

ANNUAL REPORT

2023-24



NATIONAL INSTITUTE OF TECHNOLOGY
JAMSHEDPUR-831014, INDIA

ANNUAL REPORT

2023-2024



NATIONAL INSTITUTE OF TECHNOLOGY
JAMSHEDPUR-831014, INDIA

TABLE OF CONTENTS

	Page no.
1.0 THE INSTITUTE	1-6
1.1 Brief Overview	1
1.2 Vision & Mission	2
1.3 Goals	2
1.4 Priorities for Academic Excellence	2
1.5 Greetings from the Director	3
1.6 Board of Governors	4
1.7 Finance Committee	4
1.8 Building Works Committee	5
1.9 Senate	5
1.10 Deputy Director	5
1.11 Deans	5
1.12 Associate Deans	6
1.13 Head of the Departments	6
2.0 ACADEMIC PROGRAMES	7-19
2.1 Academic Programmes offered at NIT Jamshedpur	7
2.2 Best Practices for Academic Excellence	8
2.3 Admission Procedure	8
2.4 Examination and Evaluation	8
2.5 Training and Placement	9
2.6 Hostels	18
3.0 ACADEMIC UNITS	20-57
3.1 Department of Chemistry	20
3.2 Department of Civil Engineering	23
3.3 Department of Computer Science and Engineering	27
3.4 Department of Electrical Engineering	30
3.5 Department of Electronics and Communication Engineering	34
3.6 Department of Humanities, Social Sciences and Management	38
3.7 Department of Mathematics	40
3.8 Department of Mechanical Engineering	42
3.9 Department of Metallurgical and Material & Engineering	48
3.10 Department of Physics	52
3.11 Department of Production and Industrial Engineering	54
4.0 FACULTY ACHIEVEMENTS	58-114
4.1 Sponsored Research Project	58
4.2 Consultancy Services/Testing Projects	61
4.3 Patents (Filed/Published/Granted)	65
4.4 Seminar/Conferences/FDP/Workshops	69
4.5 Editorial Board Member of Journals	73
4.6 Ph.D. Degree	74
4.7 Publications	78
4.8 Outreach Activities (Expert Lectures)	109

5.0 GENERAL FACILITIES, SERVICES AND ACTIVITIES	114-148
5.1 Computer Centre	114
5.2 Central Library	115
5.3 Planning and Development Division	118
5.4 Institute Health Centre & Hospital Facility	120
5.5 Annual Alumni Meet	121
5.6 Vehicle Section	123
5.7 13 th Convocation, 2023	124
5.8 Students Welfare and National Service Scheme (NSS)	127
5.9 Observation of Special Events	136
5.10 Departmental Societies/Associations Activities	139
5.11 Unnat Bharat Abhiyan	145
5.12 Go Green Club	146
5.13 List of MoUs	147
5.14 News Clips	148
6.0 THE STAFF	149-153
6.1 List of Officers	149
6.2 List of Group – B Staff	149
6.3 List of Group – C Staff	150
6.4 List of Employee on Contract	151
6.5 List of MTS	151
7.0 FINANCIAL AND ACCOUNT DETAILS	154-196

CHAPTER – 01 | THE INSTITUTE

1.1 BRIEF OVERVIEW

National Institute of Technology Jamshedpur, earlier known as Regional Institute of Technology, was established on 15th August 1960 as a joint venture of the Government of India and the Government of Bihar in the chain of RECs (Regional Engineering Colleges) in India with the aim to produce technical graduates of the highest standards who could provide technological leadership to the region. It was among the first eight Regional Engineering Colleges (RECs) established as part of the Second Five-Year Plan (1956 - 1961). This was the only REC in the country which was named RIT (Regional Institute of Technology). Therefore, RIT Jamshedpur was actually the REC of undivided Bihar & Jharkhand. The foundation stone of RIT (REC) Jamshedpur was laid by Dr. Srikrishna Sinha, the then chief minister of Bihar, with the aim of nurturing talent and setting high standards of education and excellence. On 27th December 2002, on the line of all other RECs of India, RIT Jamshedpur (may be read as REC Jamshedpur too) was converted to National Institute of Technology Jamshedpur with the status of a Deemed University as per the decision of the Govt. of India. The Institute is fully funded and governed by the Ministry of Education (MoE), Government of India since 1st April 2003. On 15 August 2007, NIT Jamshedpur was given the status of the Institute of National Importance through an act of Parliament known as the NIT Act. The Institute has 11 departments including engineering, science and humanities. The Institute, with 189 faculties, 4298 students, 178 administrative and supporting staff, functions on a self-contained campus. It is located on the outskirts of Jamshedpur on 341.3 acres of sprawling, wooded land. It combines the natural beauty of the countryside with the urban glamour of an industrial area. The flowing river and picturesque backdrop of low hills on one side and large tracts of forest on the other make the campus an ideal place for higher learning and research. It has been growing from strength to strength ever since it was established in 1960. Situated in the heart of

the rich mineral and industrial belt of Jharkhand State, the campus encompasses the Main building, the Library, the Computer Centre, 13 hostels (7 Boys hostels and 6 Girls hostels), staff quarters, Guest House, a Students Gymkhana, a Post-office, a branch of State Bank of India, two ATMs, central store, a dispensary, a school (DAV Public School), and a family club. The hostels and departments are connected with high-speed LAN. The institute maintains courts for basketball, volleyball, badminton, and tennis. Apart from this, it also has cricket, hockey and football grounds. The institute is poised for a bright and promising future. The courses have been completely restructured and prepared as per the needs of society and industries. There is refreshing development on every front. The institute has achieved impressive placement for its students, with top industrial houses and software companies recruiting students in large numbers.

NIT Jamshedpur is situated in the western part of the city of Jamshedpur which is in the southern end of the state of Jharkhand which in turn is bordered by the states of Orissa and West Bengal. It is just far enough to ensure that the city with its noise is too distant to distract and just near enough to guarantee that all city facilities are immediately available. The institute is strategically located with the unique advantage of being surrounded by giant and medium-scale industries like Tata Steel, Tata Motors, Tata Cummins, Indian Steel Wire Products, Tata Tubes, Tinplate Company, Tata Timken, etc. and reputed Institutes like the National Metallurgical Laboratory, Xavier Labour Relations Institute, MSME Tool Room Jamshedpur etc.

The overall placement record of the institute in this academic session (2023-24) has been excellent; amounting to 93.76% with an average overall CTC of 12.63 LPA and Maximum CTC of 1.23 Cr.PA.



1.2 VISION & MISSION

VISION

- To be one of the premier technical institutions for its academic excellence and innovative research to meet the future needs of the society
- To build a conducive environment for learning and creativity.

MISSION

- To train students to become technically competent professionals and socially responsible citizens.
- To develop innovative products and technologies for the betterment of society.

1.3 GOALS

- To offer effective teaching-learning to students.
- To provide the knowledge and skills to students to become global citizens and socially responsible.
- Training the students to meet the changing needs due to rapid technological advancement so that they may offer society and industry the necessary technologies to become self-reliant.
- To provide facilities, infrastructure, and resources to conduct meaningful research and to develop an understanding and awareness of the social relevance of indigenous materials, capacities, and technologies.
- To act as centres of excellence in technical education catalyzing absorption,

innovation, diffusion, and transfer of higher technologies for improved productivity & quality of life at the national and global levels.

- To have regional consideration regarding local needs, relevance, strength, limitations, and community services.

1.4 PRIORITIES FOR ACADEMIC EXCELLENCE

- Modification of curricula in line with NEP 2020
- Well qualified faculty.
- Effective teaching, research, and learning processes.
- Strong leadership and good governance (processes and procedures, clear communication of policies, transparent and fair processes, supporting culture).
- Development of learning resources, infrastructure, and technologies.
- Industry and Alumni relations.
- Involvement of people (students, faculty, staff, and alumni).
- The welfare of the people (Students, faculty, and staff).
- Community welfare and economic development.



DIRECTOR'S DESK**1.5 GREETINGS FROM THE DIRECTOR****Greetings!**

I am honoured to present the annual report for the fiscal year 2023-24, a testament to our resilience and commitment at the National Institute of Technology Jamshedpur. This year has been marked by unique challenges and transformations for educational institutions, yet we have emerged stronger, driven by academic excellence and innovation. Our students have showcased remarkable academic achievements along with excellence in cocurricular activities, and the dedication of our faculty in addressing real-world challenges has been pivotal to our growth. Together, we have nurtured an environment where innovation thrives, ultimately transforming lives.

This year, our partnerships with industry have flourished, leading to meaningful collaborations that bridge academia with practical applications. These efforts have enriched our curriculum and provided invaluable opportunities for our students to engage with industry leaders. The institute introduced the concept of Industry Academia Conclave to bring them together and work towards an industry focused environment where innovations are brought closer to industries so that institute' research can focus on problem solving. Notably, our placement rate reached an impressive 93.76%, with a maximum CTC of 123 LPA, reflecting the high demand for our graduates. Furthermore, many students are choosing to pursue higher studies and research, contributing to the vision of a Self-Reliant India.

Looking ahead, our roadmap is filled with exciting prospects. We are dedicated to advancing our academic programs, fostering interdisciplinary collaboration, and embracing emerging technologies that will shape the future. In line with this, the institute has introduced new master's degree program and evening programs in emerging areas.

Infrastructure enhancements have been a key focus, as we continue to invest in creating spaces conducive to learning and research with several projects underway. Our commitment to social responsibility remains strong, as we strive to develop not only skilled professionals but also compassionate global citizens with introduction of conducive spaces for activity centres.

I extend my heartfelt gratitude to our exceptional faculty, dedicated staff, talented students, supportive alumni, and esteemed partners. Their unwavering commitment to our vision is invaluable. To our shareholders and stakeholders, thank you for your continued trust in our journey. As we move into the coming year, let us embrace the challenges and opportunities ahead with enthusiasm and a shared commitment to further elevate our institution. Together, we will continue to push boundaries, create impact, and shape the leaders of tomorrow.

With Best Regards
Prof. Goutam Sutradhar
 DIRECTOR

ADMINISTRATION

1.6 BOARD OF GOVERNORS

The Board of Governors is the apex administrative body. The Director is the Principal Academic and Executive Officer of the Institute and is responsible for the proper administration of the Institute and for imparting instructions and maintenance of discipline therein. The Board of Governors of the National Institute of Technology (NIT) - Jamshedpur (Jharkhand) as per Section 11 of the NIT Act, 2007 and NIT (Amendment) Act 2012

S. N.	NAME AND DESIGNATION OF NOMINATED PERSONS	SERVES AS
1.	Sri Krishna Prasad, IPS(Retd.)	Chairman (Ex-officio)
2.	Prof. Goutam Sutradhar Director, NIT Jamshedpur	Member
3.	Shri. Sanjog Kapoor, JS & FA Ministry of Education (MoE), Govt. of India (Gol)	
4.	Smt. Saumya Gupta, J.S. (NITs), MoE, Gol	
5.	Director, Higher Technical Education and Skill Development Government of Jharkhand (GoJ) Nominee	
6.	Prof. D. K. Singh, Director, B.I.T. Sindri, GoJ Nominee	
7.	Prof. T. N. Singh, Director, IIT Patna	
8.	Senate Nominee, Prof. Rabindra Nath Mahanty, NIT Jamshedpur	
9.	Senate Nominee, Dr. Dulari Hansdah, NIT Jamshedpur	
10.	Col. (Dr.) Nisheeth Kumar Rai (Rtd.), Registrar, NIT Jamshedpur	Secretary (Ex-officio)

1.7 FINANCE COMMITTEE

The Finance Committee of the National Institute of Technology (NIT) - Jamshedpur (Jharkhand) as per Section 10(1) of the NIT Statutes and with the approval of the competent authority is as follows:

S. N.	NAME AND DESIGNATION OF NOMINATED PERSONS	SERVES AS
1.	Sri Krishna Prasad, IPS(Retd.)	Chairman (Ex-officio)
2.	Prof. Goutam Sutradhar Director, NIT Jamshedpur	Member
3.	Shri. Sanjog Kapoor, JS & FA, MoE, Gol	
4.	Smt. Saumya Gupta, J.S. (NITs), MoE, Gol	
5.	Director, B.I.T. Sindri, GoJ Nominee	
6.	Col. Nisheeth Kumar Rai (Rtd.), Registrar, NIT Jamshedpur	Ex-officio Member, Secretary

1.8 BUILDING WORKS COMMITTEE

The members of building works committee of the National Institute of Technology (NIT) Jamshedpur (Jharkhand) as follows:

S. N.	NAME	DESIGNATION
1.	Prof. Goutam Sutradhar Director, NIT Jamshedpur	Chairman (Ex-officio)
2.	Shri Anil Kumar Director (Finance) Under Secretary, NITs, DoHE, MoE	Member
3.	Ms. Veena Dunga Under Secretary, (NIT), MoE, GoI	
4.	Er. Vivek Prakash Srivastava, Chief Engineer, IIT Kharagpur	
5.	Er. Manmohan Kumar, Superintendent Engineer, JBVNL, GoJ	
6.	Dr. Shashi Bhushan Prasad, Dean (P&D)	
7.	Prof. A.K. Choudhary Professor, CED, NIT Jamshedpur	
8.	Col. (Dr.) Nisheeth Kumar Rai (Rtd.), Registrar, NIT Jamshedpur	Ex-officio Member, Secretary

1.9 SENATE

List of Members, Senate

S. N.	NAME	POSITION
1	Prof. Goutam Sutradhar Director, NIT Jamshedpur	Chairman
2	Prof. Ram Vinoy Sharma, Deputy Director, NIT Jamshedpur	Member
3	Prof. Sanjay	
4	Prof. Ujjwal Laha	
5	Prof. Shalendra Kumar	
6	Prof. A. K. L. Srivastava	
7	Prof. Amaresh Kumar	
8	Prof. Anil Kumar Choudhary	
9	Prof. Danish Ali Khan	
10	Prof. Dilip Kumar Yadav	
11	Prof. Hira Lal Yadav	
12	Prof. Mrityunjay Kumar Sinha	
13	Prof. Niranjana Kumar	
14	Prof. Prabha Chand	
15	Prof. R. N. Mahanty	
16	Prof. B. N. Singh, IIT Kharagpur	
17	Prof. N. C. Shivaprakash, IISc., Bangalore	
18	Prof. Mousumi Roy, NIT Durgapur	
19	Col. (Dr.) Nisheeth Kumar Rai (Rtd.), Registrar	Member Secretary

1.10 DEPUTY DIRECTOR

S. N.	NAME AND DEPARTMENT	SERVES AS
1.	Prof. Ram Vinoy Sharma Dept. of Mechanical Engineering	Deputy Director

1.11 DEANS

S. N.	NAME AND DEPARTMENT	SERVES AS
1.	Prof. Prabha Chand Dept. of Mechanical Engineering	Dean, Faculty Welfare
2.	Dr. Shashi Bhushan Prasad Dept. of Production and Industrial Engineering	Dean, Planning, and Development
3.	Dr. Chintalacheruvu Madhusudana Rao Dept. of Civil Engineering	Dean, Academic
4.	Dr. Prahlad Prasad Dept. of Civil Engineering	Dean, Students Welfare
5.	Prof. Mrityunjay Kumar Sinha Dept. of Mechanical Engineering	Dean, Research and Consultancy
6.	Prof. Rabindra Nath Mahanty Dept. of Electrical Engineering	Dean, Industry and Alumni Relations

