop Computers
- Computers (Workstation)
- Photocopier Machine
- FTIR Spectrometer
- USB Data acquisition Card
- Photo Electric Setup
- LAI Meter
- Ultrasonic Flaw Detector

Furniture's are also procured for some of the departments.

- **<u>Faculty and Staff Development:</u>**

  Faculty and Staff Development is an important component of TEQIP. Following activities were conducted under head FSD during the period:

***Two hundred eighty-five (285)*** faculty & staff members were financially supported for attending seminar, conference, workshop, training programme etc. under TEQIP.

**Good Governance**

**Workshop on Lab safety: Pitfall & Remedies**

**Workshop/Training program/ Conferences** organized under TEQIP:

| Sr. No. | Title of Programme | Programme Duration |
|---|---|---|
| 1. | Workshop on Lab safety: Pitfall & Remedies" by ICT Mumbai | 17 Dec 2018 |
| 2. | International Conference on Computational Intelligence (ICCI 2018) | 10-.12.18 to 11.12.18 |
| 3. | Workshop sessions on "GRAB YOUR OPPORTUNITY" by ICT Mumbai | 28.01.19 to 1.02.19 |
| 4. | NCRAME 2019 | 18.02.19 to 19.02.19 |

| | | |
|---|---|---|
| 5. | One week workshop on emerging techniques in mechanical engineering and its application (TEQIP III FUNDED) | 05.03.19 to 09.03.19 |
| 6. | Workshop on Development of IOT based Power Electronic Interface for Green Energy System | 20.05.19 to 24.05.19 |
| 7. | 12th National Workshop on Resent Trends in Software testing | 20.05.19 to 24.05.19 |
| 8. | Lectures on Institutional Reforms & Good Governance by ICT Mumbai on 8th Oct and 9th Oct 2018 in the Institute Conference Hall of BIT Mesra under the TEQIP-III twinning program between BIT Mesra & ICT Mumbai | 8.10.18 to 9.10.18 |
| 9. | Lecture series on "Particle Physics" and "Ceramics" by MR. Paresh Salame & Mr. Mohan Narayan under twinning program with ICT Mumbai conducted at BIT Mesra | 28.01.19 |
| 10. | Workshop on statistical methods in biological engineering and R programming conducted by ICT Mumbai in Department of Bioengineering on for students & faculty members | 15.04.19 |
| 11. | Workshop on Intellectual property Rights | 10.06.19 |
| 12. | Prevention of Harassment at workplace | 25.06.19 |

- **Development of Research Interest among student:**
  - One hundred ninety eight BE/ME/MTech/PhD students have been financially supported for attending Seminar/Conference etc. from TEQIP fund.
  - Thirteen UG Students participated in Summer Internship at ICT Mumbai under TEQIP-III.
- **Support to Start Up activities:**
  - Entrepreneurship Development Cell Program Flagship fest E-Summit 19 on 19-20 Jan 2019.
  - Annual Technical Student Fest of BIT, Mesra: PANTHEON 2018 was held during 5-7 Oct 2018 has been financially supported through TEQIP-III.

**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, & Gynecologist 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 specialty 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. No. | Medical officer | Contact No. | S. No. | Homeopathy Physician | Contact No. |
|---|---|---|---|---|---|
| 1. | Dr. Mona Deepa | 9431952122 | 18 | Dr. P. Mohanty | 9430118376 |
| 2. | Dr. Anju Kumari | 9973962840 | | **Pharmacist** | |
| 3. | Dr. Madhu Pramanik | 9546745091 | 19 | Mr. A.K. Tarun | |
| 4. | Dr. Dharmendra Kumar | 9576174033 | 20 | Mr. B.P. Yadav | |
| | **Visiting Specialist** | **Specialization** | 21 | Mr. Umesh Prasad | |
| 5 | Dr. Rishi Raj | Dentist | | **Storekeeper** | |
| 6 | Dr. Renu Sinha | Gynecologist | 22 | Mr. Mahesh Kumar Sinha | |
| 7 | Dr. R.P. Chaudhary | Skin Specialist | 23 | Mr. Rajeev Ranjan | |
| 8 | Dr. Pramod Kumar | Physiotherapist | | **Dressing staffs** | |
| | **Nursing staffs** | | 24 | Mr. Anil Kumar | |
| 9 | Mrs. Renu Kumari | | 25 | Mrs. Janki Devi | |
| 10 | Mr. R.E. Singh | | | **X-Ray Technician** | |
| 11 | Mrs. Sanju Devi | | 26 | Mr. K. Mahto | |
| 12 | Mrs. Pinki Kachhap | | | **Lab Technician** | |
| 13 | Mrs. Sunita Pallai | | 27 | Mr. S. K. Singh | |
| 14 | Mrs. Nupur Tigga | | | **Ward Attendant** | |
| 15 | Mrs. Aruna Goswami | | 28 | Mr. R. S. Mahto | |
| | **Office Attendant** | | 29 | Mr. Saurav Kumar | |
| 16 | Mr. B. Munda | | 30 | Mr. Jitendra Kumar | |
| 17 | Mr. Bijay Lakra | | 31 | Mr. Akash Kermali | |

**At present, the following facilities/services are available in the dispensary:**

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

**New Development & Modification done:**

1. Purchase of new dental chair set
2. Purchase of new dental X- Ray machine set
3. Purchase of new refrigerator
4. Purchase of new 2 nos. B type oxygen cylinder
5. Purchase of new one Desktop Computer

**To be commissioned:**

i. Complete Renovation & modernization of the existing infrastructure.
ii. Minor OT

The following specialist doctor`s services on part- time basis will be provided soon.

1. ENT Specialist
2. Radiologist and Sonologist
3. Pediatrician
4. Orthopedic Surgeon
5. MD. Physician: Diabetic, Hypertension, Asthma, Thyroid, Epilepsy, T.B & Leprosy clinic.

**Services provided during the period 01.07.2018 to 30.06.2019**

| | | |
|---|---|---|
| Total number of patients | : | 41611 |
| Number of outdoor patients treated & supplied medicines | : | 41611 |
| (a) Male | : | 23509 |
| (b) Female | : | 18102 |
| **Categories:** | | |
| (a) Students | : | 13463 |
| (b) Staff Members and their dependents | : | 21386 |
| (c) Non-entitled cases | : | 7081 |
| Number of patients admitted & treated | : | 792 |
| Number of patients referred | : | 275 |
| Medical Budget Allocation (2018-19) | : | Rs. 4500000 (Approx.) |
| Expenses incurred | : | Rs. 4450000 (Approx.) |
| Number of patients treated by Homeopathic Physician | : | 4611 |
| Number of patients treated by Dental Surgeon | : | 2556 |
| Number of patients treated by Gynecologist | : | 403 |
| Number of patients treated by Skin Specialist | : | 1103 |
| Number of patients treated by Physiotherapist | : | 2275 |
| Number of Chicken Pox, Measles & Herpes patients treated & supplied medicines | : | 14 |
| Number of X-Ray done | : | 190 |
| Number of ECG done | : | 76 |
| Number of Blood Donation camp organize in dispensary | : | 03 |
| Number of Medical camp organize in dispensary | : | 03 |

## NATIONAL CADETS CORPS

**1. About NCC at BIT, Mesra:**

National Cadets Corps of B.I.T. MESRA is one of the important components of the institute which impart military training to include technical and physical subjects for first 6 semesters Technical Council has approved the duration of NCC training for 3 years (6 semesters) starting from 2017-18 batch. NCC has 200 cadets on its roll who are given basic knowledge in Corps EME, Corps Engineers and Corps Signals. NCC also enhance the overall personality of the Cadets and shaping young minds as well as inculcating nationalism, patriotism and building good citizen among new generation youths.

**2. No. of students enrolled: -**

Total Students: 200

- Boys: 134

- Girls: 66

**3. Achievement of NCC:**

| Sl. No. | Activity | Venue | Date | No. of Cadets |
|---|---|---|---|---|
| a | Swachh Bharat Abhiyan | Ormanjihi, Ranchi Birsa Zoo Premises | 15/09/2018 | 42 |
| b | Swachh Bharat Abhiyan | Masu Village | 27/09/2018 | 18 |
| c | Run for Unity | Sainik Market to Sahid Chowk | 31/10/2018 | 150 |
| d | Arm Display | BIT, MESRA | During Pantheon 2018 | |
| e | Cashless Transactions | NIFFT-HATIA Campus | 01/11/2018 | 190 |
| f | Anti-Plastic Abhiyan | BIT, Campus | 20/11/2018 | 14 |
| | Swachh Bharat Abhiyan | BIT, Campus | 29/01/2019 | 16 |
| g | Swachh Bharat Abhiyan | BIT, Campus | 19/03/2019 | 22 |
| h | Blood donation | BIT, Campus | 29/05/2019 | 2 Officers, 1 JCO, 23 Cadets |

**4. NCC Team:**

| Ser No. | Name of Faculty Member / NCC Officer | Department / NCC | Designation |
|---|---|---|---|
| (a) | Kishore Kumar Senapati | CSE Department | Lieutenant |
| (b) | Amritanjali | CSE Department | Caretaker Officer |

**5. Any other relevant point**:

In session 2018-19, NCC has conducted apart from classes, activities like firing, blood donation, adoption of village tree plantation to name a few. The cadets put up impressive parade during Republic Day and Independence Day which was lauded by all. The Army band brought more color and fanfare to the parade. The following major activities were conducted by the NCC: -

- Live firing of .22 Rifles by cadets.
- Participation in Republic Day and Independence Day Parade.
- Tree Plantation by cadets.
- Blood Donation by the entire NCC Team incl the cadets.
- Facilitator for other Battalion and Units as well as CRPF people.