1.12 ASSOCIATE DEANS

S. N.	NAME AND DEPARTMENT	SERVES AS
1.	Dr. Dinesh Kumar Department of Production and Industrial Engineering	Associate Dean, Faculty Welfare
2.	Dr. Somenath Mondal Department of Civil Engineering	Associate Dean, Planning and Development
3.	Dr. Sanjay Kumar Department of Electrical Engineering	Associate Dean, Electrical and Maintenance Service
4.	Dr. Awdhesh Kumar Choudhary Department of Civil Engineering	Associate Dean, Academics
5.	Dr. Mrutyunjay Rout Department of Electronics & Communication Engineering	Associate Dean, Academics
6.	Dr. Neha Agnihotri Department of Physics	Associate Dean, Student Welfare
7.	Dr. Sakthivel S Department of Chemistry	Associate Dean, Student Welfare
8.	Dr. Vishesh Ranjan Kar Department of Mechanical Engineering	Associate Dean, Academic: Recognition and Accreditation
9.	Dr. Tushar Banerjee Department of Production and Industrial Engineering	Associate Dean, Industry and Alumni Relations
10.	Dr. Om Hari Gupta Department of Electrical Engineering	Associate Dean, Research and Consultancy
11.	Dr. Keshav Kumar Sharma Department of Civil Engineering	Associate Dean, New Construction
12.	Dr. Ashok Kumar Mandal Department of Mechanical Engineering	Associate Dean, Research and Consultancy: Collaboration and Entrepreneurship Development
13.	Dr. Madhuri Seeram Department of Civil Engineering	Associate Dean, Academics
14.	Dr. Akanksha Shukla Department of Humanities, Social Sciences and Management	Associate Dean, Alumni Relations
15.	Dr. Vineet Sahoo Department of Mechanical Engineering	Associate Dean, Academics
16.	Dr. Dinesh Kumar Department of Computer Science and Engineering	Associate Dean, Academics
17.	Dr. Kanika Prasad Department of Production and Industrial Engineering	Associate Dean, Research and Consultancy: IPR Cell

1.13 HEAD OF THE DEPARTMENTS

S. N.	NAME	DEPARTMENT
1	Dr. Shailesh Kumar Prasad	Chemistry
2	Dr. Sanjay Kumar	Civil Engineering
3	Prof. Danish Ali Khan	Computer Science and Engineering
4	Dr. Dilip Kumar	Electronics & Communication Engineering
5	Dr. Umesh Kumar Sinha	Electrical Engineering
6	Dr. Manish Kumar Jha	Humanities, Social Sciences, and Management
7	Dr. Ramayan Singh	Mathematics
8	Prof. Sanjay	Mechanical Engineering
9	Dr. Ashok Kumar	Metallurgical & Materials Engineering
10	Prof. Hira Lal Yadav	Physics
11	Dr. Ashok Kumar Jha	Production and Industrial Engineering

CHAPTER-2: ACADEMIC PROGRAMMES

NIT Jamshedpur offers educational programmes namely, undergraduate Postgraduate and Doctoral programmes with a well-designed curriculum. NIT Jamshedpur has been following the semester system with internal and continuous evaluation since its inception. The nomenclatures of programmes are B.Tech. (Hons.), M.Tech., M.Sc., MCA and Ph.D.



2.1 ACADEMIC PROGRAMMES OFFERED AT NIT JAMSHEDPUR

2.1.1 B. TECH. (HONS.) 4 YEARS DURATION

S. N.	NAME OF THE PROGRAMME
1.	Civil Engineering
2.	Computer Science and Engineering
3.	Electronics and Communication Engineering
4.	Electrical Engineering
5.	Mechanical Engineering
6.	Metallurgical and Materials Engineering
7.	Production and Industrial Engineering
8.	Engineering and Computational Mechanics

2.1.2 POST GRADUATE PROGRAMMES: M.TECH. (2 YEARS DURATION)

S. N.	NAME OF DEPARTMENT	SPECIALIZATION
1.	Civil Engineering	Structural Engineering
		Geotechnical Engineering
		Water Resources Engineering
2.	Computer Science and Engineering	Computer Science
		Information Systems Security Engineering
3.	Electronics and Communication Engineering	Communication Systems Engineering
		Embedded Systems Engineering
4.	Electrical Engineering	Power System Engineering
		Power Electronics & Drives
5.	Mechanical Engineering	Computer Aided Design and Manufacturing
		Thermal Engineering
		Energy Systems Engineering
6.	Metallurgical and Materials Engineering	Industrial Metallurgy
		Materials Technology
7.	Production and Industrial Engineering	Manufacturing System Engineering
8.	Chemistry	Surface Science and Engineering

2.1.3 MCA (3 YEARS DURATION):

S. N.	NAME OF DEPARTMENT	SPECIALIZATION
1.	Computer Science and Engineering	Master of Computer Applications

2.1.4 M.Sc. (2 YEARS DURATION)

S. N.	NAME OF DEPARTMENT	SPECIALIZATION
1.	M.Sc.	Physics
		Chemistry
		Mathematics

2.1.5 Ph. D. ALL THE DEPARTMENTS OF THE INSTITUTE OFFER DOCTORAL PROGRAMMES.

2.2 BEST PRACTICES FOR ACADEMIC EXCELLENCE

- Academic excellence is the brand image of NIT Jamshedpur. The best practices implemented for Lectures, examination, and evaluation.
- The automated UG, PG, and Ph.D. admission process has been introduced since 2013. In this admission process, the complete details/database including the bio-metrics of the student is captured on the first day of his/her admission. RFID multipurpose ID card is issued to each student. The OBC, SC and ST certificates are scanned and are sent for further verification at their respective offices.
- All academic programmes are scheduled as per the academic calendar. The academic calendar is distributed to all students during the first week of both the autumn and spring semesters.
- Academic registration process is made online through MIS.
- The detailed course hand-out, which includes course description, scope, objectives, text & reference books, course plan, evaluation scheme, and chamber consultation hour etc. are shared with students.
- Online verification of degree certificate.
- Digital library (with e-textbooks, e-journals and e-learning resources).
- Visiting faculty from the industry for teaching assignments.
- Equal emphasis on both teaching and research.
- The flexibility of academic programmes and curriculum.
- Usage of learning resources and MOOCs.
- Online student feedback for various aspects of the course and its teaching. The results of the student feedback are uploaded on the Institute website. The feedback results are shared with teachers after grade submission for the course or next semester.
- Sharing laboratory experiments through the online platform
- NIT Jamshedpur is successfully implementing the best practices for effective teaching and learning in pursuance of academic excellence.
- The institute encourages UG students to go for internships in the 8th semester and take online courses through Swayam-NPTEL/MOOCs, etc.

2.3 ADMISSION PROCEDURE

PROGRAMME	ADMISSION PROCEDURE
B.Tech. (Hons.)	Admissions are made on the basis of JEE(Mains) and counselling is conducted by CSAB, on behalf of the Govt. of India, MoE.
M.Tech.	Admissions to the regular M.Tech. Programmes are made only on the basis of the GATE score through Centralized Counselling for M.Tech. admission in NITs (CCMT).
MCA	Admissions to the MCA programme are made on the basis of the rank in NITs MCA Common Entrance Test (NIMCET).
M.Sc.	Admissions to M.Sc. (Mathematics, Physics & Chemistry) programme are made on the basis of the rank of Joint Admission Test for M.Sc. (JAM) conducted by IITs and counselling conducted by CCMN.
Ph.D.	Admission to Ph.D. (Regular/ Part-time / Sponsored) programme is conducted on the basis of the rank in online entrance test conducted by the Institute followed by a personal interview.

2.4 EXAMINATION AND EVALUATION

Internal and continuous evaluation scheme:

- Solutions are shared with students through online & offline platform.
- Answer books are open to revisiting by students if desired.
- Resorting to any unfair means during examination incurs a heavy penalty

Evaluation Scheme

S. N.	Evaluation Component	Duration	Weightage
1.	Mid-semester	2 hrs	30%
2.	End Sem. Exam	3 hrs	50%
3.	Teacher Assessment	---	20%

- Attendance is compulsory. Class attendance and marks assessment are entered in MIS.

- The academic section coordinates the overall examination system, and the final results are kept online and sent through SMS to students.

2.5 TRAINING AND PLACEMENT

The Training and Placement Cell was established in the year 1973-74. The Training & Placement Cell handles all activities related to campus placements and internships of both UG & PG programs.

2.5.1 DEPARTMENT WISE PLACEMENT STATISTICS (UG)

A. Six Months Internship (UG)

Sl. No.	Branch	Total No. of students registered in the class	Total No. of students Registered for placement	No. of Students undergoing Internship with FTE	No. of Students undergoing Internship with Performance based PPO	Total No. of Students undergoing Internship	% of Students undergoing Internship
1	Computer Science Engg.	121	115	43	21	64	55.65
2	Civil Engineering	110	98	18	21	39	39.80
3	Electrical Engineering	113	108	24	18	42	38.88
4	Electronics & Communication Engg.	115	103	34	39	73	70.87
5	Mechanical Engineering	111	106	07	30	37	34.90
6	Production & Industrial Engineering	48	45	04	13	17	37.77
7	Metallurgical & Materials Engineering	104	98	12	16	28	28.57
Total:		722	673	142	158	300	44.58

B. PLACEMENT STATISTICS (UG)

Sl. No	Branch	Total No. of students Registered in the class	No. of students Registered for placement	Placed students	No. of offers	No. of students opting for Higher studies	Highest CTC (LPA)	Average CTC (LPA)	Median salary CTC (LPA)	Minimum CTC (LPA)	% Placement
1	Computer Science Engg.	121	115	107	127	03	123.00	20.24	14.10	5.00	93.04
2	Civil Engineering	110	98	93	109	10	18.00	8.22	7.00	5.00	94.90
3	Electrical Engineering	113	108	100	105	04	82.00	14.78	11.25	5.00	92.59
4	Electronics & Communication Engg.	115	103	93	100	10	82.00	15.65	12.00	5.00	90.29

5	Mechanical Engineering	111	106	97	112	05	18.00	9.30	8.00	5.00	91.50
6	Production & Industrial Engineering	48	45	43	46	01	14.10	8.26	8.00	5.00	95.56
7	Metallurgical & Materials Engineering	104	98	98	114	02	17.00	9.33	8.00	5.00	100
Total:		722	673	631	713	35	12.00	12.63	9.00	5.00	93.76

Highlights

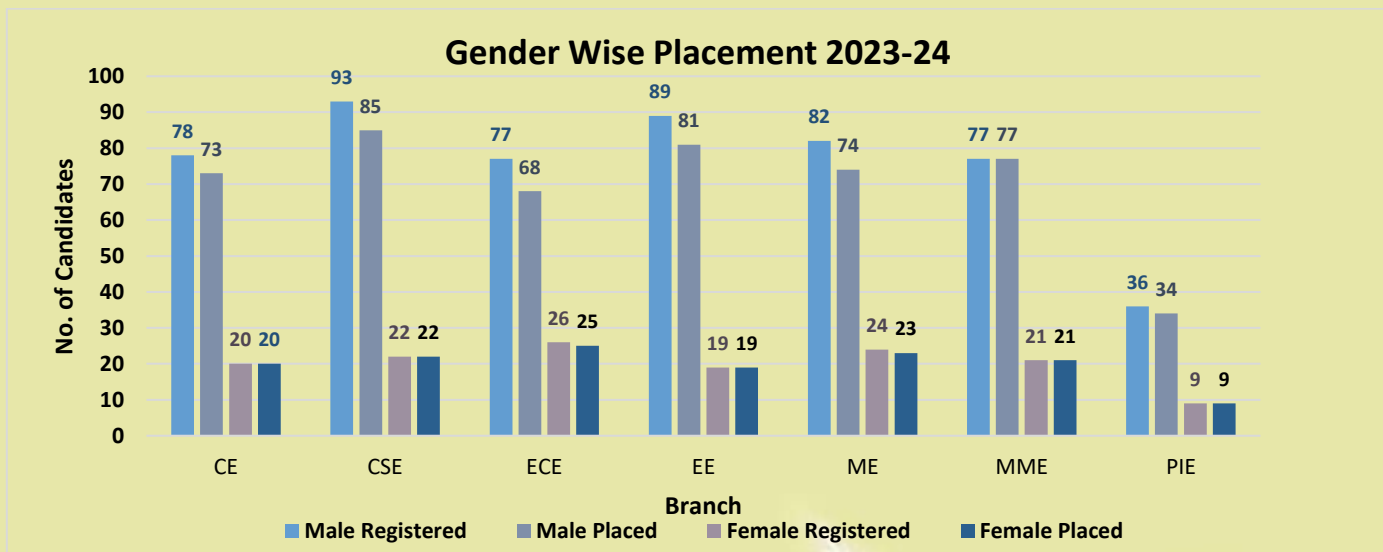
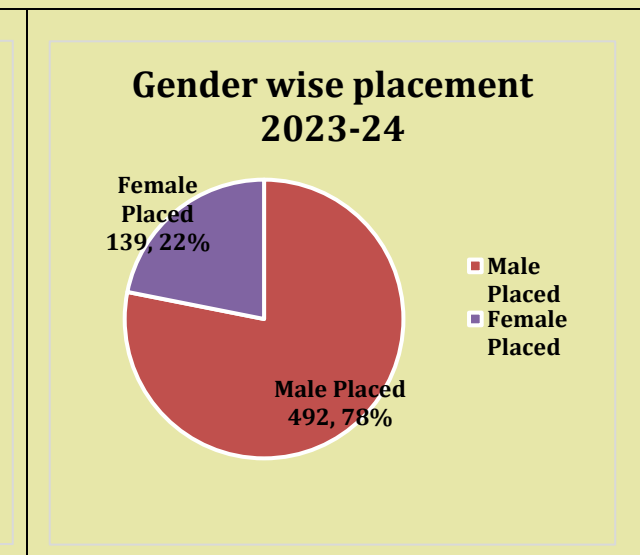
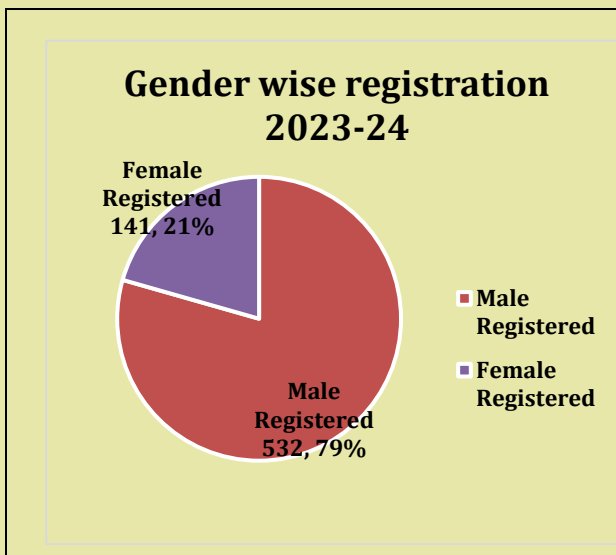
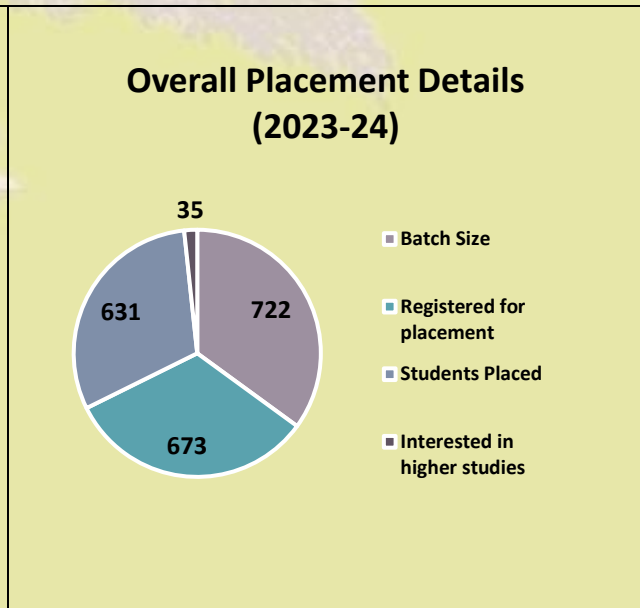
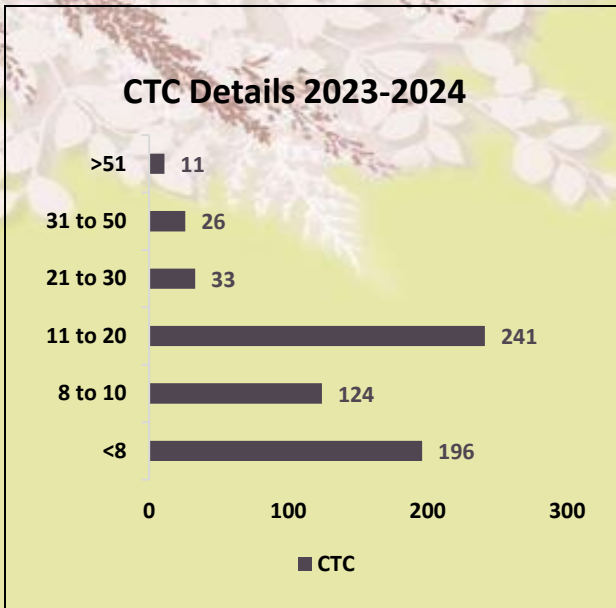
- Total students registered for placement: **673**
- Number of students placed: **631**
- Total No. of offers: **713**
- Overall % placement: **93.76**
- Overall Max CTC (in LPA): **1.23 Cr.**
- Overall Av. CTC (in LPA): **12.63**
- Overall Median CTC (in LPA): **9.00**
- Overall Min. CTC (in LPA): **5.00**
- Number of students undergoing Internship: **300**
- Number of interns with pre-placement offers (PPO) & FTE offers: **300**
- Number of DASA students placed: **3 (out of 5)**
- Number of PwD students placed: **9 (out of 9)**