# NATIONAL SERVICE SCHEME

## ABOUT 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. The sole aim of the N.S.S is to provide hands on experience to young students in delivering community service .

## MOTTO OF N.S.S

The motto of the National Service Scheme is: **'NOT ME BUT YOU'**. This reflects the essence of democratic living and upholds the need for selfless service and appreciation of the other person's point of view and also to show consideration for fellow human beings. It underlines that the welfare of an individual is ultimately dependent on the welfare of society on the whole. Therefore, it should be the aim of the N.S.S to demonstrate this motto in its day-to-day program.

## AIM OF N.S.S B.I.T Mesra

The program aims to develop student's personality through community service. The main objective of this program is to instill social welfare in students and to provide service to society without bias. N.S.S volunteers work to ensure that everyone who is needy gets help to enhance their standard of living and lead a life of dignity.

B.I.T Mesra offers N.S.S as an elective subject in all undergraduate programs for 1st and 2nd year students. N.S.S, BIT Mesra organises regular and special activities in the ten adopted villages namely Rudia, Panchauli, Kenduatoli, Humbai, Mesra East, Mesra West, Neori, Chuttu, Kedal and Nawatoli.

Total no. of NSS units: 09

Total no. of volunteers enrolled: 642

a) Boys - 422 b) Girls – 220

## ACHIEVEMENT OF N.S.S

1) Mr. Ravi Kumar has been selected for the prestigious "NSS Award 2017-18". The award ceremony will be held at Rashtrapati Bhawan, New Delhi on 24th September 2019.

2) 4 volunteers from N.S.S B.I.T Mesra participated in Trekking and Cultural Exchange Program under "Ek Bharat Shresth Bharat" held at Goa from 22nd – 28th July, 2018. (Organized by Directorate of Sports & Youth Affairs, Government of Goa)

3) 5 volunteers from N.S.S B.I.T Mesra participated in "National Integration Camp" held at NIFFT Hatia from 06th – 12th December 2018. (Organized by Ministry of Youth Affairs & Sports, Government of India)

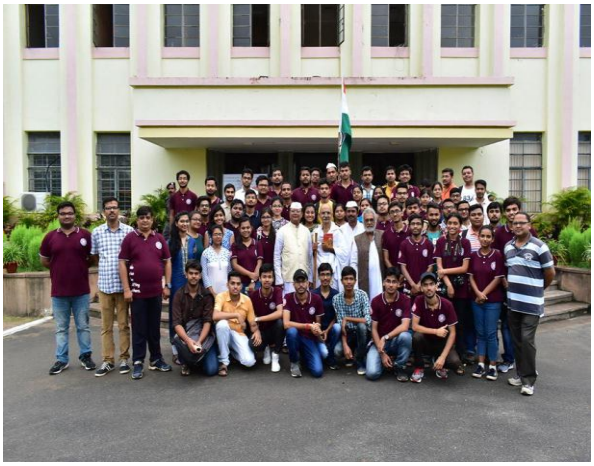
## TEAM N.S.S B.I.T MESRA

| Sr. No | Name of Faculty Member | Department | Designation |
|---|---|---|---|
| 01 | Dr. O.P. Pandey | Mechanical Engg. | Program Coordinator |
| 02 | Mr. Gautam Shandilya | HMCT | Program Officer |
| 03 | Dr. Yogender Aggarwal | Bio Engineering | Program Officer |
| 04 | Dr. Shashank Pushkar | Computer Sc. & Engg | Program Officer |

| | | | |
|---|---|---|---|
| 05 | Dr. Syeda Darahkshand Jabeen | Mathematics | Program Officer |
| 06 | Dr. Prabjot Kaur | Mathematics | Program Officer |
| 07 | Mr. Pranjal Kumar | HMCT | Program Officer |
| 08 | Dr. Praveen Srivastava | HMCT | Program Officer |
| 09 | Dr. Abhijeet Nag | Mechanical Engg. | Program Officer |
| 10 | Dr. Sanjeet Kumar | ECE | Program Officer |

**The major events conducted by N.S.S B.I.T Mesra during 2018-19 :**

**International Yoga Day:** On the occasion of 4th International Yoga Day, N.S.S B.I.T Mesra organized a yoga session in the college premises. More than 120 volunteers & faculty members gathered for the event. They were given information about the benefits of yoga and its possibility to benefit each age group in some way or the other.



**Independence Day:** On the occasion of 72nd Independence day of India, N.S.S B.I.T Mesra organized a Prabhat Pheri in the college campus. The rally was organized to spread the message of love, peace and harmony. More than 550 N.S.S volunteers, faculty & staff members participated in the event.

**Friendly Football Match:** On the ocassion of National Sports Day, N.S.S B.I.T Mesra organized a football match in the adopted village of Rudia.The event was organized in association with the sports department of B.I.T Mesra & was aimed to make the players realize the true meaning of sportsmanship.The event witnessed the participation of more than 80 volunteers , faculty & villagers.

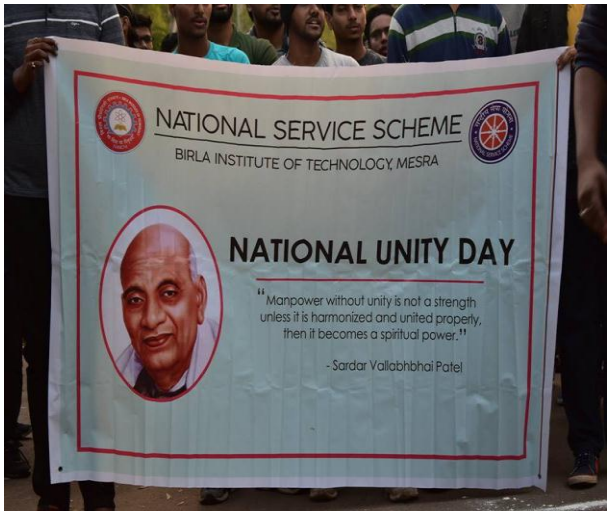
**<u>Swachh Bharat Abhiyaan</u>:** A cleanliness drive was organized by N.S.S B.I.T Mesra from 1st August to 15th August 2018 in the college premises & nearby adopted villages, wherein all the volunteers took part in cleaning the villages and also took the initiative to make people aware about the importance of cleanliness.

**<u>Blood Donation Camp</u>:** On the occasion of Gandhi Jayanti, N.S.S B.I.T Mesra organized a Blood Donation Camp at the Institute dispensary. The camp was organized in collaboration with two hospitals - Medanta & Seva Sadan. A total of 392 units of blood was collected during the camp making it a huge success.

**<u>N.S.S day</u>:** In order to commemorate N.S.S Day, which is celebrated on 24th September, a cleanliness drive was organized inside the BIT campus. The drive witnessed the participation of more than 540 volunteers, faculty & staff members.The objective of the campaign was to mobilise people and reinforce the "Jan Aandolan" for cleanliness to

contribute to Mahatma Gandhi's dream of a Clean India.

**National Unity Day (Run for Unity):** N.S.S B.I.T Mesra organized a "Run for Unity" on 27th October 2018 in order to celebrate National Unity Day. The event was conducted in association with sports department of B.I.T Mesra. Students and faculty members enthusiastically participated in the event and played a vital role to spread the message of national integration.



**Cloth Distribution Drive:** A cloth distribution drive was organized by N.S.S B.I.T Mesra on 28th October 2018 in the nearby villages of Bhattatoli and Mesra West. This event was conducted just before Diwali in an effort to bring happiness in the lives of villagers.

**National Youth Day:** On the occasion of National Youth Day, N.S.S B.I.T Mesra provided an opportunity to volunteers to express their artistic and literary talents through Group Discussion, Poster Making, and Speech Competition on 11th January 2019.

बीआईटी एनएसएस के कार्यक्रम में बोले स्टूडेंट्स, युवाओं की सोच पर खरी नहीं उतर रहीं हैं राजनीतिक पार्टियां

रांची | बीआईटी मेसरा में एनएसएस की ओर से राष्ट्रीय युवा दिवस मनाया गया। इस अवसर पर एक ग्रुप डिस्कशन, भाषण प्रतियोगिता और पेंटिंग प्रतियोगिता हुई। 'राजनीतिक पार्टियों का युवाओं की सोच पर खरा न उतरने के विषय पर स्टूडेंट्स ने चर्चा की। वहीं, भाषण व पेंटिंग का विषय 'देश के विकास में युवाओं का क्या योगदान' था। इस अवसर पर एनएसएस अध्यक्ष डॉ. महेश चंद्रा, कार्यक्रम समन्वयक प्रो. ओपी पांडेय, कार्यक्रम अधिकारी डॉ. अभिजीत नाग, डॉ. शशांक, डॉ. योगेन्द्र, प्रो. गौतम, डॉ. संजीत, डॉ. प्रभजोत, डॉ. प्रवीण, छात्र प्रमुख अक्षय, शौर्य, रवि, आकर्षित और वितन आदि उपस्थित रहे।

जेनेसिस : एनआईटी राउरकेला ने जीता वूल्फ ऑफ दलाल स्ट्रीट

बीआईटी मेसरा में चल रहे क्विज और डिबेट कार्यक्रमों पर आधारित जेनेसिस के दूसरे दिन रांची के अलावा अन्य शहरों के स्कूल-कॉलेजों के स्टूडेंट्स ने भाग लिया। शनिवार का मुख्य आकर्षण 'वूल्फ ऑफ दलाल स्ट्रीट' क्विज कंपीटशन था। इसमें पल्क कुमार क्विज मास्टर थे। इसमें रांची के कॉलेजों के अलावा एनआईटी राउरकेला, एनआईटी जमशेदपुर, अशोका यूनिवर्सिटी की टीमों ने भाग लिया। एनआईटी राउरकेला की टीम जीती। एनआईटी जमशेदपुर की दो टीमें सेकेंड और थर्ड रहीं। वहीं, पिरामिड में टीम एन्डगेम, टीम निलय एंड को., टीम बॉलमर्स विन्स् बने। इसमें प्रतिभागी टीम के एक सदस्य को पर्दे पर दिखाए कुछ नामों को अपनी टीम को बताना था, लेकिन शब्दों का प्रयोग करना वर्जित था।

**Republic Day:** A prabhat pheri was organized in the college premises on the occasion of 70th Republic Day of India. More than 570 volunteers, faculty & staff members participated in the rally spreading the message of love, peace & harmony.

**<u>Handicapped Children Home Visit</u>:** N.S.S B.I.T Mesra organized a visit to Handicapped children home on 9th February 2019.The volunteers interacted with the children & played games with them. The aim of this visit was to develop among the volunteers a sense of realization for the handicapped children.

**<u>Stress Management Workshop</u>:** N.S.S B.I.T Mesra organized a stress management workshop in association with Sahaja Yoga Meditation on 10th February 2019.The workshop was organized to make the volunteers realize the importance of meditation in today's world. The workshop witnessed the participation of more than 450 N.S.S volunteers, faculty & staff members.

**<u>Blood Donation Seminar 2019</u>:** N.S.S B.I.T Mesra organized a Blood donation seminar on 14th March 2019.The seminar was conducted to make the volunteers understand the importance of donating blood. The seminar was attended by more than 200 volunteers, faculty & staff members.

**<u>Blood Donation Camp</u>:** On 16th March 2019, N.S.S B.I.T Mesra organized a Blood Donation Camp at the institute dispensary. The camp was organized in collaboration with two hospitals - Medanta & Seva Sadan. A total of 342 units of blood was collected during the camp making it to be a huge success.

**<u>Voting Awareness</u>:** In view of the coming Lok Sabha elections, N.S.S B.I.T Mesra organized a voting awareness campaign in the adopted villages of Nawatoli, Pancholi, Mesra West, Neuri & Kedal on 6th April 2019.The awareness was conducted to make people understand the importance of voting & to encourage the youngsters to take part in the electoral process. The event involved the participation of more than 250 N.S.S volunteers.

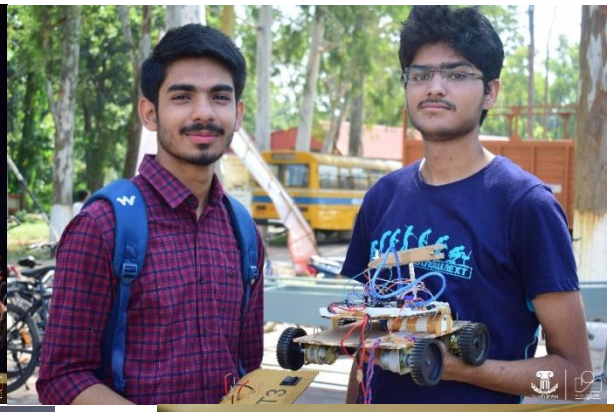
**Students Activities**

**BIT TECH FEST- PANTHEON 2018**

With an ambition to provide a platform for the youth to showcase their technical skills and display cutting-edge technologies, BIT conducts one of the biggest technical fests of Eastern India- Pantheon.

In its truest sense, Pantheon is an intricately strung assortment of technological marvels blended with a unique taste of youthful exuberance. This edition of Pantheon dove deeper into the wondrous world of technology through its intriguing theme "Techstones:Then.Now.Next.". Cognoscenti and connoisseurs of technology gathered together with their thinking caps on from 5th to 7th October, 2018.

A plethora of exquisite events and workshops were organized in the fields of Scientific Research, Coding, Robotics, Oration, and Quizzing which helped the budding engineers prove their mettle and emerge victorious. The Flagship events included the All-terrain Robot making competition, 'Droid Trooper', 'Eureka'-the Science Exhibition, 'Codezilla'- the online coding contest, 'CyberBridgeton'- the bridge simulation module and 'Illuminati'- the mock paper presentation contest. Apart from this, Pantheon'18 provided a myriad of fun-filled activities including gaming events, debates and presentations which provided a delightful treat along with an intellectual platform.



**BIT SPORT FEST-VAJRA 2018**

The idea of VAJRA was inspired by the thought to amalgamate different sporting events under one roof and build a world-class platform to recognize, nurture, and reward talent in the most righteous manner, that is, through realizing our love and passion for the game. It is with this inspiration that the students and members of the administration of BIT Mesra turned the idea into what has grown leaps and bounds ever since its genesis.

During the past three years, VAJRA has grown from just a sports fest with a select few participants to one of the most celebrated sports fest of Eastern India with a wide array of athletes participating from all over India. VAJRA'18 saw a participation of 660 students from 26 different colleges from all around India.

The 28th Chetan Devraj Memorial Cricket Tournament marked the beginning of VAJRA 2018. The three day fest saw staggering performances in 7 different sports namely- Cricket, Chess, Volleyball, Basketball, football, table tennis and badminton and witnessed ecstasy and fresh ideation, a transcendent opportunity to hone one's finesse and adroitness and luxuriate in the grandeur of victory and exuberance. For the first time in the glorious history of VAJRA, an EDM night, Celesta was held with many acclaimed artists in the helm.

The aspiring sportsmen not only astounded everyone with their performances but also with their zeal to fight till the end. The efforts and dedication of the entire VAJRA family helped in taking the sports fest to unprecedented heights this year.

## BIT CULTURAL FEST-BITOTSAV 2019

BITOTSAV, the annual socio-cultural festival of Birla Institute of Technology, Mesra, is undoubtedly one of the biggest campus and youth festival of Eastern India. This year it was presented by **TvF (The Viral fever),** co-presented by **Jeep**, in association with **MTV Beats**, **Vh-1 and Dainik Bhaskar**, the fest took place over a span of 3 days from **14th to the 17th of February, 2019**.

The Theme this year was 'celebration of cultures'. It began on the 14th February with the Heritage Night which featured a glimpse of the vivid and kaleidoscopic cultural vibrancy of the Asian Continent. The night also played host to **the renowned poet and YouTube sensation, Mr. Amandeep Singh** whose heart-rendering beat poetry brought a wave of applause throughout. The band night on the 16th February, featured two of the most famous Indie-Rock bands of India, '**Moongphali' and 'Nalaayak'** whose performances electrified the crowd to their core. The 'MTV Beats Pro-Nite' on the 17th of February stood witness to an array of enchanting musical performances by the stalwarts of Indian music industry. The first pro-nite star, the 'ravishing' **Shalmali Kholgade** weaved an aura of resplendence. The 'dazzling duo' **Sachin-Jigar**, made BITians tap their feet to some of their popular numbers and infused energy and vigour throughout.

Performances by BIT Students

Performances by Ms. Shalmali Kholgade and the Duo Sachin & Jigar

## Environmental Initiatives

**River Cleaning Drive:**

**Tree Plantation Campaign**: More than 100 trees were planted inside the campus

**Jharkhand Science and Environment Festival 2019**:

- The 8th edition of Jharkhand Science and Environment Fest or The JSEF was successfully organized for the entire East-Zone on 2nd February 2019. This fest witnessed more than 600 school students from states like Jharkhand, Bihar, West Bengal etc. for the first time ever.

| | | |
|---|---|---|
| 4 | Sapphire International School Ranchi | 32 |
| 5 | DAV Nirja Sahay Ranchi | 15 |
| 6 | Saint Thomas Ranchi | 15 |
| 7 | DAV Bistupur Jamshedpur | 25 |
| 8 | SS DAV Centenary Public School, Khunti Ranchi | 128 |
| 9 | DPS Ranchi | 25 |
| 10 | DAV Hehal Ranchi | 13 |
| 11 | Guru Gobind Singh Public School, Bokaro | 31 |
| 12 | DAV Gandhinagar Ranchi | 20 |
| 13 | Atomic Energy School Jadugoda Jamshedpur | 27 |
| 14 | St Xaviers College Ranchi | 83 |
| 15 | DPS Gaya | 12 |
| 16 | DAV Muzaffarpur | 52 |
| 17 | DAV Chatra | 62 |
| 18 | Chinmaya Vidyalaya Bokaro | 15 |
| 19 | Taurian World School Ranchi | 6 |
| 20 | DPS Greater Ranchi | 16 |
| 21 | Sarala Birla Pblic School Ranchi | 5 |

**Entrepreneurship Development Cell**

**WORKSHOPS:**

**Workshop on Stock Market Analysis and Investing:**

A guest workshop by Mr. Saurabh Dafria, Founder of Phinnacle Wealth Advisors, in collaboration with TEQIP was conducted on 8th August 2018.