Cumulative Highlights:

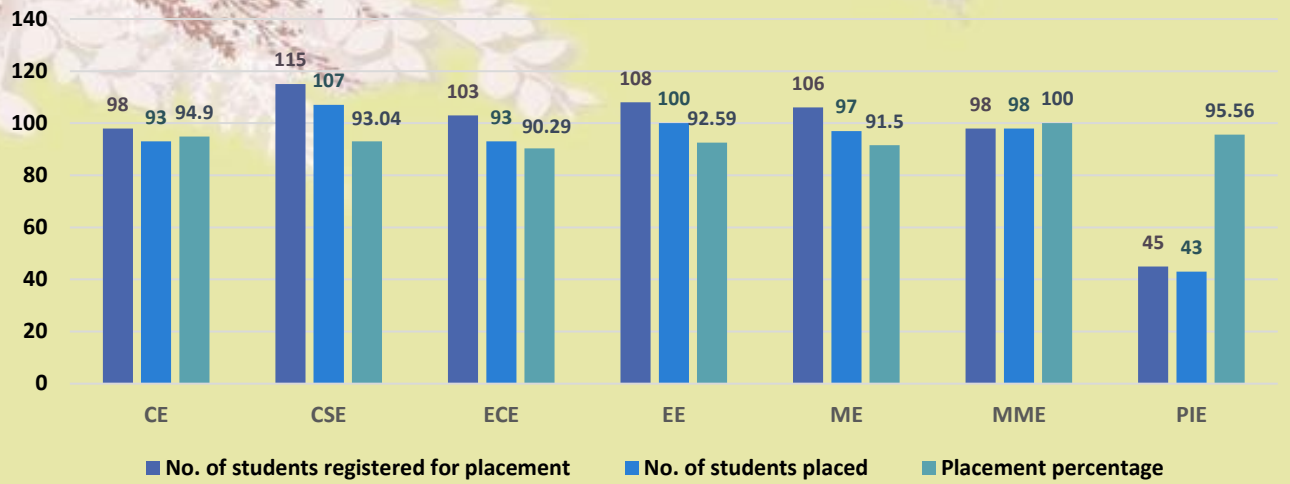
- Number of students with CTC greater than or equal to 50 LPA = **11**
- Number of students with CTC greater than or equal to 30 LPA = **37**
- Number of students with CTC greater than or equal to 20 LPA = **70**
- Number of students with CTC greater than or equal to 15 LPA = **117**
- Number of students with CTC greater than or equal to 10 LPA = **311**
- Number of students with CTC greater than or equal to 8 LPA = **435**
- Number of students with CTC greater than or equal to 5 LPA = **631**

CTC Highlights:

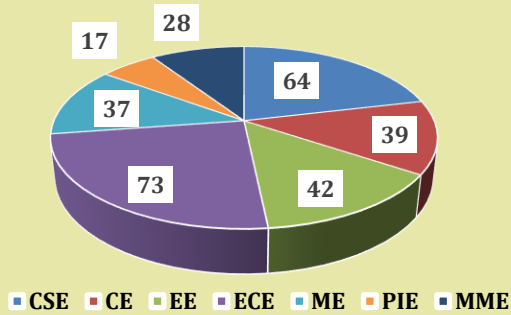
- Number of students with CTC greater than 50 LPA = **11**
- Number of students with CTC between 31 LPA to 50 LPA = **26**
- Number of students with CTC between 21 LPA to 30 LPA = **33**
- Number of students with CTC between 11 LPA to 20 LPA = **241**
- Number of students with CTC between 8 LPA to 10 LPA = **124**
- Number of students with CTC less than 8 LPA = **196**



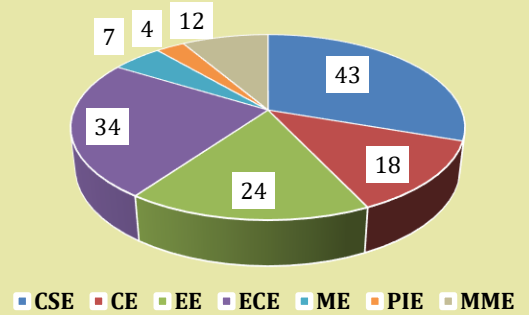
Placement Statistics 2023-24



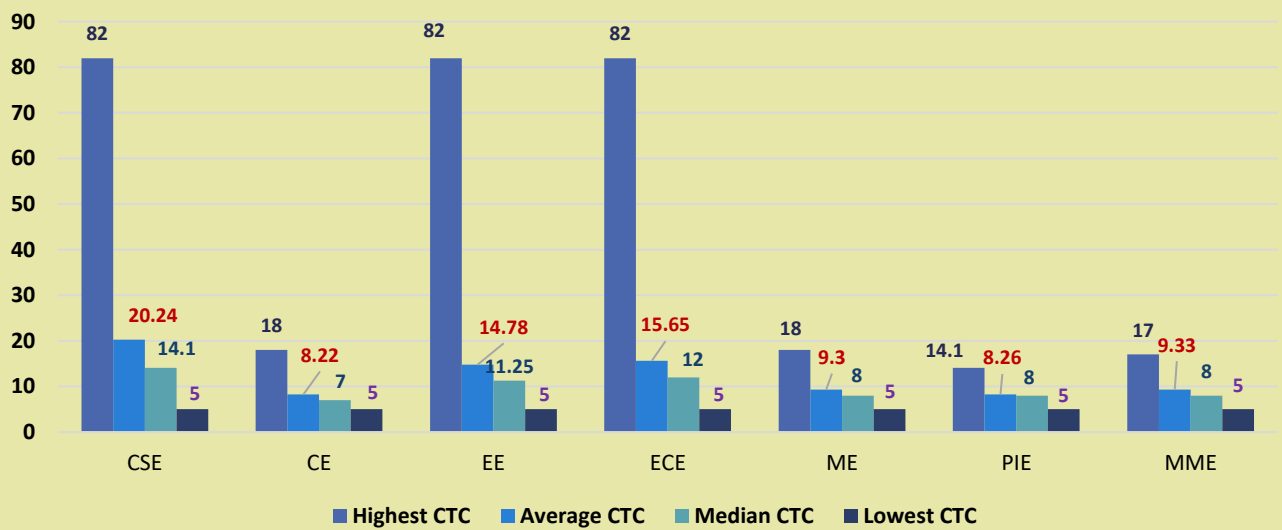
6 Months Internship Offers



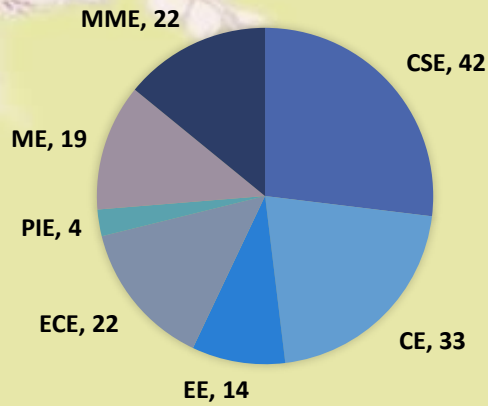
FTE Offers (2023-24 Batch)



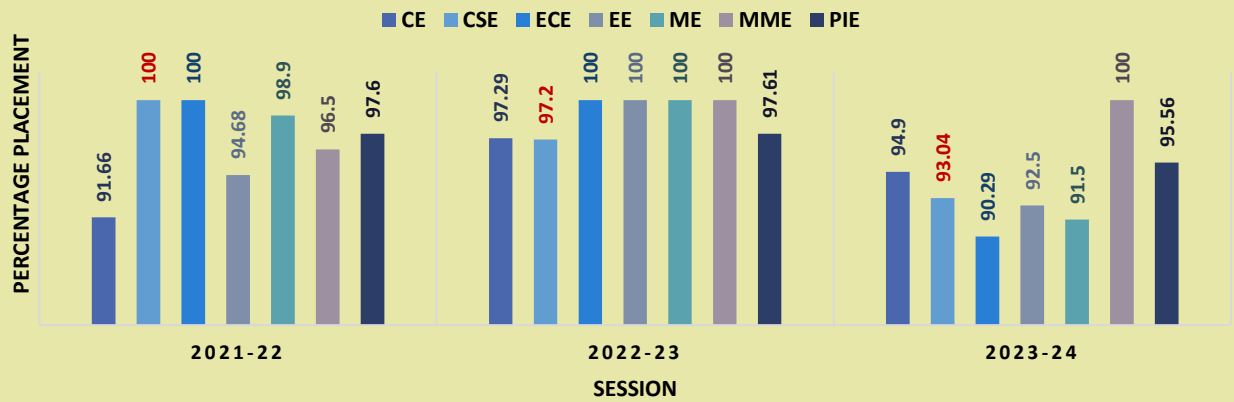
Salary Statistics 2023-24



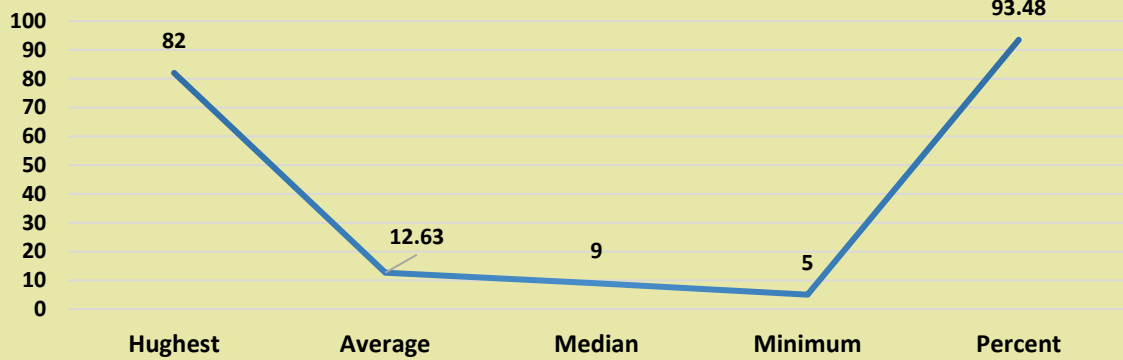
SUMMER INTERNSHIP 2025 BATCH

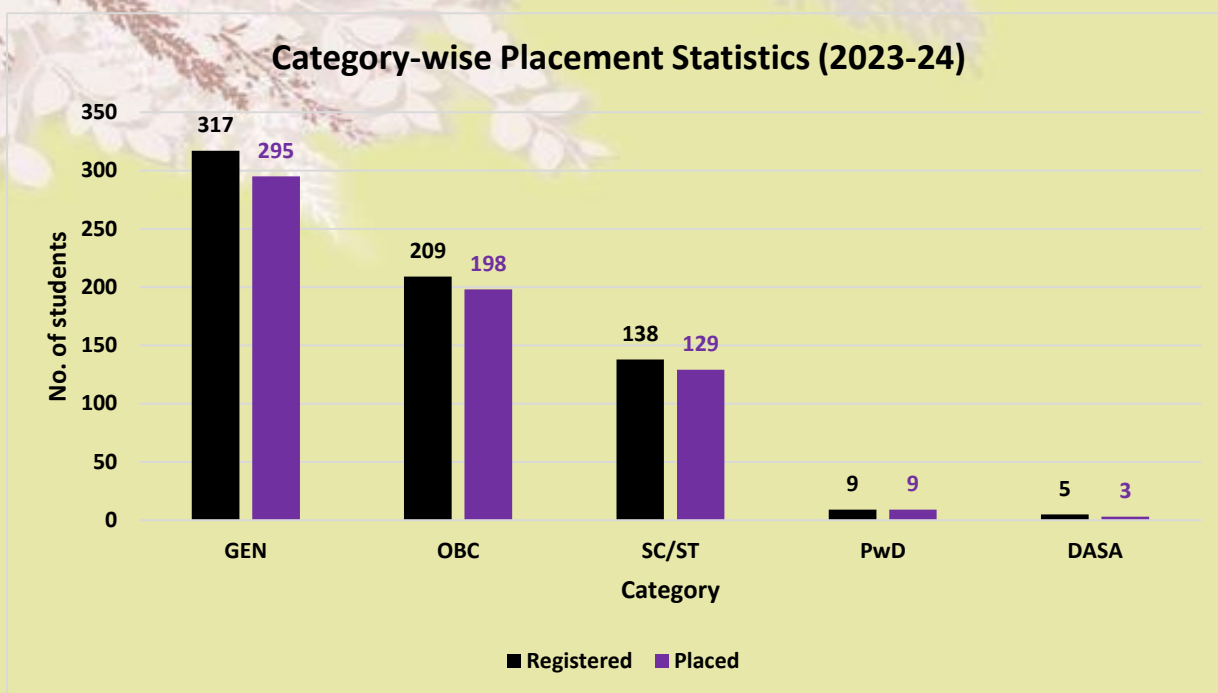


PLACEMENT STATISTICS YEAR-WISE



Overall Salary Statistics 2023-24





2.5.2. DEPARTMENT WISE INTERNSHIP/PLACEMENT STATISTICS (PG)

A. INTERNSHIP STATISTICS (M.Tech. & MCA)

Sl. No.	Branch	Registered students	No. of Students undergoing Internship with FTE	No. of Students undergoing Internship with Performance based PPO	Total No. of Students undergoing Internship	% of Students undergoing Internship
1	Computer Science Engg.	20	Nil	11	11	55.00
2	Civil Engineering	20	Nil	1	1	5.00
3	Electrical Engineering	17	7	06	13	76.50
4	Electronics & Communication Engg.	20	4	14	18	90.00
5	Mechanical Engineering	10	Nil	3	3	33.33
6	Production & Industrial Engineering	2	Nil	Nil	Nil	Nil
7	Metallurgical & Materials Engg.	Nil	Nil	Nil	Nil	Nil
8.	Master of Computer Application	106	24	9	33	31.13
9.	M. Tech (Surface Science and Engg./Chemistry)	Nil	Nil	Nil	Nil	Nil
Total:		195	35	44	79	40.50

B. PLACEMENT STATISTICS (M.Tech. & MCA)

Sl. No.	Branch	Specialization	Registered students	Placed students	No. of students interested for Higher studies	Highest CTC (LPA)	Average CTC (LPA)	Median salary CTC (LPA)	Min. Salary CTC (LPA)	% Placement
1	Computer Science Engg.	CSE	16	13	3	40.33	12.76	8.50	6.00	81.25
		ISSE	3	3	0	15.00	11.33	10.50	8.50	100
		MCA	106	66	9	24.00	8.47	6.50	5.00	62.26
2	Civil Engineering	STE	13	7	8	6.25	5.25	5.00	5.00	53.84
		GTE	4	2	Nil	5.50	5.50	5.50	5.50	50.00
		WRE	3	Nil	2	Nil	Nil	Nil	Nil	Nil
3	Electrical Engineering	Power System	5	3	2	12.50	10.00	10.00	10.00	60.00
		Power electronics	12	10	2	35.00	15.70	12.50	10.50	83.34
4	Electronics & Communication Engg.	Comm. Systems	2	Nil	2	Nil	Nil	Nil	Nil	Nil
		Embedded Systems	18	18	2	33.00	10.80	10.80	9.25	100.00
5	Mechanical Engineering	Thermal Engg.	6	1	6	9.00	9.00	9.00	9.00	16.67
		CIDM	4	2	Nil	6.00	6.00	6.00	6.00	50.00
6	Production & Industrial Engg.	MFMS	2	Nil	2	Nil	Nil	Nil	Nil	Nil
Total:			195	125	38	40.33	9.48	8.73	5.00	64.10

Highlights

- Total students registered for placement: **195**
- Number of students placed = **125**
- Total No. of offers = **126**
- Overall % placement: **64.10**
- Overall Max CTC (in LPA): **40.33**
- Overall Av. CTC (in LPA): **9.48**
- Overall Median CTC(in LPA): **8.73**
- Overall Minimum CTC(in LPA):**5.00**
- Number of interns with pre-placement offers (PPO) & FTE offers: **79**

Major Highlights:

- Number of students with CTC higher than 30 LPA = **3**
- Number of students with CTC between 20 LPA and 30 LPA = **7**
- Number of students with CTC between 10 LPA and 20 LPA = **20**

C. PLACEMENT STATISTICS (M.Sc.)

Sl. No	Branch	Total No. of students Registered in the class	Placed students	No. of students opting for Higher studies	Highest CTC (LPA)	Average CTC (LPA)	Median salary CTC (LPA)	Minimum CTC (LPA)	% Placement
1	MSc Physics	31	Nil	21	Nil	Nil	Nil	Nil	Nil
2	MSc Mathematics	32	3	21	9.00	7.66	7.00	7.00	10.71
3	MSc Chemistry	31	1	20	7.20	7.20	7.20	7.20	3.00
Total:		94	04	62	9.00	7.43	7.10	7.00	4.35

Highlights

- Total students registered for placement: **94**
- Number of students placed = **4**
- Overall % placement: **4.35**
- Overall Max CTC (**in LPA**): **9.00**
- Overall Av. CTC (**in LPA**): **7.43**
- Overall Median CTC (**in LPA**): **7.10**
- Number of students opting for Higher studies: **62**

2.5.3 LIST OF RECRUITERS (UG):

Accenture	Capillary Technologies (SDE)	Fastenal*	IQVIA(PPO)	Mphasis*
Accolite Digital	Celigo India	Flexcar*	Iscar Pvt. Ltd.	Mu-Sigma
Acies Holdings	Chryso	Flipkart	Jindal Power LTD.	Nation With Name
Aditya Birla Group	Citi Bank	Forma.AI	Jindal shadeed iron and steel	Neenopal
Advanced micro devices inc.*	CNH Industrial	Fristine Infotech	Jindal Stainless Steel (Summer intern)	LG Soft India Pvt. Ltd.
Afcons	CommercelQ	FunctionUp	Jindal Stainless Steel*	Nvidia(hardware intern)*
Airtel	Competishun	Futures First	JSW	Nvidia(software intern)*
Alfa Laval	Cred	Ganit Inc.	Jubliant Foodworks	O9 Solutions
Alstom	Cotiviti India Pvt. Ltd.	GE Digital*	Kalpataru Projects International Ltd.	Oben Electric Vehicles Pvt. Ltd.
Amazon*	Course5i	GE Healthcare*	Kansai Nerolac Paints	Online 24x7 India Pvt. Ltd.*
Amdocs*	CreditNirvana	GE Healthcare	KEC International	OpeninApp

		(summer intern)		
AMNS India	Cropin Technology Solutions	Genpact*	Kickdrum	Optum
Analitica Global	Cubastion Consulting Pvt Ltd	Geta.ai Labs	L&T*	Oracle*
Ashok Leyland	Cultfit	Grey B*	Labra.io	Pepsico-GBS Hyderabad
Aspire Fintech Pvt Ltd	Daimler India commercial vehicles pvt. Ltd.*	Hexaware Technologies	Latent View Analytics	Phamax Analytic Resources
Atlassian	DE Shaw	Hike	Logic Fruit	Physics Wallah*ss
Axis Bank	Decision Point Analytics*	Hindustan Unilever Limited	LOWE'S India	Practo
Axxela	Deep Logictech*	HLS Asia Pvt. Ltd.	LSEG	Pradan NGO*
BharatX	Deloitte*	HLS Asia Pvt. Ltd.(Summer intern)	Lumiq AI	ProcdNA
BigBasket	Devtron	HSBC India	MakeMyTrip	Pubmatic India Pvt. Ltd.*
Blackrock	Digit Insurance	Husk Power Systems	Mamaearth	Quantifi Analytics
Blueyonder	DMI Finance	Husk Power Systems(Summer intern)	MaQ Software	Sahaj AI Software Solutions
BNY Mellon	Drip Capital	IBM Research	Maruti Suzuki	Saint Gobain*
Bosch Rexroth*	EIL*	ICICI Bank	Mecon LTD.	Scaler by interview bit*
Brane Enterprises	ElectricPe	Infinity learn	Media.net	Scheider Electric
Bugsmirror Research Pvt. Ltd.	Electrosteel Castings Ltd.	Infosys*	Meesho	Schlumberger
BuyHatke	Energy Exemplar	Infoys	Mercer Mettl	Scrut Automation*
Calance Software Pvt. Ltd.	Ericsson India	Inito	Merilytics	Scry Analytics
Capillary Technologies	Escorts Kubota Limited*	Invesco Ltd.	Metadome.AI	Seco Warwick
Signalchip Innovation Pvt Ltd*	EXL Analytics	IQVIA	MITJEE Classes*	Siemens EDA
SKLR Edutech*	Star Union Dai Chi	Tata AIG General insurance company	Morphle labs	TCS*
Skoda Volkswagon	Steel Strip wheels Ltd.	Tata Bluescope	Tata Steel	TCS NQT*
Skylark Drones Pvt. Ltd.	Suzuki Motors Gujarat Pvt Ltd	Tata Motors	Tata Steel (Summer intern)	Technip Energies
Skylark labs	TA Digital	Tata Power	TCE	Technip Energies

Tera Data*	Toshiba Software*	Unacademy	Wabtec Corporation	Zelta Tech Pvt. Ltd.*
Tesco*	Trilogy Innovations	Unistring Tech Solutions	Wabtec Corporation	Zetwerk
Texas Instruments*	TSDPL	Urban Ladder	Welspun	ZS Associates (BTSA)
Texas Instruments (Summer intern)*	TSUISL	Vedanta	YOptima	ZS Associates (DAA)
Thoughtworks	UiPath	Vesuvius India	Zavya	PayPal

2.5.4 LIST OF RECRUITERS (PG):

98th Percentile	Capace Software	Hinduja Tech	Pyzapl	Viaion IAS
Ador Building	Caparo	Infi Technologies	Quality Council	Webber
Altair	Champ Square	Infineon	Quicksell	ZF
Aricent	ChangeJar	IPSOS Healthcare	Renesas	Zigram
ARV	Collegedunia	Jaro	Rinex	
Bennet University	Create Bytes	Jash Energy	Sterling & Wilson	
BLK Constructions	Create Global	JVM EV	Teachnook	
BOC India Ltd.	Eaton	Outscal	Tescra	
Bosch	Frugal Testing	Pubmatics India	Triton	
BuroHappold	Hemlatha Coaching	PV Insights	Vestas	

2.6 HOSTELS

There are thirteen hostels, also known as Halls of Residence, seven for boys and six for girls. They have been named in honour of great Indian personalities. All halls have internet access through Institute wide LAN. Each hostel has a mess and a common room. Each hall of residence also has its own badminton and volleyball courts. Girls' hostels are situated adjacent to the Computer Centre in the Institute's Residential Area, where the Faculty Quarters are located. The boys' hostels are located on either side of the Institute's Main building in two complexes- Up Hostels Complex and Down Hostels Complex. The Up Hostels Complex holds hostels A, B, C and D. The Up Hostels Complex is home to 1st year and 2nd-year students of the B. Tech Programme. The Down Hostels Complex holds hostels E, F, G, H, I, J and K. These are home to students of 3rd and 4th years of the B. Tech programme. In addition, 1000 capacity boys' hostel and 300 capacity girls hostel are under construction to cater the increased strength of students.



S. N.	NAME OF THE HOSTEL	BOYS/GIRLS	MAX. CAPACITY
1.	Rani Lakshmi Bai Hall of Residence	Girls	96
2.	Ambedkar Hall of Residence	Girls	96
3.	Visveswararajah Hall of Residence (Hostel-E)	Boys	125
4.	Shivaji Hall of Residence (Hostel-F)	Boys	125
5.	S.C. Bose Hall of Residence (Hostel-G)	Boys	125
6.	Abul Kalam Hall of Residence (Hostel-H)	Boys	130
7.	Hall of Residence (Hostel-I)	Boys	300
8.	Hall of Residence - J (Hostel - J)	Boys	740
9.	Hall of Residence - K (Hostel - K)	Boys	740
10.	Aryabhatta Hall of Residence (Hostel-A)	Girls	180
11.	Nirala Hall of Residence (Hostel-B)	Girls	180
12.	Bhabha Hall of Residence (Hostel-C)	Girls	180
13.	Rajendra Prasad Hall of Residence (Hostel-D)	Girls	180
		TOTAL	3197

2.6.1 DISCIPLINARY COMMITTEE

The institute has a disciplinary committee to impart social and ethical values among the students and to maintain a disciplined environment for studies with a motive to produce law-abiding and disciplined engineers for the nation. The understated are the guidelines for the students which must be followed:

- All the students of N.I.T. Jamshedpur are warned not to leave the Hostel/Classroom/Campus without the prior permission of the concerned Warden/HOD/Faculty Coordinator.
- In particular, the students are strictly prohibited from venturing viz. Kharkai river / Lake / Pond or similar places.
- The students are hereby directed not to indulge in any type of intoxication.
- Further the Students are warned to abide by the rules and regulations of the Institute and the Hostels for maintaining discipline in the Institute Campus.
- The students who are found to violate the rules of the Institute/Hostel, stern disciplinary action will be taken against those students.
- The "Standing Institute Disciplinary Committee (SIDC)" is constituted for three years (i.e. 2021-22, 2022-23 and 2023-24). The details are as follows:
- For an offence committed (a) in a hostel, (b) in the department or a classroom and (c) elsewhere, the Warden, the Head of the Department and the Dean, Students Welfare, respectively shall have the authority to reprimand or impose fine or take any other suitable measure.
- All cases involving punishment other than reprimand shall be reported to the Chairperson of the Standing Institute Disciplinary Committee.

CHAPTER – 03 | ACADEMIC UNITS

3.1 DEPARTMENT OF CHEMISTRY

Department of chemistry, National Institute of Technology Jamshedpur was originally founded as a department under regional institute of technology in 1960 to nurture talent and set high standards of education and excellence. The department offers courses in general chemistry and engineering chemistry to the students in different branches of engineering students at B.Tech. level. The department started the post graduate programme (M.Tech.) In surface science and engineering in 1982. The department is equipped with various instruments. Besides teaching, the highly qualified and energetic faculty members of the department have contributed a lot to elevate the prestige of the

institute through their research activities of both basic and applied areas of chemistry.



3.1.1 VISION AND MISSION






Vision




1. To create the Department of Chemistry as a centre of excellence in science and technology through enhanced collaboration between Industries and academia and serving the country.
2. Building world-class research facilities to train young minds through an extensive research curriculum.
3. To provide a pool of bright scientists for the advanced scientific endeavour of our country.

Mission

1. To provide good fundamental concepts of Chemistry applied to the Engineering field.
2. To introduce the importance of Chemistry in the industry as well as in the research field.
3. To study the importance of chemicals, chemical reactions, and physical phenomena, synthesis in higher study of Engineering.

3.1.2 FACULTY

S.N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Shailesh Kumar Prasad Ph.D., Associate Professor	Organic Chemistry, Radio, Analytical Chemistry, Surface Chemistry	
2.	Dr. Balram Ambade Ph.D., Associate Professor	Environmental Chemistry and Analytical Chemistry	
3.	Dr. Ananta Kumar Atta Ph.D., Associate Professor	Sugar-modified Fluorometric Chemosensors for metal ions/anions/nitroaromatics, Development of Photosensitizer for PDT, Low molecular weight Gelators	
4.	Dr. Sekharpandi Sakthivel Ph.D., Assistant Professor	Organic Chemistry	
5.	Dr. Subrata Mahanta Ph.D., Assistant Professor	Physical Chemistry	
6.	Dr. Sudhanshu Shekhar Pati Ph.D., Assistant Professor	Magnetic Materials, Functional Nanoparticles, Energy Materials, Nanomaterials for Biomedical Applications like Magnetic Hyperthermia and Drug Delivery	
7.	Dr. Moumita Mondal Ph.D., Assistant Professor	Inorganic Chemistry	

8.	Dr. Naveen Kumar Veldurthi Ph.D., Assistant Professor	Photocatalysis	
9.	Dr. Tapas Das Ph.D., Assistant Professor	Organic Chemistry	
10.	Dr. Prabhat Kumar Ph.D., Assistant Professor	Organic and Materials Chemistry	

3.1.3 ACADEMIC PROGRAMMES

The Department offer the following courses:

(a) Post-Graduate Programmes

M.Tech.: Surface Science and Engineering

M.Sc. : Chemistry

(b) Doctoral Programmes

3.1.4 EQUIPMENT PROCURED

S. N.	EQUIPMENT	COST (INR)	Funding Agency
1.	Eppendorf Refrigerated Centrifuge	9,95,000/-	Institute Fund
2.	Probe Sonicator	1,45,000/-	Institute Fund
3.	Water Double Distillation Unit	78,000/-	Institute Fund
4.	Hydrothermal Autoclave Reactors	81,000/-	Institute Fund
5.	Rudolph Digital polarimeter	16,40,200/-	Institute Fund
6.	Fluorescence Spectrophotometer	35,62,125/-	Institute Fund
7.	Gaussian 16 and Gaussview 6 (Software)	8,71,000/-	Institute Fund
8.	Conductometers	44009/-	Institute Fund
9.	Potentiometer	59472/-	Institute Fund
10.	pH meter	97531/-	Institute Fund
11.	Colorimeter	46389/-	Institute Fund
12.	Magnetic stirrer	269493/-	Institute Fund
13.	Borosilicate-Glass Water Single-Distillation Apparatus	99488/-	Institute Fund
14.	Weighing Balance	89208/-	Institute Fund
15.	Table-top double stage vacuum pump	42480/-	Institute Fund
16.	Hot water bath	48598/-	Institute Fund
17.	Single Phase Variac Transformer with heating coil	76464/-	Institute Fund
18.	Rotary flask shaker	62817/-	Institute Fund
19.	Hot plate	30585/-	Institute Fund
20.	Lab Centrifuge	91756/-	Institute Fund
21.	Ultrasonic Bath (Sonicator)	12604/-	Institute Fund
22.	Heating mantle	112150/-	Institute Fund
23.	Sand bath	59472/-	Institute Fund
24.	Automatic Digital melting point apparatus	95156/-	Institute Fund
25.	UV chromatography Inspection cabinet	20390/-	Institute Fund
26.	Digital Vortex mixer	33984/-	Institute Fund
27.	Disc Polarimeter	165672/-	Institute Fund

3.1.5 LABORATORIES

- Undergraduate Chemistry Laboratory (B.Tech.)
- Organic Chemistry Laboratory (M.Sc.)
- Physical Chemistry Laboratory (M.Sc.)
- Inorganic Chemistry Laboratory (M.Sc.)
- Nanomaterials Research Laboratory
- Atmospheric Laboratory



Conductometer



Fluorescence Spectrophotometer



DISC POLARIMETER



UV CHROMATOGRAPHY INSPECTION CABINET



EPPENDORF REFRIGERATED CENTRIFUGE



PH METER & COLORIMETER

3.2 DEPARTMENT OF CIVIL ENGINEERING

The Department of Civil Engineering of National Institute of Technology (formerly Regional Institute of Technology) Jamshedpur was started since the institute's inception in 1960. The department is running UG course for B.Tech. (Hons) degree in Civil Engineering and PG courses as M.Tech. degree in the streams of Structural Engineering, Geotechnical Engineering and Water Resource Engineering, and Ph.D. program in various streams of Civil Engineering. The under Graduate programme of the department has been granted extension of accreditation of 2 years by NBA in 2022.