**Mock Pitching Workshop:**

The "Investor Mock Pitching Session-cum-workshop" was conducted on the 24th of August and aimed for the introduction of all the upcoming entrepreneurs, start-up owners and zealous fresher's to the world of pitching sessions.

**Stock Market Workshop:**

The workshop on Stock Market was held from 25th to 29th of September. In the span of four days, the principles of stock market were covered and students were elucidated on the terms like 'initial public offering', 'market making', 'compound interest 'and' bid price'. A general idea on mutual funds was also given.

**Social Entrepreneurship Workshop:**

A workshop by the guest speaker Mr. Divyaditya Kothari was held on November 10th. The main topic of the workshop was social entrepreneurship and how one can develop the skills to be a successful social entrepreneur.

**Big Data Workshop:**

In this tech advancing world, data science has emerged as one of the best-earning ideas. To help one dive headfirst into the world of Data we organized a certified workshop on Big Data. It was a 5-day Workshop conducted by Mr Ashish Misra of RCPL

**EVENTS and GUEST LECTURES:**

**Start-up India Jharkhand Yatra:**

Start-up awareness event conducted in collaboration with Start-up India conducted on 11th August 2018. It was an initiative by the Department of IT & e-Government of Jharkhand organized in collaboration with Startup India leading to a plethora of incubation offers and incentives as you move up the ladder.

**AIC Information Session:**
A formal session was organized to spread awareness about Atal Tinkering Labs and Atal incubation Mission on 22nd October 2018. The session was conducted by the NITI Aayog official Dr. Ashish Nayan, who gave a brief on how 'Atal Innovation Mission' works.

**A Talk by Mr. Sandeep Gupta:**
The Executive Director at J.P. Morgan, India Head of Regulatory Capital Management, Mr. Sandeep Gupta, enlightened the students about the know-how of risk management

**Lecture by Dr. Alok Chaturvedi:**
The esteemed alumnus of BIT Mesra, Mechanical Engineering and current professor in Purdue University's Krannert Graduate School of Management and the Department of Computer Sciences and also the Founder, Chairman, and the CEO of Simulex Inc. He spoke about social empowerment, entrepreneurship for masses and upliftment of the weaker sections of the society through entrepreneurship.

**Virtual Stock Simulation:**
A one month online event conducted to give a real life experience of how stock market works to the students.

**Rapidough:**
RAPIDOUGH focused on the sales and marketing strategy of the participants.

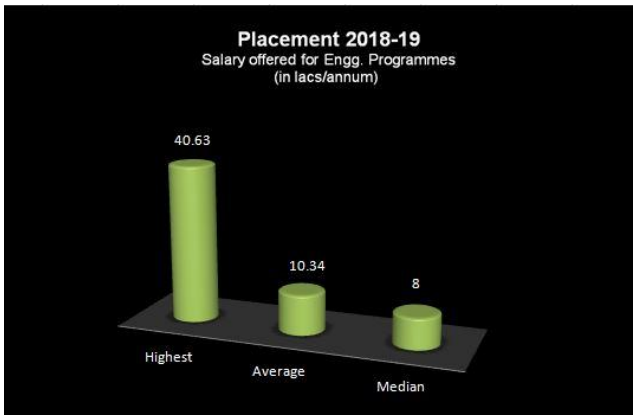
**E-Talks:**
Two E-Talks were organized on topics **Trade War** and **Jio-Past, Present and Future**.

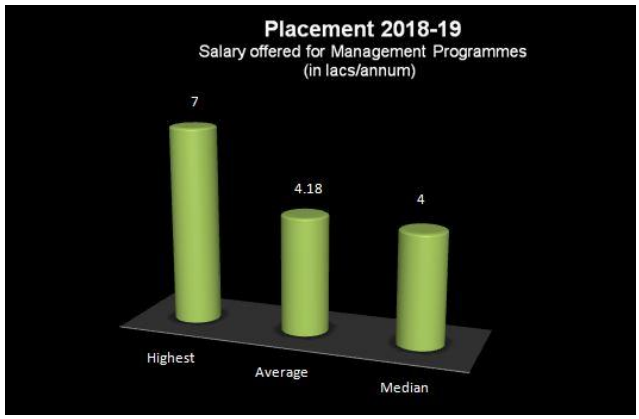
**E-SUMMIT'19:**

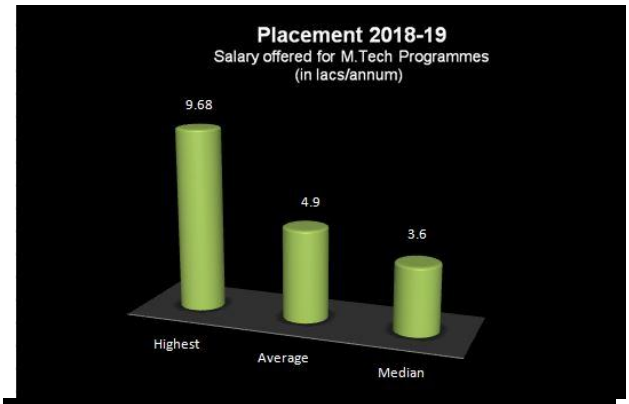
BIT Mesra has always had a strong ties with entrepreneurship, leaving its mark across all industries. EDC, BIT Mesra celebrates this entrepreneurial spirit with its annual flagship event E-Summit.
Many prominent Guest Speakers - **Mr Sandeep Jain** and **Mrs Bhargavi Nuvvula** and investors- **Mr Shashikant Choudhary** and **Mr Anil Joshi** graced their presence for the fest.
Events that were organised in E-Summit'19 were- **B-Plan, IPL Auction, Digital Pyramid.**

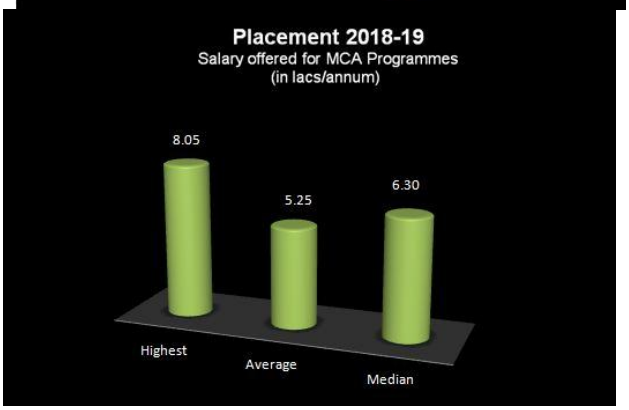
## Training and Placement

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. During the year 2018-19, the Campus Recruitment Programme maintained its strong position with visits from 141 recruiters across all campuses and by achieving an overall target of 859 job offers. The Mesra campus boasts of an average package of INR 10.4 lakhs per annum and the highest national salary of 40.63 lakhs per annum for BE Progame.