3.2.1 VISION AND MISSION







Vision

To become the best department for the research, academic and consultancy with the vigorous participation of faculty, research scholars and students and produce smart solutions with ethics and morals in civil engineering for the benefit of society and industry.






Mission

- 1 To develop modern laboratories, centre of excellence and advanced computational facilities.
- 2 To conduct research in all fields of civil engineering and interdisciplinary areas.
- 3 To motivate research scholars and students towards best professional practices.
- 4 To make graduating students exposed to industry and R & D organizations to get better opportunities.
- 5 To offer educational programmes that imparts inventive knowledge with high levels of ethical and human values.

3.2.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Arvind Kumar Lal Srivastava Ph.D., Professor	Structural Engineering	
2.	Dr. Anil Kumar Choudhary Ph.D., Professor	Geotechnical Engineering	
3.	Dr. Virendra Kumar Ph.D., Professor	Structural Engineering	
4.	Dr. Rakesh Pratap Singh Ph.D., Associate Professor	Geotechnical Engineering	
5.	Dr. Akhileshwar Kumar Singh Ph.D., Associate Professor	Geotechnical Engineering	
6.	Mr. Nigam Prakash M.Sc. Engg., Associate Professor	Water Resources Engineering	

7.	Dr. Sanjay Kumar Ph.D., Associate Professor	Structural Engineering	
8.	Dr. Shashi Ranjan Pandey Ph.D., Associate Professor	Structural Engineering, Fracture Mechanics, Geopolymer of concrete	
9.	Dr. Brajkishor Prasad Ph.D., Associate Professor	Structural Engineering	
10.	Dr. Prahlad Prasad Ph.D., Associate Professor	Structural Engineering	
11.	Dr. Abdhesh Kumar Sinha Ph.D., Associate Professor	Transportation Engineering	
12.	Mr. Sajjan Kumar Paswan M.Sc. Engg., Associate Professor	Geotechnical Engineering	
13.	Dr. Chintalacheruvu Madhusudana Rao Ph.D., Associate Professor	Water Resources Engineering	
14.	Dr. Seeram Madhuri Ph.D., Associate Professor	Structural Engineering	
15.	Dr. Sunil Kumar Murmu Ph.D., Associate Professor	Urban flooding, Real time flood forecasting and Interlinking of River	
16.	Mr. Ashok Kumar M.Sc. Engg., Assistant Professor	Structural Engineering	
17.	Dr. Subhadeep Metya Ph.D., Assistant Professor	Geotechnical Engineering	
18.	Dr. Somenath Mondal Ph.D., Assistant Professor	Environmental Geotechnology, Geotechnical Engineering	
19.	Dr. Keshav Kumar Sharma Ph.D., Assistant Professor	Structural Engineering	
20.	Dr. Sangeeta Kumari Ph.D., Assistant Professor	Water Resources Engineering	
21.	Dr. Awdhesh Kumar Choudhary Ph.D., Assistant Professor	Geotechnical Engineering	

22.	Dr. Sriram Karthick Raja P. Ph.D., Assistant Professor	Geo-environmental Computational geotechnics	engineering,	
23.	Dr. Debshri Swargiary Ph.D., Assistant Professor	Hydrology, Shallow flows, Hydrodynamics		
24.	Dr. Suravi Pal Ph.D., Assistant Professor	Soil mechanics, Ground improvement		
25.	Dr. Bhupali Dutta Ph.D., Assistant Professor	Road user behaviour, Traffic safety, Pavement management system, Sustainable materials		
26.	Dr. J. Jayapal Ph.D., Assistant Professor	Innovative Civil Engineering Materials, Geo-naturals		

3.2.3 ACADEMIC PROGRAMMES

The Department offers the following courses:

- (a) Under-Graduate Programme
B.Tech. (H): Civil Engineering
- (b) Post-Graduate Programmes
M.Tech.:
- Geotechnical Engineering
 - Structural Engineering
 - Water Resources Engineering
- (c) Doctoral Programmes

3.2.4 EQUIPMENT PROCURED

S. N.	EQUIPMENT	COST (INR)	Funding Agency
1.	Structural Component Proof Test Simulation Set Up: 01 No	Rs. 45.00 Lakhs	Institute Fund
2.	Curing of Concrete Specimens at Elevated temperature: 01 No	Rs. 1.80 Lakhs	Institute Fund
3.	Triaxial Apparatus	Rs 683,692.00/-	Institute Fund
4.	Drawing Boards (100 Pcs)	Rs. 1.30 lakh	Institute Fund
5.	Plotter cum Scanner with Xerox Machine (A1 size)	Rs. 2.62 Lakh	Institute Fund
6.	Large size Direct shear Test Apparatus	Rs. 12.31 Lakh	Institute Fund
7.	Brazilian Test Apparatus	Rs. 82.5 Thousand	Institute Fund
8.	Electrical Operated Oven (2)	Rs. 1.29 Lakh	Institute Fund
9.	Manual and Automated Hydraulic Jack	Rs. 6.14 Lakh	Institute Fund
10.	Data Acquisition System	Rs. 4.19 Lakh	Institute Fund
11.	Flow velocity measuring sensors	Rs.99,592.00/-	DST-TDP project
12.	Dew point potentiometer	Rs.11,50,000.00/-	Institute Fund
13.	FEFLOW FM3 software	Rs.9,80,318.00/-	Institute Fund
14.	MIKE+ software	Rs.19,99,707.00/-	Institute Fund

3.2.5 LABORATORIES

1. Soil Mechanics
2. Geosynthetics and Geo-environmental Engineering
3. Transportation Engineering
4. Concrete and Structure
5. Survey

- 6. Environmental Engineering
- 7. Hydraulics & Water Resource Engineering
- 8. Computational Rock Mechanics & Rock Engineering
- 9. NDT and Durability of Concrete



Oven



Consolidometer



Servo controlled compression testing machine & flexural testing machine



Vane shear apparatus



Permeameter



3.3 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

The Department of Computer Science and Engineering was founded in 1992. Since its inception, the department has always been recognized all over the country for its excellence.

The Department has consistently produced quality professionals in the field of Computer Science & Engineering and has striven towards excellence in research and development.

3.3.1 VISION AND MISSION

Vision









1. Producing high quality, industry ready Computer engineers to cater to the needs of the society.

Mission

1. To train young minds and to equip them with the best possible technical knowledge to meet the current and future demands of the industry, academia & research. To create infrastructure, motivation and culture for the state-of-the-art research work in the area of Computer Science & Information Technology.

3.3.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Dilip Kumar Yadav Ph.D., Professor	Software Engineering, Software Reliability, Fuzzy Logic, Soft Computing, Operation Research	
2.	Dr. Danish Ali Khan Ph.D., Professor & Head	Optimization Technique, Computer Applications	
3.	Dr. Ashok Kumar Mehta Ph.D., Professor	Computer organization and Architecture, Soft Computing	
4.	Dr. B. K. Singh Ph.D., Associate Professor	Computer Network, Image Processing, Computerized Tomography	
5.	Dr. Dilip Kumar Shaw Ph.D., Associate Professor	Network optimization, Data Structures & Program Design, Supply Chain Management	
6.	Dr. Rajiv Ranjan Suman Ph.D., Associate Professor	Software Engineering, Algorithms	
7.	Dr. Sanjay Kumar Ph.D., Associate Professor	Computer Networks, Artificial Intelligence, Parallel Processing, Mobile Computing	
8.	Dr. Dilip Kumar Ph.D., Assistant Professor	Computer Graphics, Operating System, Internet Technology, Network Security	
9.	Dr. Koushendra Kumar Singh Ph.D., Assistant Professor	Image Processing, Computerized Tomography	
10.	Dr. Chandrashekhar Azad Ph.D., Assistant Professor	Data mining, Intrusion Detections System, Swarm Intelligence, Artificial Intelligence	
11.	Dr. Subrata Dutta Ph.D., Assistant Professor	Mobile Computing, Wireless Sensor Network	

12.	Dr. Alekha Kumar Mishra Ph.D., Assistant Professor	Network Security	
13.	Dr. Dinesh Kumar Ph.D., Assistant Professor	Cloud Computing, Internet of Things, Mechanism Design	
14.	Dr. Gopa Bhaumik Ph.D., Assistant Professor	Image Processing, Computer Vision, Machine Learning	
15.	Dr. Jitesh Pradhan Ph.D., Assistant Professor	Image Processing, Computer Vision, Machine Learning	
16.	Dr. Mayukh Sarkar Ph.D., Assistant Professor	DNA Computing, Quantum Computing, Machine Learning	
17.	Dr. Amit Majumder Ph.D., Assistant Professor	Computer Vision, Deep Learning, Machine Learning	
18.	Dr. Ashish Kumar Sahu Ph.D., Assistant Professor	Decision Support System, Data Analytics	
19.	Dr. B. Ramachandra Reddy Ph.D., Assistant Professor	Machine Learning, Software Security, Software Reliability	

3.3.3 ACADEMIC PROGRAMME

The Department offer the following courses:

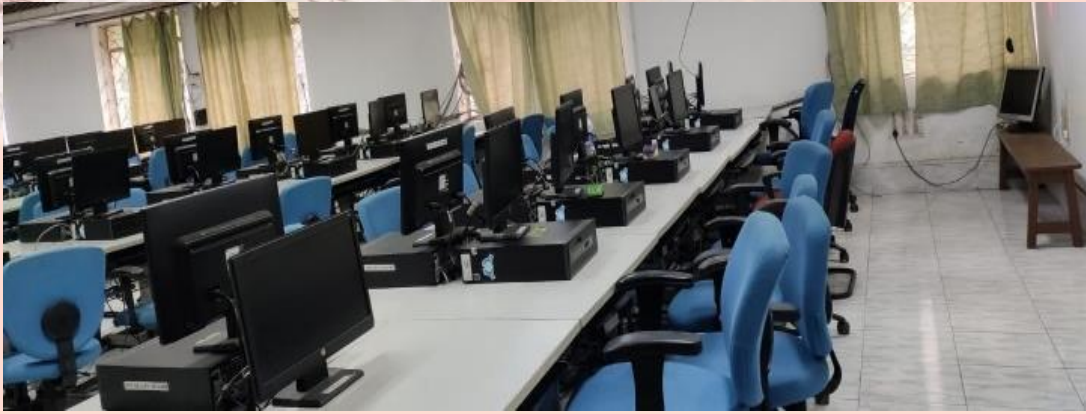
- (a) Under-Graduate Programme
B.Tech. (H): Computer Science and Engineering
- (b) Post-Graduate Programmes
1. M.Tech. : Information Systems Security Engineering
 2. M.Tech.: Computer Science and Engineering
 3. MCA : Master of Computer Applications
- (c) Doctoral Programmes

3.3.4 EQUIPMENT PROCURED

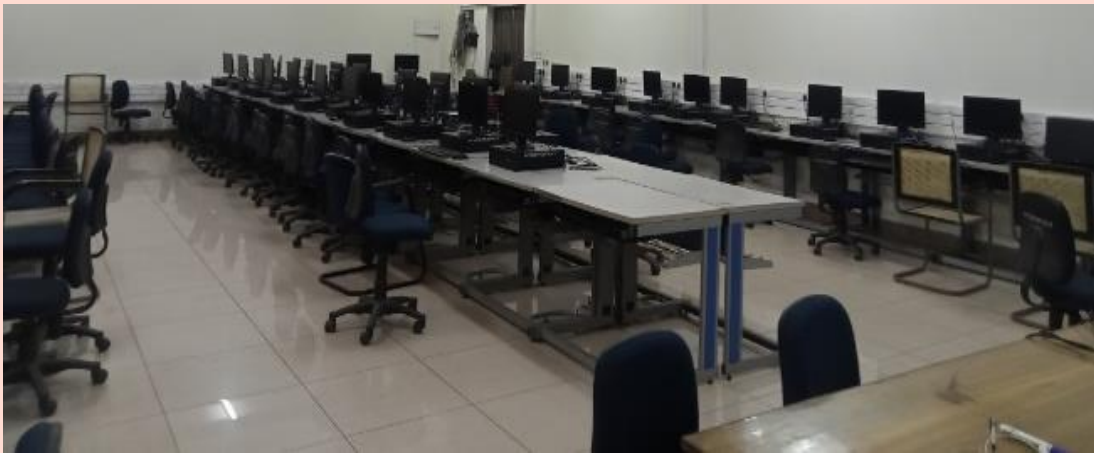
S. N.	EQUIPMENT	COST (INR)	FUNDING AGENCY
1.	IoT Kit	40,00,000.00/-	Institute Fund
2.	Quad A53 FPGA Developer Evaluation Board	2,60,780.00/-	Institute Fund
3.	HP workstation with Intel Core 1913900k processor 128GB	2,09,313.55/-	Institute Fund
5.	Workstation with Intel Xeon	4,32,203.00/-	Institute Fund
6.	ACER DT 12TH/17/8/512SSD/W11 Professional with ACER Monitor 238 inch UMQEISI E02	1,49,800.00/-	Institute Fund
7.	Business Desktop 800 G9 MT i9 12900 and Business Monitor P24 G5 60.45 cm FHP-HP	67,16,350.00/-	Institute Fund
8.	GPU-based Desktop Systems	66.5 Lakhs	Institute Fund
9.	Workstation	5.65 Lakhs	Institute Fund

3.3.5 LABORATORIES

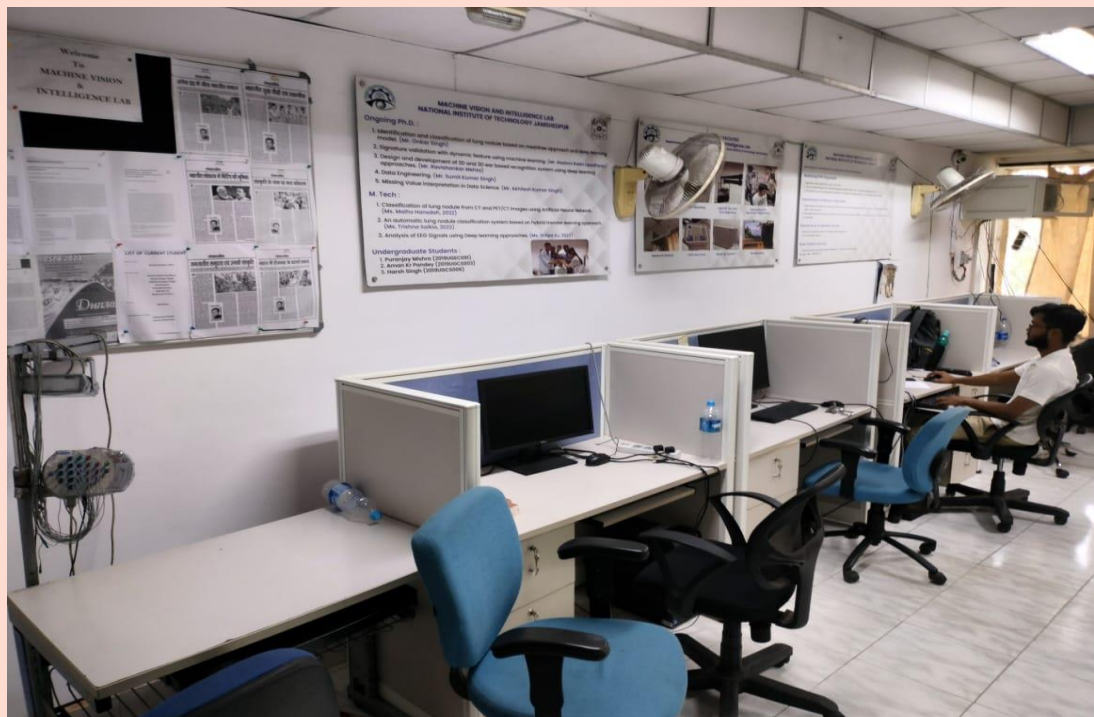
1. Network Laboratory
2. Software Laboratory
3. Software Development Laboratory
4. Software Laboratory I
5. Software Laboratory II
6. Machine Vision and Intelligence Laboratory



Network Laboratory



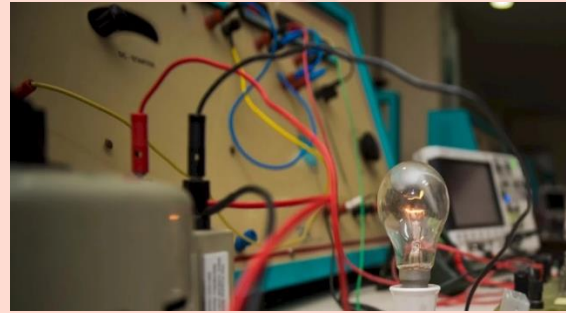
Software Laboratory



Machine Vision and Intelligence Laboratory

3.4 DEPARTMENT OF ELECTRICAL ENGINEERING

The Department of Electrical Engineering was started in 1960. Since its inception, the Department has been consistently producing quality Electrical Engineers and is also involved in research and development activities. As a result, the department's alumni are well placed in both the public and private sectors. In addition to the UG program, the department runs PG programs in Power Systems and Ph.D. programs in different areas of specialization.



3.4.1 VISION AND MISSION

Vision

1. To be a centre for imparting world class education in the field of electrical engineering
2. To conduct extensive and quality research and to propel innovations for the betterment of society.

Mission

1. To train young minds and to equip them with the best possible technical knowledge
2. To recognize education and research in close interaction with the industry and to install leadership qualities in young men and women who enter the portals of the institute with sensitivity for social development and with an eye for growth in international perspective.

3.4.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Rabindra Nath Mahanty Ph.D., Professor	Electric Vehicle, Application of ANN in Power System Protection, Wavelet Transform and Fuzzy Logic Applications in Power System Protection	
2.	Dr. Niranjana Kumar Ph.D., Professor	Power System Deregulation, Restructuring Power Market, Electric Vehicle, FACTS Devices, Transmission Costing	
3.	Dr. Ashok Kumar Akella Ph.D., Professor	Control System and Renewable Energy System	
4.	Dr. Umesh Kumar Sinha Ph.D., Professor	Solar and Renewable Energy, Instrumentation, Power Electronics and Drives.	
5.	Dr. Krishna Behari Yadav Ph.D., Professor	Multi-phase Electrical Machine, Power Electronics and Drives, Renewable Energy System	
6.	Dr. Sushil Kumar Gupta Ph.D., Associate Professor	Power System, Reactive Power Management and Control,	
7.	Dr. Kumari Namrata Ph.D., Associate Professor	Solar power generation and conversion, Solar radiation estimation, Modeling and simulation of the energy-based system, Microgrid – Modeling, operation and control	
8.	Dr. Madhu Singh Ph.D., Associate Professor	Power Electronics and Drives, Renewable Energy System	
9.	Dr. Alok Priyadarshi Ph.D., Assistant Professor	Power Systems (Power grid)	

10.	Dr. Sanjay Kumar Ph.D., Assistant Professor	Reactive power planning, FACTS Device, Smart Grid, Restructure Power System	
11.	Dr. Ananyo Bhattacharya Ph.D., Assistant Professor	Power Electronics and Drives, Renewable Energy	
12.	Dr. Jitendra Kumar Ph.D., Assistant Professor	Digital Protection of Power System, Advanced Protection Algorithm Design in FACTS, Power Swing, Microgrid, Islanding Detection in Microgrid Available transfer capability determination	
13.	Dr. Om Hari Gupta Ph.D., Assistant Professor	Power System Protection, Microgrid, Renewable-based Distributed Generation, Power Quality	
14.	Dr. Ravi Bhushan Ph.D., Assistant Professor	Power System Stability and Control, Application of Optimal Control in Power Systems	
15.	Dr. Mrinal Kanti Sarkar Ph.D., Assistant Professor	Power Electronics, Sliding Mode Control, Non-Fragile Control	
16.	Dr. Supriyo Das Ph.D., Assistant Professor	High Voltage Engineering & Power System	
17.	Dr. Kethavath Raghavendra Naik Ph.D., Assistant Professor	Intelligent control algorithms for Voltage control of Isolated solar PV-Micro Hydro-Battery storage Integrated DC Microgrids	
18.	Dr. Simanta Kumar Samal Ph.D., Assistant Professor	Converter modelling and control, soft-switching power converters, grid-tied inverters, renewable power conversion for hybrid microgrid and power conversion for electric vehicles	
19.	Dr. Arvind Kumar Prajapati Ph.D., Assistant Professor	Control systems, model order reduction, large scale systems, fault detection and accommodation etc.	

3.4.3 ACADEMIC PROGRAMME

The Department offers following courses:

- (a) Under-Graduate Programme:
 - B.Tech. (H): Electrical Engineering
- (b) Post-Graduate Programmes:
 - M.Tech.:
 1. Power Systems Engineering
 2. Power Electronics and Drives
- (c) Doctoral Programmes

3.4.4 EQUIPMENT PROCURED

S. N.	EQUIPMENT	COST (INR)	FUNDING AGENCY
1.	Real Time Simulator OPAL-RT Lab	53,98,500/-	Real Time Simulator OPAL-RT Lab

3.4.5 LABORATORIES

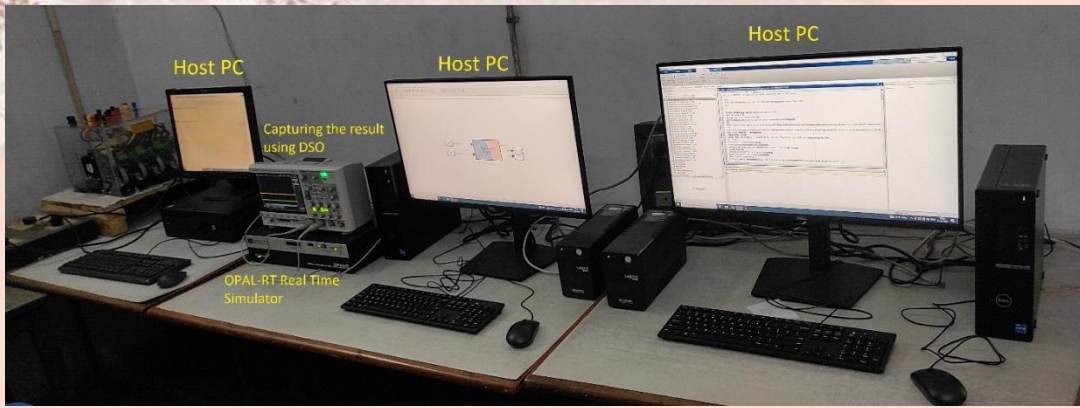
1. Power Electronics Laboratory
2. Control System Laboratory
3. Microprocessor Laboratory
4. Electrical Measurement Laboratory
5. Electrical Machine Laboratory
6. Power System Laboratory
7. Power System Simulation Laboratory
8. Real Time simulation Laboratory
9. HVDC and FACTS Laboratory



Electrical Machine Laboratory



Control System Laboratory



Real Time Simulation Laboratory

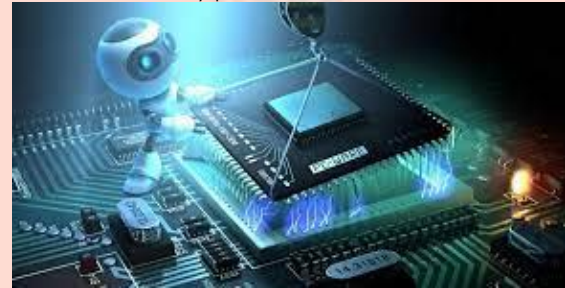


Power System Laboratory

3.5 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

The Department of Electronics and Communication Engineering was started in 1989. The department covers a host of subjects, including Electronic Circuits, Microprocessor, Digital Signal Processing, Analogy Communication, Digital Communication, Mobile Communication, VLSI, Embedded systems, Instrumentation, etc. The department has laboratories catering to all the subjects of study. Five research scholars are working in different specializations under Communication Engineering, VLSI and Embedded systems, Signal Processing, Instrumentation and Soft Computing. The Department has a highly

motivated faculty pool to mentor the students.



3.5.1 VISION AND MISSION

Vision

1. Global Knowledge Hub
2. Excellence in technical and interdisciplinary domain
3. Amalgam of research and entrepreneurship in pursuit of Make in India drive
4. Beckoning pillar for digital India

Mission

1. Imparting total quality education to develop next generation professional scholars, fit for the globally competitive environment.
2. Value creation through economic, social, and environmental development using original ideas through discovery, inquiry, innovation, research, transformational scholarship, and creative activities.
3. Dramatic increase in product-oriented research for establishing a self-sustaining and wealth creating centre by involving the interaction among committed, diverse faculty, staff, students and community to serve the societal needs of the State of Jharkhand, India and ultimately, the world.

3.5.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Amit Prakash Ph.D., Associate Professor	Parallel Computing, Network Reliability, Mobile Communication and Networking, Microprocessor, VLSI Design	
2.	Mr. B. N. S. Munda M.Tech., Associate Professor	Power Electronics, Devices & Circuits and Renewable Energy	
3.	Dr. Akhilesh Kumar Ph.D., Associate Professor	Antenna Design, Application of VLSI, Microwave Engg., Power electronics, Solar Cell, Communication Engg. Analog and Digital ckt etc.	
4.	Dr. Rashmi Sinha Ph.D., Associate Professor	Soft Computing, Digital Signal Processing, Antenna Design and Metamaterial Absorber	
5.	Dr. Dilip Kumar Ph.D., Associate Professor	Communication Systems Microwave Engineering Devices and Circuits	
6.	Dr. Jayendra Kumar Ph.D., Assistant Professor	Digital signal and Image Processing, IoT, Embedded System	
7.	Dr. Nagendra Kumar Ph.D., Assistant Professor	Communication Systems, Wireless communication	
8.	Dr. Kunal Singh Ph.D., Assistant Professor	Microelectronics, Low Power VLSI Devices.	
9.	Dr. Basanta Bhowmik Ph.D., Assistant Professor	Nanoelectronics and VLSI, Micro/Nano material-based Sensor, Non-invasive disease diagnosis.	

10.	Dr. Basudeba Behera Ph.D., Assistant Professor	Micro/ Nanoelectromechanical Systems (MEMS/NEMS), Piezoelectric devices, SAW devices/ motors, Internet of Things (IoT)	
11.	Dr. Mayank Srivastava Ph.D., Assistant Professor	Analog integrated circuits and analogue signal processing	
12.	Dr. Swagatadeb Sahoo Ph.D., Assistant Professor	Microwave Engineering, Broadband Dielectric Spectroscopy	
13.	Dr. Mrutyunjay Rout Ph.D., Assistant Professor	Wireless Sensor Network and Signal processing	
14.	Dr. Ajay Kumar Ph.D., Assistant Professor	Optical Fibre Communication, Optical Logic Devices, Sensors	
15.	Dr. Prashant Kumar Ph.D., Assistant Professor	Communication Systems	
16.	Dr. Surajit Kundu Ph.D., Assistant Professor	Wireless Communication, Ground Penetrating Radar	
17.	Dr. Arjun Kumar Ph.D., Assistant Professor	Computational electromagnetics, Slow-wave structure	
18.	Dr. Hathiram Nenavath Ph.D., Assistant Professor	Computer Vision, Image and Video Processing	
19.	Dr. Amit Kumar Ph.D., Assistant Professor	Thin Film Devices such as Photovoltaic Devices, Photo Detectors, Thin Film Transistors (TFTs), and Gas Sensors	
20.	Dr. Chandradeep Singh Ph.D., Assistant Professor	Wireless Communication	

3.5.3 ACADEMIC PROGRAMME

The Department offer the following courses:

- (a) Under-Graduate Programme
B.Tech. (H): Electronics & Communication Engineering
- (b) Post-Graduate Programmes
M.Tech.:
1. Embedded System
 2. Communication Systems
- (b) Doctoral Programmes

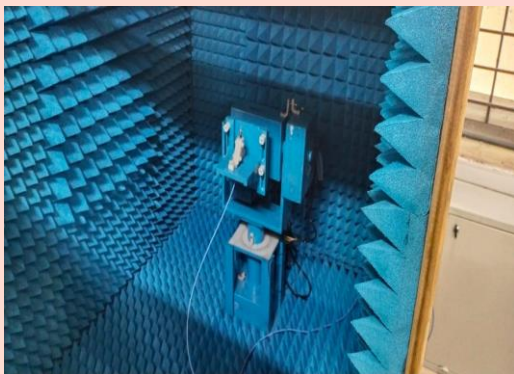
3.5.4 EQUIPMENT PROCURED

S. N.	EQUIPMENT	COST (INR)	FUNDING AGENCY
1.	Microwave Circuit Measurement System	5,31,000.00/-	Institute Fund
2.	Trainer Kit with 30 Different Types of Antenna	3,54,000.00/-	Institute Fund
3.	Klystron Based Microwave Test Bench up to X band Klystron based basic microwave trainer	2,36,000.00/-	Institute Fund
4.	Gunn Based Microwave Test Bench up to X Band	2,36,000.00/-	Institute Fund
5.	3D Antenna Radiation Pattern and Gain Measurement System with Portable Anechoic Boxes Components	24,25,000.00/-	Institute Fund
6.	Lab grade water purification system	7,93,000.00/-	Institute Fund

7.	Portable Anechoic Chamber	10,00,000.00/-	JV Micronics
8.	GNSS Base station	1,00,000.00/-	TEXMIN, IIT-ISM
9.	GNSS Rover set up	1,00,000.00/-	TEXMIN, IIT-ISM
10.	PCB Prototype Machine (Fully Automatic)	28,28,000.00/-	Institute Fund

3.5.5 LABORATORIES

1. Basic Electronics Laboratory
2. Analog Electronics Laboratory
3. Digital Electronics Laboratory
4. Microprocessor & Microcontroller Laboratory
5. Data Communication & Networking Laboratory
6. Communication & DSP Laboratory
7. Industrial Electronics & Drives Laboratory
8. VLSI Design Laboratory
9. Microwave and Antenna Laboratory
10. Thin film Devices Laboratory
11. Modelling & Simulation Laboratory
12. Underwater Acoustic Communication Laboratory
13. Fiber Optics Laboratory
14. RF and Microwave Lab
15. Antenna Engineering and Satellite Navigation Laboratory



3D Antenna Radiation Pattern and Gain Measurement System with Portable Anechoic Boxes Components (Receiver)



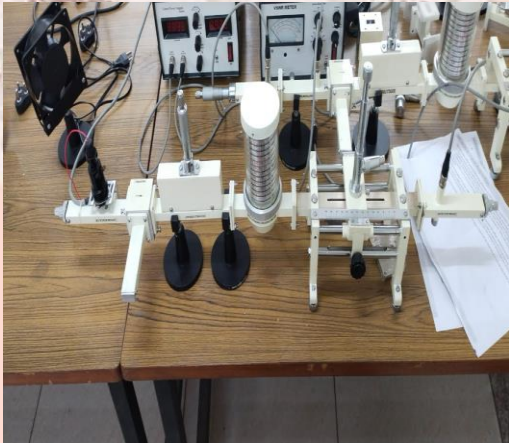
3D Antenna Radiation Pattern and Gain Measurement System with Portable Anechoic Boxes Components (Transmitter)



Trainer Kit with 30 Different Types of Antennas



Gunn Based Microwave Test Bench up to X Band



Klystron Based Microwave Test Bench up to X band Klystron based basic microwave trainer



Microwave Circuit Measurement System



Underwater Acoustic Communication Laboratory

3.6 DEPARTMENT OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT

The department came into being as Humanities department since the institute's inception. Later the department was upgraded as the Department of Humanities and Social Sciences in line with IITs. The

Department is currently engaged in teaching English and Management courses to B.Tech. (Hons.), M.Tech., M.Sc., and MCA students.