**Student Placed From Various Departments**

| Sl. No. | Company | Sector | B Tech | M Tech | M E | M Sc | IM Sc | B Pharma | M Pharma | MBA | MCA | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Accenture Services Pvt. Ltd | IT | 2 | | | | | | | | | **2** |
| 2 | Accures Legal | CONSULTANCY | 1 | | | | | | | | | **1** |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | Aditya Birla Fashion & Retail Ltd | APPAREL | | | | | | | | 1 | | **1** |
| 4 | Adobe Systems | IT | 1 | | | | | | | | | **1** |
| 5 | ADROSONIC IT Consultancy Services Pvt Ltd | IT | 8 | | | | 1 | | | | 1 | **10** |
| 6 | Affine CONSULTANCY | CONSULTANCY | 4 | | | | | | | | | **4** |
| 7 | Amadeus Software Labs | IT | 4 | | | | | | | | | **4** |
| 8 | Amazon | CONSULTANCY | 3 | | | | | | | | | **3** |
| 9 | Amazon Development Centre India Pvy. Ltd. | IT | 4 | | | | | | | | | **4** |
| 10 | Amdocs | IT | 24 | | | | | | | | 14 | **38** |
| 11 | Amnex Infotechnologies | IT | | 2 | | 2 | | | | | | **4** |
| 12 | APAC Sourcing Solutions Ltd. | PHARMA | 1 | | | | | | | | | **1** |
| 13 | Axis Bank | FI | 5 | | | | | | | | 2 | **7** |
| 14 | AXIS Institute | EDUCATION | 1 | | | | | | | | | **1** |
| 15 | Axxela Advisory Services LLP | FI | 1 | | | | | | | | | **1** |
| 16 | Bajaj Electricals | ELECTRONICS | | | | | | | | 1 | | **1** |
| 17 | Bandhan Bank | FI | | | | | | | | 11 | | **11** |
| 18 | Baylen De Louis | APPAREL | | | | | | | | 1 | | **1** |
| 19 | Bharti Airtel | IT | | | | | | | | 1 | | **1** |
| 20 | Buyhatke | CONSULTANCY | 2 | | | | | | | | | **2** |
| 21 | Byjus | EDUCATION | 11 | | 2 | | 2 | 2 | | 1 | | **18** |
| 22 | Cadella | PHARMA | | | | | | | 3 | | | **3** |
| 23 | Capgemini Technology Services India Limited | IT | 15 | | | | | | | | | **15** |
| 24 | CGI | EDUCATION | 12 | | | | | | | | | **12** |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | Cholamandalam Investment & Finance Comp. Ltd. | FI | | | | | | | | 3 | | **3** |
| 26 | Cipla Ltd. | PHARMA | | | | | | 2 | 1 | | | **3** |
| 27 | Cognizant | IT | 12 | | | | 1 | | | | 4 | **17** |
| 28 | Cypress Semiconductors | ELECTRONICS | 2 | | 1 | | | | | | | **3** |
| 29 | Deloitte Consulting India Pvt Ltd | IT | 7 | | | | | | | | | **7** |
| 30 | DRL | PHARMA | 4 | | | | | | 3 | | | **7** |
| 31 | Edvizo Media Pvt. Ltd. | CONSULTANCY | 1 | | | | | | | | | **1** |
| 32 | Endurance Technologies Ltd. | MANUFACTURING | 2 | | | | | | | | | **2** |
| 33 | Enhance Oman | RETAIL | | | | | | | | 2 | | **2** |
| 34 | Ericsson | ELECTRONICS | 2 | | | | | | | | | **2** |
| 35 | EXL Service | CONSULTANCY | 5 | | | | | | | | 3 | **8** |
| 36 | Fastenal India Sourcing, IT & Procurement Pvt Ltd | IT | 3 | | | | 1 | | | | | **4** |
| 37 | Federal Bank | FI | | | | | | | | 1 | | **1** |
| 38 | Futures First Info Services Pvt. Ltd | IT | 2 | | | | | | | | | **2** |
| 39 | Gandhi Fellowship | CONSULTANCY | 1 | | 1 | | 1 | | | | | **3** |
| 40 | Godrej & Boyce | CONSULTANCY | | | | | | | | 1 | | **1** |
| 41 | Goldman Sachs | FI | 7 | | | | | | | | | **7** |
| 42 | HCL Technologies | IT | 1 | 1 | | | | | | | | **2** |
| 43 | HDFC Asset Management Company Limited | FI | | | | | | | | 1 | | **1** |
| 44 | HDFC BANK | FI | | | | | | | | 3 | | **3** |
| 45 | Hero Moto | MANUFACT | 5 | | | | | | | | | **5** |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Corps | URING | | | | | | | | | | |
| 46 | Hewlett Packard Enterprise | IT | 1 | | | | | | | | | **1** |
| 47 | HindalcoÂ Industries | MANUFACTURING | 7 | | | | | | | | | **7** |
| 48 | Hyderabad Industries Ltd. | MANUFACTURING | 2 | | | | | | | | | **2** |
| 49 | ICICI Bank | FI | | | | | | | | 20 | | **20** |
| 50 | ICICI Pru | FI | | | | | | | | 1 | | **1** |
| 51 | ICICI Securities Limited | FI | | | | | | | | 2 | | **2** |
| 52 | IFB | ELECTRONICS | 3 | | | | | | | | | **3** |
| 53 | Indian Oil Corporation Limited | MANUFACTURING | 8 | | | | | | | | | **8** |
| 54 | Indus Valley Partners (IVP) | IT | 2 | | | | | | | | | **2** |
| 55 | IndusInd Bank | FI | | | | | | | | 2 | | **2** |
| 56 | Infoedge | IT | 7 | | | | | | | | | **7** |
| 57 | Infosys Ltd. | IT | 18 | 1 | 1 | 1 | 3 | | | | 3 | **27** |
| 58 | InnovaccerÂ CONSULTANCY Pvt. Ltd. | CONSULTANCY | 1 | | | | | | | | | **1** |
| 59 | Intuit | CONSULTANCY | 3 | | | | | | | | | **3** |
| 60 | JnJ | APPAREL | | | | | | 2 | | | | **2** |
| 61 | JSPL | MANUFACTURING | 1 | | | | | | | | | **1** |
| 62 | JSW Steel Ltd | MANUFACTURING | 3 | | | | | | | | | **3** |
| 63 | JUSCO | EDUCATION | 10 | | | | | | | | | **10** |
| 64 | Karvy Stock Broking Ltd. | FI | | | | | | | | 2 | | **2** |
| 65 | Kota Talent Academy | EDUCATION | | 1 | | | | | | | | **1** |
| 66 | KPMG | FI | 7 | | | | | | | | | **7** |
| 67 | L&T MANUFACTURING | MANUFACTURING | 6 | | | | | | | | | **6** |
| 68 | Lowes India Services | IT | 2 | | | | | | | | | **2** |
| 69 | Mahindra Comviva | IT | 1 | | | | | | | | | **1** |
| 70 | Mahindra Financial | FI | | | | | | | | 9 | | **9** |
| 71 | Maq Software | CONSULTANCY | | | | | | | | | 1 | **1** |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 72 | Maruti Suzuki | MANUFACTURING | 8 | | | | | | | | | **8** |
| 73 | Microland Limited | IT | 4 | | | | | | | | | **4** |
| 74 | Microsoft India Development Centre | IT | 20 | | | | | | | | | **20** |
| 75 | NathCorp | IT | | | | | 1 | | | | 1 | **2** |
| 76 | NBC Bearings | MANUFACTURING | 3 | | | | | | | | | **3** |
| 77 | Nestle | MANUFACTURING | 2 | | | | 1 | | | | | **3** |
| 78 | Netscribes (India) Private Limited | RETAIL | | | | | | | | 2 | | **2** |
| 79 | Nxp | ELECTRONICS | 3 | | | | | | | | | **3** |
| 80 | OPTUM | CONSULTANCY | 8 | | | | | | | | | **8** |
| 81 | Oracle Ofss | CONSULTANCY | 5 | | | | | | | | | **5** |
| 82 | Paytm | FI | 13 | | | | | | | | | **13** |
| 83 | Presidency University - Bangalore | EDUCATION | | 1 | | | | | | | | **1** |
| 84 | Pricewaterhouse Coopers (Pwc) | IT | 20 | 1 | | | 3 | | | | | **24** |
| 85 | Prism Johnson | MANUFACTURING | | | | | | | | 1 | | **1** |
| 86 | PSIT | EDUCATION | | 1 | | | | | | | | **1** |
| 87 | Quality Council of India | MANUFACTURING | 2 | | | | | | | | | **2** |
| 88 | Reliance Industries Limited | MANUFACTURING | 1 | | | | | | | | | **1** |
| 89 | Reliance JIO | IT | 1 | | | | | | | | | **1** |
| 90 | S K SAMANTA | MANUFACTURING | 7 | | | | | | | | | **7** |
| 91 | Sabre | IT | 5 | | | | | | | | | **5** |
| 92 | Salesforce | CONSULTANCY | 2 | | | | | | | | | **2** |
| 93 | Samsung CONSULTANCY Institute Bangalore | CONSULTANCY | 3 | | | | | | | | | **3** |
| 94 | Samsung CONSULTANCY Institute Noida | CONSULTANCY | 3 | | | | | | | | | **3** |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 95 | Societe General | FI | 8 | | | | | | | | | **8** |
| 96 | Stellium | CONSULTANCY | 6 | | | | | | | | | **6** |
| 97 | Strides Pharma Science Limited | PHARMA | | | | 1 | 1 | 1 | 10 | | | **13** |
| 98 | Synopsys | CONSULTANCY | 9 | | | | | | | | | **9** |
| 99 | Tata Aig | FI | | | | | | | | 4 | | **4** |
| 100 | TATA Autocomp Systems Ltd. | IT | 2 | | | | | | | | | **2** |
| 101 | TATA Hitachi | ELECTRONICS | 1 | | | | | | | | | **1** |
| 102 | TATA IQ | CONSULTANCY | 1 | | | | | | | | | **1** |
| 103 | Tata Motors | MANUFACTURING | 4 | | | | | | | | | **4** |
| 104 | Tata Power | MANUFACTURING | 3 | | | | | | | | | **3** |
| 105 | Tata Steel | MANUFACTURING | 14 | | | | | | | | | **14** |
| 106 | Techstern Solutions | IT | 3 | | | | | | | | | **3** |
| 107 | Techture Structures Pvt. Limited | MANUFACTURING | 1 | | | | | | | | | **1** |
| 108 | TEQFORCE Solutions | IT | | | | | | | | | 1 | **1** |
| 109 | Times Internet | IT | 3 | | | | | | | | | **3** |
| 110 | Utkarsh Small Finance Bank | FI | | | | | | | | 2 | | **2** |
| 111 | VARROC | MANUFACTURING | 1 | | | | | | | | | **1** |
| 112 | Vedanta Limited | MANUFACTURING | 10 | | | | | | | | | **10** |
| 113 | Visa | FI | 3 | | | | | | | | | **3** |
| 114 | VKC Group | MANUFACTURING | | | | | | | | 1 | | **1** |
| 115 | Vm Ware | CONSULTANCY | 3 | | | | | | | | | **3** |
| 116 | Vodafone | IT | 1 | | | | | | | | | **1** |
| 117 | Walmart Labs | IT | 5 | | | | | | | | | **5** |
| 118 | Wipro | IT | 13 | | | | 1 | | | | | **14** |
| 11 | YourOwnRO | CONSULTAN | | | | | | | | 1 | | **1** |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | OM | CY | | | | | | | | | | |
| 120 | Zindel Pharma | PHARMA | | | | | | 1 | | | | **1** |
| 121 | Zs Associates India Pvt. Ltd. | CONSULTANCY | 3 | | | | | | | | | **3** |
| **Total** | | | **439** | **8** | **5** | **4** | **16** | **8** | **17** | **74** | **30** | **601** |