3.6.1 VISION AND MISSION

Vision

To contribute to the emergence of NIT Jamshedpur as a world-class institution, producing highly skilled engineers who are the finest specimens of technology at its best merging aesthetics with human values and social responsibility to make this world a better place.

Mission

To contribute to the holistic development of the students' personality to enable them to meet their professional and societal challenges successfully, teach essential human values in them, and make them sensitive to the concerns of the environment.

3.6.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Rajiv Bhushan Ph.D., Associate Professor	American Literature	
2.	Dr. Manish Kumar Jha Ph.D., Associate Professor	Finance	
3.	Dr. Shwati Sudha Ph.D., Assistant Professor	Human Resource Management & Organisational Behaviour	
4.	Dr. Akanksha Shukla Ph.D., Assistant Professor	Marketing & Finance	
5.	Dr. Doreswamy Ph.D., Assistant Professor	English Language	

3.6.3 ACADEMIC PROGRAMME

The Department offer the following courses:

(a) Doctoral Programmes

Ph.D.

1. English
2. Management

3.6.4 LABORATORIES

1. Management and Business Analysis Lab
2. Language Lab



Management and Business Analysis Lab



Language Lab

3.7 DEPARTMENT OF MATHEMATICS

The Department of Mathematics was established with the inception of National Institute of Technology as Regional Institute of Technology, Jamshedpur in 1960. The Department caters to the institute's need by providing teaching to the undergraduate and post-graduate students of engineering in several branches. It also offers two years master's program in Mathematics and Ph.D. program in different areas of Pure and Applied Mathematics. The Department provides an outstanding research environment complemented by excellent teaching for its students to flourish in various areas of academics and industry. The Department's faculty members are handling

research projects from reputed organizations such as Science & Engineering Research Board (SERB), DRDO, NBHM etc.



3.7.1 VISION AND MISSION

Vision

- To be recognized as one of the best Mathematics Departments in the country and establish a reputation in terms of teaching and research.

Mission

- To set high standards of excellence in creating and disseminating knowledge in Mathematics.
- To focus on the emerging area of Research in Pure & Applied Mathematics.

3.7.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Ramayan Singh Ph.D., Professor	Heat and Mass Transfer, Boundary Layer Theory, Numerical Methods	
2.	Dr. Sunil Kumar Ph.D., Associate Professor	Mathematical Modelling, Fractional Calculus, Mathematical Physics, Numerical Methods, Wavelet Methods	
3.	Dr. Raj Nandkeolyar Ph.D., Associate Professor	MHD fluid flow, Numerical Analysis	
4.	Dr. Shakti Prasad Ph.D., Associate Professor	Sampling Theory	
5.	Dr. Hari Shankar Prasad Ph.D., Assistant Professor	Numerical Analysis, Singularly Perturbed differential-difference equations, Delay problems	
6.	Dr. Sourav Das Ph.D., Assistant Professor	Complex Analysis, Special Functions	
7.	Dr. Ratnesh Kumar Mishra Ph.D., Assistant Professor	Commutative Algebra, Computational Algebra and Fuzzy Algebra	
8.	Dr. Snehasis Kundu Ph.D., Assistant Professor	Mathematical Modelling of Turbulent Flow, Hydraulics, Fractional Modelling	
9.	Dr. Rajat Tripathi Ph.D., Assistant Professor	Thin Film Flows, Magnetohydrodynamic, Heat and Mass Transfer, Boundary Layer Theory	
10.	Dr. Sumit Kumar Debnath Ph.D., Assistant Professor	Cryptology & Network Security, Coding Theory	

11. Dr. Subha Sarkar
Ph.D., Assistant Professor Additive Number Theory



3.7.3 ACADEMIC PROGRAMME

The Department offer the following courses:

- (a) Post-Graduate Programmes
M. Sc.: Mathematics
(b) Doctoral Programmes

3.7.4 EQUIPMENT PROCURED

S. N.	Equipment	Cost (INR)	Funding Agency
1.	Desktop Computer (40 Nos.)	37,93,600.00/-	DST
2.	MATLAB Software (40 Licence)	14,38,131.00/-	
3.	UPS (10 KVA)	1,98,863.00/-	
4.	Projectors (2 Nos.)	76,948.00/-	CEFIPRA
5.	Canon MF645cx	58,872.00/-	

3.7.5 LABORATORIES

1. Scientific Computing Lab



Scientific Computing Lab

3.8 DEPARTMENT OF MECHANICAL ENGINEERING

The Department of Mechanical Engineering boasts well-qualified and experienced faculty have teaching and research exposure from globally ranked universities. Just like 2022, three faculty of the department are featured in the Global Top 2% researchers for the year 2023, namely Prof. Sanjay, Dr. Satish Kumar and Dr. Vishesh Ranjan Kar. Faculties of the Department have been engaged in cutting-edge research encompassing emerging fields including Smart materials/ Renewable Energy/ Nano Energy/ Thermo-Fluids / Manufacturing Management to name a few. The average publication of faculty per year of the department is one of the highest in the institute. Also, faculty having the highest h-index in the institute are from the Department. As on date the total publication of the Department is 600+ with total citations 7000+ and h-index of 43.

The Department has been actively engaged in conducting Workshops/ Seminar/ Karyashala/ FDP/ GIAN Programmes and National and International Conferences of repute. Through these events, the Department has been able to create a network with reputed Faculty from all across the globe. The Department has planned to float a new dual-

degree programme in Electric Mobility in collaboration with EED and ECE Departments. Also, the Department has planned to set up a Practicing Engineers Lab which will house measuring/ Testing/ Inspection instruments used in the industry namely Vibration, Noise, and Thermography. The facility would be open to UG/ PG students to practice the use of these instruments so as to make them industry ready. An interactive relationship is maintained between the students and staff which enable the students to develop a sound foundation in a conducive environment. The Under Graduate programme of the department has been granted extension of accreditation of 2 years by NBA in 2022.



3.8.1 VISION AND MISSION






Vision

1. To be a centre for imparting world-class education in Mechanical Engineering
2. To conduct extensive and quality research and propel innovations for the betterment of society.

Mission

1. To train young minds and equip them with the best possible technical knowledge to meet the current and future demands of the industry, academic & research.
2. To create infrastructure, motivation, and culture for the state-of-the-art research work in Mechanical Engineering.
3. To enhance the research and teaching by interaction and developing relationships with industry, R&D organizations, and academic institutions.
4. To develop an energetic environment for excellence, creativity, and perfection.

3.8.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Goutam Sutradhar Ph.D., Professor	Metal Casting Process, Forged Powder Metallurgy Components, Metal and Polymer Matrix Composites, Foundry Technology	
2.	Dr. Ram Vinoy Sharma Ph.D., Professor	Heat Transfer, CFD & Energy Studies	
3.	Dr. Shalendra Kumar Ph.D., Professor	Heat Transfer (Boiling) Tribology, CAD, Thermal Engg	
4.	Dr. Mani Kant Paswan Ph.D., Professor (On Lien)	Renewable Energy, Manufacturing Process, Power Plant	
5.	Dr. Prabha Chand Ph.D., Professor	Thermal Engg., Aerodynamics & Solar Energy	

6.	Dr. Sanjay Ph.D., Professor	CAD of Thermal Systems Thermodynamics	
7.	Dr. Mrityunjay Kumar Sinha Ph.D., Professor	CFD, Free Surface Flow, Heat Transfer, Thermal Engg.	
8.	Dr. Satish Kumar Ph.D., Professor	Rheology of Slurry flow, Erosion wear	
9.	Dr. Saroj Kumar Sarangi Ph.D., Professor	Design, Smart Composite Structures, Functionally Graded Materials & Structures, Green Composites, Finite Element Analysis, Bio-Implants	
10.	Dr. Anil Kumar Prasad Ph.D., Associate Professor	Combustion Engg. Heat Transfer & Pinch Technology	
11.	Dr. Malay Niraj Ph.D., Associate Professor	Production Management & TPM	
12.	Dr. Parmanand Kumar Ph.D., Associate Professor	Thermal Engg., Refrigeration & Air Conditioning	
13.	Dr. Krishna Deo Prasad Singh Ph.D., Associate Professor	Solar Energy & Heat Transfer	
14.	Dr. Md. Ashique Hassan Ph.D., Assistant Professor	Complex non-Newtonian fluid flow and heat transfer	
15.	Dr. Pranab Kumar Kundu Ph.D., Associate Professor	MEMS fabrication, Advanced manufacturing processes, Electrical Vehicle (EV) battery, Microfluidics	
16.	Dr. Saikat Ranjan Maity Ph.D., Associate Professor	AI & ML in Manufacturing Process, Process Modelling, Laser Welding Additive Manufacturing	
17.	Dr. Laljee Prasad Ph.D., Assistant Professor	Heat Transfer, Solar Energy	
18.	Dr. Naresh Prasad Ph.D., Assistant Professor	Vibration & Noise Control, Composite Materials & Tribology	
19.	Dr. Deepak Kumar Ph.D., Assistant Professor	Composite Materials, Finite Element Method	
20.	Dr. Vijay Kumar Dalla Ph.D., Assistant Professor	Robotics, Dynamics and Control, Bond Graph Technique, Fatigue	
21.	Dr. Shashank Pandey Ph.D., Assistant Professor	Computational Structural Mechanics, Composite and Sandwich Structures, Finite Element Analysis	
22.	Dr. Bipin Kumar Ph.D., Assistant Professor	Vibration and Acoustics	

23.	Dr. Dulari Hansdah Ph.D., Assistant Professor	IC Engine, Renewable Energy, Engine emissions and control	
24.	Dr. Vineet Sahoo Ph.D., Assistant Professor	Mechanical System Design, Mechanical Drives, FEM	
25.	Dr. Ashok Kumar Mandal Ph.D., Assistant Professor	Dynamics and Vibration, Non-Linear vibration	
26.	Dr. Vishesh Ranjan Kar Ph.D., Assistant Professor	Computational Mechanics, Advanced Composites, Nonlinear FEM, Functionally Graded Materials,	
27.	Dr. Sankar Kumar Roy Ph.D., Assistant Professor	Design Engineering/ Machine Health Monitoring, Structural Vibration, Experimental Mechanics	
28.	Dr. Ashok Kumar Barik Ph.D., Assistant Professor	Thermal Engineering/ Thermo-fluids, CFD	
29.	Dr. Shailesh Kumar Jha Ph.D., Assistant Professor	Thermal Engineering/ Aero-acoustics, Fluid solid interaction, Aerodynamics of airfoil	
30.	Dr. Arvind Kumar Patel Ph.D., Assistant Professor	Thermal Engineering/ Nano Particle Refrigeration, Human Thermal Comfort	
31.	Dr. Rinku Kumar Gouda Ph.D., Assistant Professor	Thermal Engineering/ Boiling Heat Transfer, Biosurfactant, Micro/Nano scale Fluid and Heat Transport, Surface Wettability	
32.	Dr. K Sri Krishna Sudhamsu Ph.D., Assistant Professor	Solid Mechanics and Mechanical Design/Impact Mechanics, Damage Mechanics, Mechanical Design	

3.8.3 ACADEMIC PROGRAMME

The Department offer the following courses:

- (a) Under-Graduate Programme
B.Tech. (H)
1. Mechanical Engineering
 2. Engineering & Computational Mechanics
- (b) Post-Graduate Programmes
M.Tech.
1. Computer Integrated Design and Manufacturing,
 2. Energy System Engineering,
 3. Thermal Engineering
- (c) Doctoral Programmes

3.8.4 EQUIPMENT PROCURED

S. N.	EQUIPMENT	COST (INR)	FUNDING AGENCY
1.	Deionised water setup unit	494950.00/-	Institute Fund
2.	DC power source	665049.00/-	Institute Fund
3.	Data Logger	223453.00/-	Institute Fund
4.	Tensiometer	61885.00/-	Institute Fund
5.	Portable surface roughness tester	97898.00/-	Institute Fund
6.	Solar Concentrator Training System with Solar Simulator	5,90,000.00/-	Institute Fund
7.	Optical emission Spectrometer	13,50,000.00/-	Institute Fund
8.	Automotive Oxygen Bomb Calorimeter	11,58,760.00/-	Institute Fund
9.	Automatic Cold Filter Plugging Point Analyser	9,49,900.00/-	Institute Fund

10.	Flash Point Apparatus	6,19,500.00/-	Institute Fund
11.	3D Printer, PID controller, LIDAR, 10 Channel Remote control. Variable Power Supply, Drilling, Grinding, Arc welding Machine and various sensors, actuators related to underwater robot.	8,00,000.00/-	NMICPS TIHAN IIT Hyderabad & IIT Guwahati Technology Innovation and Development Foundation
12.	Computational System with printer	88,250.00/-	DST
13.	Technical Enhancement Customer Support TECS and Annual Maintenance Contract AMC of existing ANSYS 25 and 250 Tasks Mech. and CFD TECS (3 years)	19,00,000.00/-	Institute Fund
14.	Wind Tunnel	6,646,200.00/-	Institute fund
15.	Continuous flow packed bed reactor CLC with gas chromatograph	14,49,500.00/-	SERB
16.	Argon cylinder (47 litre)	28,000.00/-	SERB
17.	Probe ultrasonicator	2,80,000.00/-	Institute Fund
18.	keysight Data Logger Unit Storage, Maximum Multiplexing Channel 20	223,453.00/-	Institute Fund
19.	DC Power Source	665,049.00/-	Institute Fund
20.	Dell Intel Core i9 13900 32 GB/ 1000 GB HDD/ Windows 11 Professional	243,815.04/-	Institute Fund
21.	Intel Core i9 13900 Processor 32 GB	224,399.00/-	Institute Fund
22.	SPAQLABS Mild Steel Impact Of Jet Apparatus, Complete Unit Warranty 1 year	34,500.00/-	Institute Fund
23.	BPE Online UPS of Rating 3.0 KVA With Battery Of Backup Time 15 Minutes	109,002.00/-	Institute Fund
24.	LABWAN LCD Micro weighing Balance with licensed software, Capacity 220g	50,000.00/-	Institute Fund
25.	HP Intel Core i7 13700 64 GB/ 4000 GB HDD/DOS	134,209.00/-	Institute Fund
26.	Cloud and pour point apparatus	4,94,420.00/-	Institute Fund
27.	Supply of flash point apparatus	6,19,500.00/-	Institute Fund

3.8.5 LABORATORIES

1. Engineering Mechanics Laboratory
2. Engineering Graphics & CAD Laboratory
3. Strength of Materials Laboratory
4. Fluid Mechanics Laboratory
5. Dynamics of Machinery Laboratory
6. Heat & Mass Transfer Laboratory
7. Metrology Laboratory
8. Applied Thermodynamics Laboratory
9. Fluid Machinery Laboratory
10. Renewable Energy Laboratory
11. Multiphase and Energy Transport Lab
12. Computational Mechanical Lab
13. Robotics & Embodied Artificial Intelligence Laboratory



Tensiometer



Ultrasonic Probe Sonicator



Internal Combustion Engine Lab



Fluid Mechanics Lab



Gas Chromatograph with PC



Open Loop Chemical Looping Combustor (Combustion/Heat Lab)



Deionised water setup unit

3.9 DEPARTMENT OF METALLURGICAL AND MATERIAL ENGINEERING

The Department of Metallurgical and Materials Engineering was amongst the four branches with which the institute was initially launched in 1960 with intends to focus on Advanced Materials, Composite Materials, Nanotechnology, Materials Technology, Foundry Technology, Iron & Steel, Mineral Benefaction, Corrosion, and Surface Engineering in which R & D work has been carried out. The Department offers B.Tech. in Metallurgical & Materials Engineering and M.Tech. in Industrial Metallurgy and Materials Technology. Department also offers admission in its Ph.D. Programme in various research areas of Metallurgical and Materials Engineering. It also offers part-time Ph.D. and Executive Ph.D. opportunity, mainly meant for

those employed in industries and academic institutions.