# Central Library, BIT-Mesra

**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 software. The collection comprises of print and electronic documents in the field of basic science, engineering, pharmacy, management and hotel management. Online journals like IEEE, Science Direct, Springer, IOP, ASME, ASCE and others subscribed through Institute fund & e-ShodhSindhu Consortium. E-Library section consisting of a number of networked terminals to access e-journals, e-books and other e-reference resources to the library users under Intranet and Internet environment.

**Print Books**

| | | |
|---|---|---|
| Total Volumes | : | 1, 50,268 |
| Total Titles | : | 48,729 |
| Online Books | : | 43,42,649 |

**Online Journals, Conference**

| | | |
|---|---|---|
| Proceedings, Standards | : | 26, 228 |
| Print Journals/Magazine | : | 34 |

**Print Journals**

| | | |
|---|---|---|
| Indian | : | 24 |
| Foreign | : | 00 |
| Magazine | : | 10 |
| Indian | : | 08 |
| Foreign | : | 02 |
| CD/ DVD | : | 4,303 |
| **Bound Volumes** | : | 18,902 |
| **Library home page** | : | http://bitmesra.ac.in/library/default.asp |
| **Library Services** | **:** | Bibliographic services<br>Document Lending Services<br>E Document Delivery Services<br>Inter Library Loan<br>Language Laboratory<br>Literature search<br>New arrivals<br>News clippings<br>Off Campus Service<br>ON/Off line database search<br>Reference<br>Referral<br>Reprographic |

**Library Membership**

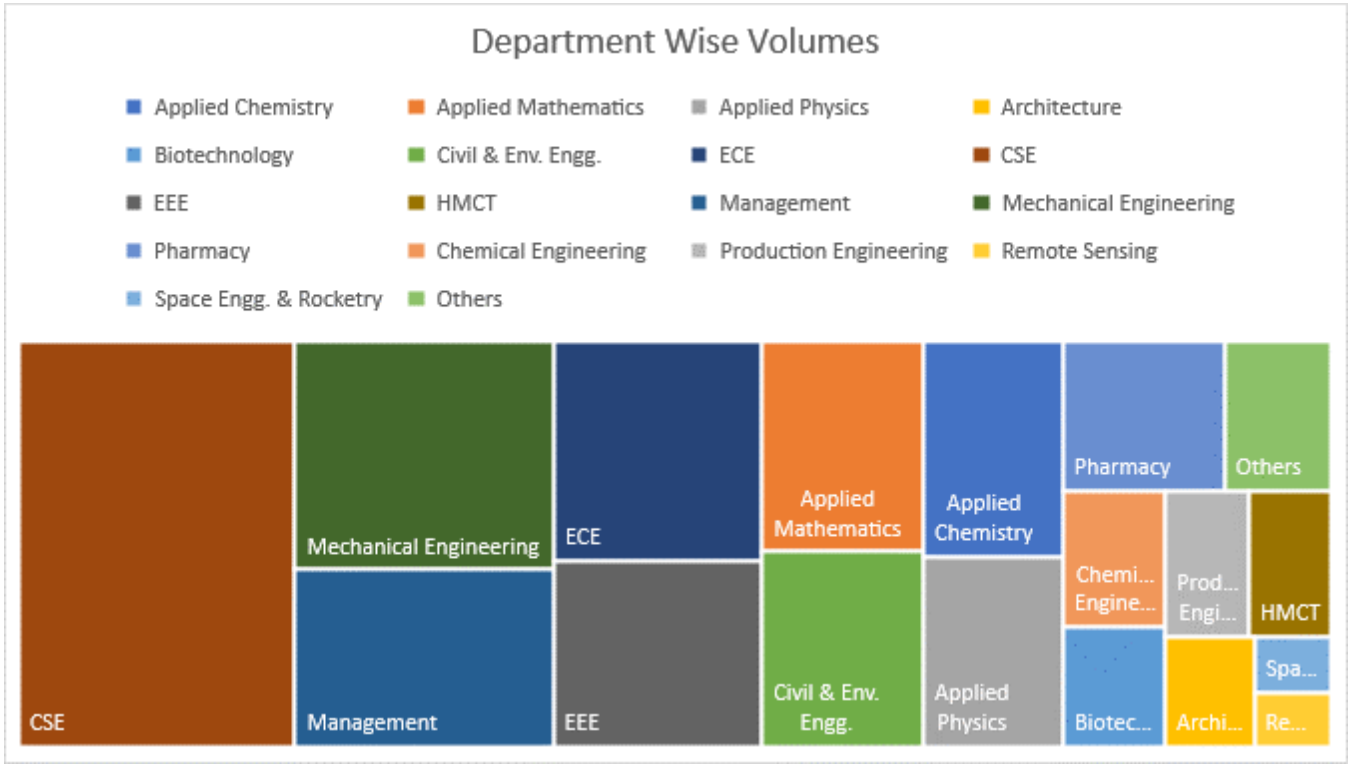
The library serves more than 5000 members, including students, research scholars, faculty, project engineers, and staff.

| Description | No. of Books | Period of Loan |
|---|---|---|
| Teaching Faculty | 08 | One Month |
| Non-Teaching Staff | 04 | One Month |
| All Under Graduate and Post Graduate students | 05 | 15 Days |
| All Under Graduate and Post Graduate SC/ST students | 10 | One Semester |
| All Under Graduate and Post Graduate OBC student | 5 | One Semester |
| Research Scholars | 05 | One Month |
| Books from Textbook Section for All Categories | 1 | 1 Day |

**Library Consortium/Membership**

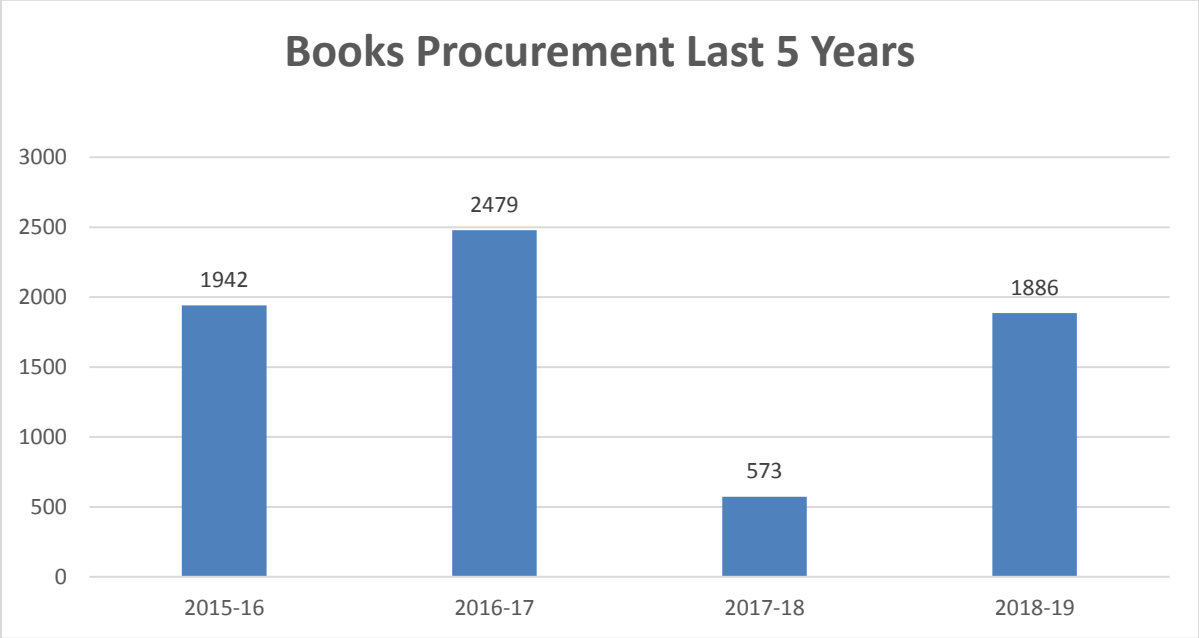
Central library enrolled its membership for following consortium

- e-ShodhSindhu Consortium
- NDL India



**Details of Online Journals/books/thesis & dissertations**

| SNo | 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 |
| 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 |




**Library Statistics of 2017-18**

Total Books Added : Title - 626 & Volumes – 1886
Total Journals Procured : Print - 34 & Online – 26, 228
Total Online books Procured : 43,42,649
Total Number of Membership enrolled : 1581
Total Number of Books Issued : 47561
Total Number of Books Returned : 47850

**Library Activities:**

The Central Library organized awareness program on e-resources on Friday, 12th July 2019 at Seminar Hall -2, R & D Building, BIT Mesra.

## ANNEXURE I: LIST OF DEANS & ASSOCIATE DEANS

### DEANS

| S.No. | Name & Address | | Designation |
|---|---|---|---|
| 1. | Dr. S. Konar<br>Professor<br>Department of Physics<br>BIT-Mesra, Ranchi | - | Dean (Faculty Affairs & Sponsored Research) |
| 2. | Dr. (Mrs.) P. Padmanabhan<br>Professor<br>Department of Bio-Engineering<br>BIT-Mesra, Ranchi | - | Dean (Academic Programmes) |
| 3. | Dr. Utpal Baul<br>Professor<br>Department of Management<br>BIT-Mesra, Ranchi | - | Dean (Alumni & International Relations) |
| 4. | Dr. S. Dutta<br>Professor<br>Department of Comp. Sc. & Engineering<br>BIT-Mesra, Ranchi | - | Dean (Admission & Academic Coordination) |
| 5. | Dr. Mahesh Chandra<br>Professor<br>Department of Electronics & Communication Engineering<br>BIT-Mesra, Ranchi | - | Dean (Students Welfare) |

### ASSOCIATE DEANS

| S.No. | Name & Address | | Designation |
|---|---|---|---|
| 1. | Dr. Ashoke Sharon<br>Asso. Professor<br>Department of Chemistry<br>BIT-Mesra, Ranchi | - | Associate Dean (Students Welfare) |
| 2. | Dr. (Mrs.) Vijay Laxmi<br>Professor<br>Department of Electrical & Electronics Engineering<br>BIT-Mesra, Ranchi | - | Associate Dean (Students Welfare) |
| 3. | Dr. V.K. Nigam<br>Associate Professor<br>Department of Bio-Engineering<br>BIT-Mesra, Ranchi | - | Associate Dean (Students Welfare) |
| 4. | Dr. R.P. Sharma<br>Professor & Head<br>Department of Mechanical Engineering<br>BIT-Mesra, Ranchi | - | Associate Dean (Academic Programmes) |

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| 5. | Dr. Ritesh Kr. Singh<br>Asso. Professor<br>Department of Production Engineering<br>BIT-Mesra, Ranchi | - Associate Dean (Faculty Affairs & Sponsored Research) |
| 6. | Dr. Sudip Das<br>Professor<br>Department of Space Engineering & Rocketry<br>BIT-Mesra, Ranchi | - Associate Dean (Admission & Academic Coordinations) |

## Annexure II: MEMBERS OF BOARD OF GOVERNORS

| | | |
|---|---|---|
| 1. | Shri C. K. Birla<br>Birla Tower (9th Floor)<br>25, Barakhamba Road<br>NEW DELHI – 110 001 | Chairman |
| 2. | Joint Secretary (Central Universities)<br>Nominee of MHRD, Govt. of India<br>Dept. of Higher Education<br>233-C Shastri Bhawan<br>NEW DELHI – 110 001 | Member<br>(Nominee of MHRD, GoI) |
| 3. | Dr. (Mrs.) Renu Batra<br>Additional Secretary II<br>University Grants Commission<br>Bahadur Shah Zafar Marg<br>NEW DELHI - 110 002 | Member<br>(Nominee of UGC) |
| 4. | Prof. Ajit K. Chaturvedi<br>Director<br>Indian Institute of Technology<br>Roorkee - 247 667 | Member<br>(Nominee of AICTE) |
| 5. | Shri Rajesh Kumar Sharma, IAS<br>Secretary<br>Dept. of Higher & Technical Education<br>Government of Jharkhand<br>Nepal House, Doranda<br>RANCHI – 834 002 | Member<br>(Ex-Officio) |
| 6. | Smt. Shubhra Verma, IAS<br>Commissioner<br>South Chhotanagpur Division,<br>Jharkhand, RANCHI – 834 001<br>**Email – scnd.comm.ranc@gmail.com** | Member<br>(Ex-Officio) |
| 7. | Shri Satendra Singh, IAS<br><br>Principal Secretary to the Governor<br>Hon'ble Governor of Jharkhand<br>Raj Bhawan<br>RANCHI – 834 001 | Member<br>(Nominee of the Chancellor) |
| 8. | Shri Rohit Saboo<br>M/s. National Engineering Industries Ltd.<br>Khatipura Road, JAIPUR – 302006 | Member<br>(Nominee of HCT) |
| 9. | Shri Madhvan Nayar<br>23W301 Kimberwick Lane<br>Naperville, Illinois – 60540 (USA) | Member<br>(Nominee of HCT) |

10. Dr. Manoj Kumar Mishra — Member
Vice Chancellor — (Ex-officio)
BIT, Mesra
RANCHI – 835 215

11. Dr. Shradha Shivani — Member
Professor — (Institute Faculty)
Department of Management
BIT, Mesra
RANCHI – 835 215

12. Dr. Priyank Kumar — Member
Assistant Professor — (Institute Faculty)
Space Engineering & Rocketry Department
BIT, Mesra
RANCHI – 835 215

13. Shri Aroop Zutshi — Member
43804 Green Hills Way — (Nominee of the General Council)
Fremont, CA 94539
USA

14. Dr. P. Ghosh — Member
Executive Director — (Nominee of the General Council)
Birla Institute of Scientific Research
Statue Circle
JAIPUR – 302 001

15. Dr. Arup Roy Choudhury — Member
Chief Commissioner — (Nominee of the General Council)
West Bengal Right to Public
Service Commission, Kreta Surakha Bhawan
04th Floor, 11A Mirza Ghalib Street
KOLKATA – 700 087

16. Shri S. N. Agarwal — Member
Chairman — (Nominee of HCT)
Bhoruka Power Ltd.
48, Lavelle Road
Bangalore – 560 001

## ANNEXURE III: MEMBERS OF ACADEMIC COUNCIL

| Sl. | Name | Design. | Department | Role |
|---|---|---|---|---|
| 1 | Dr. M.K. Mishra | Vice Chancellor | BIT-Mesra | Chairman |
| 2 | Dr. J.P. Pandey | Controller of Examination | Examination | Member |
| 3 | Dr. Sandip Dutta | Dean | Admission & Academic Coordination | Member |
| 4 | Dr. S. Konar | Dean | Faculty Affairs & Sponsored Research | Member |
| 5 | Dr. Utpal Baul | Dean | Alumni & International Relations | Member |
| 6 | Mrs.(Dr.) P. Padmanabhan | Dean | Academic Programmes | Member |
| 7 | Dr. Mahesh Chandra | Dean | Students Welfare | Member |
| 8 | Dr. Anand Kr. Sinha | Prof. & Head | Civil & Environmental Engg. | Member |
| 9 | Mrs.(Dr.) Vandana Bhattacharjee | Prof. & Head | Comp. Sc. & Engg. | Member |
| 10 | Dr. P.K. Srivastava | Prof. & Head | Chemistry | Member |
| 11 | Dr. Sudip Das | Prof. & Head | Space Engg. & Rocketry | Member |
| 12 | Dr. (Mrs.) Sunita Keshri | Prof. & Head | Physics | Member |
| 13 | Dr. Subir Samanta | Prof. & Head | Pharm. Sciences & Technology | Member |
| 14 | Dr. Satyaki Sarkar | Asso. Prof. & Head | Architecture | Member |
| 15 | Dr. Ramesh Chandra | Prof. & Head | Bio-Engineering | Member |
| 16 | Dr. C. Jeganathan | Prof. & Head | Remote Sensing | Member |
| 17 | Dr. P.R. Thakura | Prof. & Head | EEE | Member |
| 18 | Dr. Sanjay K. Jha | Asso. Prof. & Head | Production Engg. | Member |
| 19 | Dr. Srikanta Pal | Prof. & Head | ECE | Member |
| 20 | Dr. R.P. Sharma | Prof. & Head | Mechanical Engg. | Member |
| 21 | Dr. Gautam Sarkhel | Prof. & Head | Chemical Engineering | Member |

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|---|---|---|---|---|
| 22 | Dr. (Mrs.) Shradha Shivani | Prof. & Head | Management | Member |
| 23 | Dr. Souvik Chakraborty | Prof. & Head | Mathematics | Member |
| 24 | Dr. Abhinav Kr. Sandilya | In-charge | HMCT | Member |
| 25 | Dr. Sarbani Chakraborty | Professor | EEE | Member |
| 26 | Dr. (Mrs.) Usha Jha | Professor | Chemistry | Member |
| 27 | Dr. (Mrs.) M. Chakraborty | Professor | Architecture | Member |
| 28 | Dr. P.R.P. Verma | Professor | Pharm. Sciences & Technology | Member |
| 29 | Dr. (Mrs.) Nisha Gupta | Professor | ECE | Member |
| 30 | Dr. S.K. Ghorai | Professor | ECE | Member |
| 31 | Dr. Nilanchal Patel | Professor | Remote Sensing | Member |
| 32 | Dr. Swapan Kr. Chakraborty | Professor | Mathematics | Member |
| 33 | Dr. Birendra Kr. Singh | Professor | Civil & Environmental Engg. | Member |
| 34 | Dr. G. Sahoo | Professor | Comp. Sc. & Engg. | Member |
| 35 | Dr. S. Jha | Professor | Pharm. Sciences & Technology | Member |
| 36 | Dr. D.K. Mohanta | Professor | EEE | Member |
| 37 | Dr.(Mrs.) Mandira Mukherjee | Professor | Chemical Engineering | Member |
| 38 | Dr. (Mrs.) Manju Bhagat | Professor | Management | Member |
| 39 | Dr. R. Sukesh Kumar | Professor | ECE | Member |
| 40 | Dr. R.N. Gupta | Professor | Pharm. Sciences & Technology | Member |
| 41 | Dr. Vibha Rani Gupta | Professor | ECE | Member |
| 42 | Dr. Sudeshna Chakraborty | Professor | Civil & Environmental Engg. | Member |
| 43 | Dr. R.N. Bhagat | Professor | Management | Member |

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|---|---|---|---|---|
| 44 | Dr. Rakesh Kumar Sinha | Professor | Bio-Engineering | Member |
| 45 | Dr. T. Ghose | Professor | EEE | Member |
| 46 | Dr. (Mrs.) Sudipta Goswami | Professor | Chemical Engineering | Member |
| 47 | Dr. Kunal Mukhopadhyay | Professor | Bio-Engineering | Member |
| 48 | Dr. (Ms.) Swastika Ganguly | Professor | Pharm. Sciences & Technology | Member |
| 49 | Dr. (Mrs.) Bindhu Lal | Professor | Civil & Environmental Engg. | Member |
| 50 | Dr. (Mrs.) S.M. Verma | Professor | Pharm. Scicences & Technology | Member |
| 51 | Dr. Mohan Varma | Professor | Space Engg. & Rocketry | Member |
| 52 | Dr. Sanjay Kumar Sinha | Professor | Physics | Member |
| 53 | Dr. K. Jayaram Kumar | Professor | Pharm. Sciences & Technology | Member |
| 54 | Dr. S.S. Solanki | Professor | ECE | Member |
| 55 | Dr. (Mrs.) Papiya Mitra Mazumder | Professor | Pharm. Sciences & Technology | Member |
| 56 | Dr. (Ms.) Vijaya Laxmi | Professor | EEE | Member |
| 57 | Dr. S.K. Bose | Professor | Management | Member |
| 58 | Dr. S.K. Jain | Professor | Mathematics | Member |
| 59 | Dr. B.N. Sinha | Professor | Pharm. Sciences & Technology | Member |
| 60 | Dr. D.P. Mishra | Professor | Mechanical Engg. | Member |
| 61 | Dr. S. Padhi | Professor | Mathematics | Member |
| 62 | Dr. D.J. Biswas | Professor | Architecture | Member |
| 63 | Dr. A.P. Krishna | Professor & Registrar (Actg.) | Remote Sensing | Member & Secretary |

**OFF CAMPUSES**

| | | | | |
|---|---|---|---|---|
| 64 | Dr. R.C. Jha | Director | Off-campus, Deoghar | Invitee |

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|---|---|---|---|---|
| 65 | Dr. Munish Makkad | Director | Off-campus, Noida | Invitee |
| 66 | Dr. A.N. Jha | Director (In-charge) | Off-campus, Lalpur | Invitee |
| 67 | Dr. B.K. Singh | Director | Off-campus, Patna | Invitee |
| 68 | Dr. Abhinav Dinesh | Director | Off-campus, Jaipur | Invitee |

## ANNEXURE IV: MEMBERS OF THE FINANCE COMMITTEE

| | | |
|---|---|---|
| 1. | Shri C. K. Birla<br>Birla Tower (9th Floor)<br>25, Barakhamba Road<br>NEW DELHI – 110 001 | Chairman |
| 2. | Dr. M.K. Mishra<br>Vice Chancellor<br>BIT, Mesra, RANCHI | Member |
| 3. | Prof. Jose Varghese<br>Professor of Eminence<br>Christ University<br>(Deemed University)<br>Hosur Road<br>BANGALORE – 560 029 | Member<br>(Nominee of UGC) |
| 4. | Shri Satendra Singh, IAS<br>Principal Secretary to the Hon'ble Governor<br>Governor Secretariat<br>Raj Bhawan<br>RANCHI – 834 001 | Member<br>(Nominee of Chancellor) |
| 5. | Shri P. C. Agarwala<br>9/1, R. N. Mukherjee Road<br>KOLKATA – 700 001 | Member<br>(Nominee of General Council) |
| 6. | Shri Rohit Saboo<br>M/s National Engineering Industries Ltd.<br>Khatipura Road<br>JAIPUR – 302 017 | Member<br>(Nominee of BoG) |
| 7. | Shri Y. Goenka<br>Hon. Treasurer<br>Birla Tower (8th Floor)<br>25, Barakhamba Road<br>NEW DELHI – 110 001 | Member |

## ANNEXURE V: BUILDING WORKS COMMITTEE

1. Vice Chancellor - Chairman
2. Honorary Treasurer - Member
3. Registrar - Member
4. Dr. Manjari Chakraborty - Member
   Professor-Dept. of Architecture
5. Additional Registrar (F&MM) - Member
6. Dy. Finance Officer - Member
7. In-charge (Construction) - Member
8. Asst. Registrar (Works) - Member Secretary

## ANNEXURE VI: LIST OF HEADS/ IN-CHARGES OF THE DEPARTMENT

| S.No. | Name | Designation | Department |
|---|---|---|---|
| 1. | Dr. D.J. Biswas | Head | Dept. of Architecture |
| 2. | Dr. Ramesh Chandra | Head | Dept. of Bio-Engineering |
| 3. | Dr. Gautam Sarkhel | Head | Dept. of Chemical Engineering |
| 4. | Dr. P.K. Srivastava | Head | Dept. of Chemistry |
| 5. | Dr. Anand Kr. Sinha | Head | Dept. of Civil & Environmental Engineering |
| 6. | Dr.(Mrs.) V. Bhattacharjee | Head | Dept. of Computer Sc. & Engineering |
| 7. | Dr. Srikanta Pal | Head | Dept. of Electronics & Communication Engineering |
| 8. | Dr. P.R. Thakura | Head | Dept. of Electrical & Electronics Engineering |
| 9. | Dr. Abhinav Kr. Shandilya | In-charge | Dept. of Hotel Management & Catering Technology |
| 10. | Dr. Soubhik Chakraborty | Head | Department of Mathematics |
| 11. | Dr. R.P. Sharma | Head | Dept. of Mechanical Engineering |
| 12. | Dr. Shradha Shivani | Head | Dept. of Management |
| 13. | Dr. Subir Samanta | Head | Dept. of Pharmaceutical Sc. & Technology |
| 14. | Dr. (Mrs.) Sunita Keshri | Head | Dept. of Physics |
| 15. | Dr. C. Jeganathan | Head | Dept. of Remote Sensing |
| 16. | Dr. Sanjay K. Jha | Head | Dept. of Production Engineering |
| 17. | Dr. Sudip Das | Head | Dept. of Space Engineering & Rocketry |
| 18. | Dr. Gautam Sarkhel | In-Charge | Central Instrumentation Facility |

## ANNEXURE VII: ADDRESSES OF OTHER CAMPUSES OF BIT

DEOGHAR
BIT Mesra, Deoghar Campus
P O Ratanpur, Jasidih,
Dist. 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
Phone: 0141? 4019798 / 4019819
Fax: 2751601
Email: bitjaipur@bitmesra.ac.in

RANCHI
BIT Mesra Lalpur (Ranchi City) Campus
Jharkhand 834001
Phone: 0651-2531817 / 2531676
Fax: 0651-2531686
Email: bitlalpur@bitmesra.ac.in

NOIDA
BIT Mesra, Noida Campus
A-7 Sector 1
Noida 201301
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
Phone: 0612-2223538, 2223545
Fax: 0612-2227050
Email: bitpatna@bitmesra.ac.in

## ANNEXURE VIII

## WOMEN CELL COMMITTEE

1. Dr. Usha Jha - Chairperson

2. Dr. Manju Bhagat - Member
3. Dr. S.G. Pampalia - Member
4. Dr. V.R.Gupta - Member
5. Dr. Bindhu Lal - Member
6. Dr. P.M.Majumdar - Member
7. Ms. Nidhi Jaiswal - Member Secretary

**INTERNAL COMPLAINT COMMITTEE**

1. Dr. Nisha Gupta - Chairperson
2. Dr. Itu Snigdh - Member
3. Dr. Venkateshan J - Member
4. Mr. Rahul Rai - Member
5. Ms. Kaushiki Sengupta - Member(NGO Representative)
6. Ms. Nidhi Jaiswal - Member Secretary (Legal Representative)