3.9.1 VISION AND MISSION









Vision


1. To be a centre for imparting world-class education in Metallurgical and Materials Engineering, to perform extensive and quality research and do innovation for the betterment of society.

Mission

1. To train young minds and equip them with the best possible technical knowledge to meet the current and future demands of industry, academia, research, and society.
2. To create facilities for the research activities that motivate the researchers to carry out quality research work in the area of Metallurgical and Materials Engineering.

3.9.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/RESEARCH AREA	PHOTO
1.	Dr. Ashok Kumar Ph.D., Professor	Mechanical Metallurgy, Fatigue, Fracture & Failure Analysis, Physical Metallurgy	
2.	Dr. Ranjit Prasad Ph.D., Professor	Geology and Mineral Beneficiation	
3.	Mr. Binod Kumar Singh M.Tech., Associate Professor	Foundry Technology	
4.	Mr. Chandra Sekhar Choudhary M.Tech., Associate Professor	Extractive Metallurgy of Iron & Steel. Melting Practices, Coke making, Corrosion Science & Engineering	
5.	Dr. Rina Sahu Ph.D., Associate Professor	Metallic glasses, Nano Structured Materials, Mineral Beneficiation, Hydrometallurgy, Coal characterisation & beneficiation	
6.	Dr. Sanjay Kumar Vajpai Ph.D., Assistant Professor	Physical Metallurgy and Materials Design, Powder Metallurgy Processing	
7.	Dr. Aravind Gali Ph.D., Assistant Professor	Physical Metallurgy, Thermodynamics, Phase Transformations, Structure-Property-Correlations in Materials	
8.	Dr. Poulami Maji Ph.D., Assistant Professor	Physical Metallurgy, Mechanical Metallurgy	

9.	Dr. Renu Kumari Ph.D., Assistant Professor	Surface Engineering, Corrosion, Biomaterial	
10.	Dr. Ram Krishna Ph.D., Assistant Professor	High-temperature Materials, Nuclear & Advanced Materials of Ultra-supercritical Power Generation, Metallurgy, Material Degradation at Extreme Environment, Microstructural and Mechanical Characterisation of Materials	
11.	Dr. Monalisa Mandal Ph.D., Assistant Professor	Semi-solid Deformation, Metal matrix composites, Structure-Property Correlation, Creep and Fatigue Behaviour, Texture Analysis and Aqueous Corrosion	
12.	Dr. Jichil Majhi Ph.D., Assistant Professor	Physical Metallurgy, Mechanical Metallurgy, Light metal alloys, mechanical properties, corrosion behaviour	
13.	Dr. Anushree Dutta Ph.D., Assistant Professor	Structure-property correlation, Casting and Solidification, Microstructure and Mechanical properties, Nanostructured materials, Characterization and mechanical testing, High-temperature materials,	
14.	Dr. Partha Duley, Ph.D., Assistant Professor	Physical Metallurgy, Mechanical Metallurgy, Corrosion Engineering, Microstructure and Texture analysis, Deformation studies, Structure-Properties correlation	
15.	Dr. Binay Kumar Ph.D., Assistant Professor	Ironmaking, Steelmaking, Thermodynamic Modelling, Alternate Routes of Iron and Steel Making, Process optimization	

3.9.3 ACADEMIC PROGRAMME

The Department offer the following courses:

- (a) Under-Graduate Programme
B.Tech. (H): Metallurgical and Materials Engineering
- (b) Post-Graduate Programmes
M.Tech.:
1. Industrial Metallurgy
2. Materials Technology
- (c) Doctoral Programmes

3.9.4 EQUIPMENT PROCURED

S. N.	Equipment	Cost (INR)	Funding Agency
1.	Izod Impact Testing Machine	6,00,000/-	Institute Fund
2.	Sand Rammer	24,780/-	
3.	Base Block	12,862/-	
4.	Flowability Tester	11,800/-	
5.	Sand Washer	24,780/-	
6.	Rapid Moisture Tester	18,727/-	
7.	Electronic Balance (1 Kg)	23,600/-	

3.9.5 LABORATORIES

1. Thermodynamics & Kinetics
2. Extractive Metallurgy
3. Physical Metallurgy
4. Heat Treatment
5. Geology & Mineral Beneficiation
6. Material Testing
7. Non-Ferrous Metallurgy & Corrosion
8. Manufacturing
9. Foundry

- 10. Advance Materials
- 11. Analysis
- 12. Computational
- 13. Surface Engineering
- 14. Workshop



Universal Testing Machine



Induction Melting Furnace



High Temperature Muffle Furnaces



Roll Grinder



Nano Particle Ball Mill



Core Hardness Tester



Mould Hardness Tester



Sand Rammer



Sand Washer

3.10 DEPARTMENT OF PHYSICS

The Department of Physics at the National Institute of Technology Jamshedpur was formed in 1960. The department has always produced quality professionals in Physics and has strived for excellence in research and development. Currently, the department offers M.Sc. and Ph.D. programmes in various specializations of Physics.



3.10.1 VISION AND MISSION









Vision:

1. To impart quality education in Physics to produce good quality, technically trained, world-class human resources.
2. To promote research and development in the emerging and thrust areas.

Mission:

1. To become dynamic, quality conscious, forward looking and responsive to global economically viable technological development by imparting quality technical education.

3.10.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Ujjwal Laha Ph.D., Professor	Nuclear Physics	
2.	Dr. Hira Lal Yadav Ph.D., Professor	Holography	
3.	Mr. Ajay Kumar Singh M.Sc., Associate Professor	Radio Physics and Electronics	
4.	Dr. Rajeev Ranjan Ph.D., Associate Professor	X-ray crystallography, Holography	
5.	Mr. Bibeka Nanda Kundu M.Sc., Associate Professor	Material Science	
6.	Dr. Uday Kumar Ph.D., Assistant Professor	Spectroscopy	
7.	Dr. Neha Agnihotri Ph.D., Assistant Professor	Computational Physics	
8.	Dr. Tanmoy Paul Ph.D., Assistant Professor	Bouncing Cosmology, Primordial Gravitational waves, Inflationary and Bouncing Magnetogenesis	

3.10.3 ACADEMIC PROGRAMME

The Department offer the following courses:

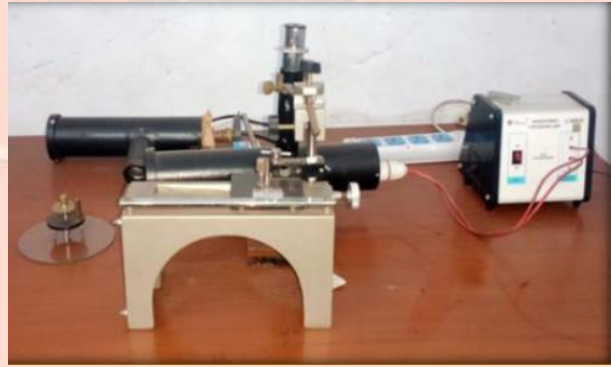
- (a) Post-Graduate Programmes
M. Sc. : Physics
- (b) Doctoral Programmes

3.10.4 LABORATORIES

1. Physics Laboratory
2. Photonics Laboratory
3. Advanced Computational Physics Laboratory



Michelsons Interferrometer



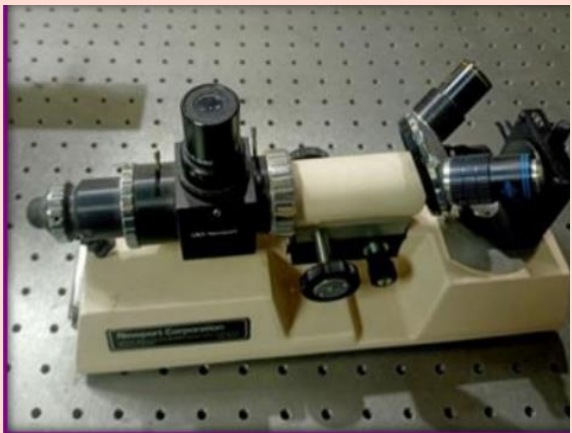
Newton' Ring



High Speed Spin Coating



B-H Curve Apparatus



Optical Fibre Microscope



Bending of Beam Apparatus

3.11 DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING

The Department of Production & Industrial Engineering was started in 1988 with "Production Engineering & Management". The name of this Department was changed to Production & Industrial Engineering in the year 2007. The Department offers a UG course for B.Tech. (Hons.) degree in Production and Industrial Engineering and a PG course in Manufacturing Systems Engineering and Ph.D. program in various streams of Production and Industrial Engineering. The Department is currently developing different engineering laboratories like CAD/CAM Lab, Advanced Manufacturing and Flexible manufacturing systems Lab, Non- Traditional Manufacturing lab, Industrial Engineering & Ergonomics lab, and Central workshop.

From time to time, curricula/syllabus is upgraded as per the market and technology requirements. The Department has also proposed to start a new PG course in Production Management which will cater to the current industrial need. The Under Graduate programme of the department has been accredited by NBA for 3 years in 2019.



3.11.1 VISION AND MISSION




Vision





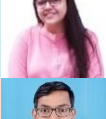

1. To produce engineers and researchers with excellent technical knowledge, research acumen, leadership skills and ethical responsibility

Mission

1. To educate B.Tech., M.Tech., and Ph.D. students with fundamental knowledge in concerned subjects and update them with the state-of-the-art in the field.
2. To develop and maintain laboratories that cater to the needs of the students
3. Quest for inter-disciplinary research.
4. To promote academia- research-industry collaboration.

3.11.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/RESEARCH AREA	PHOTO
1.	Dr. Amaresh Kumar Ph.D., Professor	Computer-Aided Design and Manufacturing, Industrial Engineering, Micro Machining	
2.	Dr. Raj Ballav Ph.D., Professor	Rapid prototyping, Reverse Engineering, CAD, Non-Traditional manufacturing	
3.	Dr. Shashi Bhushan Prasad Ph.D., Professor	Energy management, Industrial Engineering, Production Management	
4.	Dr. Ashok Kumar Jha Ph.D., Associate Professor	CAD/CAM, Robotics, Production Engineering	
5.	Dr. Kamal Pal Ph.D., Associate Professor	Manufacturing process monitoring, Joining processes, Additive manufacturing	
6.	Dr. Dharmendra Patel Ph.D., Assistant Professor	Industrial Engineering	
7.	Dr. Ashish Das Ph.D., Assistant Professor	Additive Manufacturing, Surface Engineering, Coating, Friction Stir Welding, Metal Matrix Composites.	
8.	Dr. Dinesh Kumar Ph.D., Assistant Professor	Supply Chain Management, Operations Management	
9.	Dr. Kanika Prasad Ph.D., Assistant Professor	Multi criteria decision making, Expert systems, Operations research	

10.	Dr. Mayuri Baruah Ph.D., Assistant Professor	Welding, Additive Manufacturing, Finite Element Modeling of welding process, Residual stress analysis, Advanced materials, Micro structural Analysis, Materials Processing	
11.	Dr. Tushar Banerjee Ph.D., Assistant Professor	Surface Coating, Materials Characterization, High-Speed Machining, Wear Analysis of Cutting Tools, Tribology	
12.	Dr. Kuntal Maji Ph.D., Assistant Professor	Manufacturing Engineering	
13.	Dr. Gunda Yoganjaneyulu Ph.D., Assistant Professor	Metal Forming	
14.	Dr. Shubham Tripathi Ph.D., Assistant Professor	Supply chain management, Operations research, Forecasting	
15.	Dr. Akash S. Awale Ph.D., Assistant Professor	Sustainable Manufacturing: Machining and Grinding	

3.11.3 ACADEMIC PROGRAMME

The Department offer the following courses:

- (a) Under-Graduate Programme
B.Tech. (H): Production and Industrial Engineering
- (b) Post-Graduate Programmes
M.Tech.: Manufacturing Systems Engineering
- (c) Doctoral Programmes

3.11.4 EQUIPMENT PROCURED

S. N.	Equipment	Cost (INR)	Funding Agency
1.	FDM Machine	99,120.00	Institute Fund
2.	Pulsed MIG -based WAAM	8,80,000.00	
3.	CNC Vertical Machining Centre	26,50,000.00	
4.	Autocast Software 10 PCs	5,75,000.00	
5.	Mechanical tilting type Aluminium melting furnace	1,21,304.00	
6.	Surface Profilometer	14,92,700.00	
7.	Hot-Mounting Press	2,49,708.00	

3.11.5 LABORATORIES

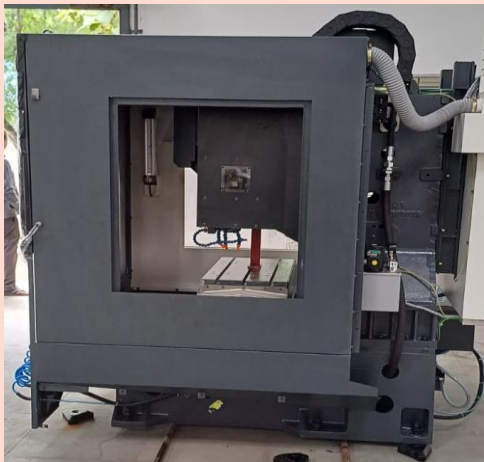
1. CAD/CAM Laboratory
2. Welding Laboratory
3. Advanced Manufacturing and FMS Laboratory
4. Surface Coating Laboratory
5. Non-Traditional Manufacturing Laboratory
6. Industrial Engineering and Ergonomics Laboratory
7. Foundry Laboratory
8. Central Workshop
9. Metal forming and Additive Manufacturing Laboratory
10. Advanced Machining Laboratory
11. Advanced casting and composite laboratory



FDM Machine



Pulsed MIG -based WAAM



CNC Vertical Machining Centre



Mechanical Tilting Type Aluminium Melting Furnace



Electroless and Electrolytic Coating Facility with All Accessories



Surface Profilometer



Hot-mounting Press

CHAPTER – 04 | FACULTY ACHIEVEMENTS

4.1 SPONSORED RESEARCH PROJECTS

S. N.	TITLE OF PROJECT	PRINCIPAL INVESTIGATOR	FUNDING AGENCY	AMOUNT (in Rs.)
1.	Enhancement of the Stability of Engineered Slope by Vegetation: A Sustainable Approach	Dr. S. Metya and Dr. S. Mondal	Scheme for Transformational and Advanced Research in Sciences, Ministry of Education (MoE-STARS), Govt. of India	35,97,000
2.	BIS Project on door closers (a builder's hardware) manufactured and/or available in the Indian market.	Dr. S. Metya	Bureau of Indian Standards (BIS), Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India,	3,09,760
3.	BIS Project on tower bolts (a builder's hardware) manufactured and/or available in the Indian market.	Dr. S. Metya	Bureau of Indian Standards (BIS), Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India,	3,43,530
4.	Synthetic strategies for the construction of fused heterocycles, distal C-H functionalization and asymmetric synthesis of furan and pyran ring fused with desymmetrized cyclopentene-1,3 dione	Dr. Tapas Das	SERB	41,85,493
5.	Nickel Catalysed Photo-Assisted Conversion of Carbon Dioxide to Formate and Carboxylic Acids in Presence of Non-Innocent Red-Ox Active Ligands	Dr. Moumita Mondal	SERB	28,82,000
6.	The Data Driven Agriculture Model to Mitigate Climate Change Impact on The Rice Crop in Indo- ASEAN Countries.	Dr. Subrata Dutta	DST (SERB)	10,96,000
7.	Development of an Augmented Reality-based Real-time Marine Visualization System under hazy and rainy weather conditions	Dr. HathiramNenavath and Dr. Jitesh Pradhan	DRDO – NRB	38,69,000
8.	Design of Optimal or Near-optimal Quantum Circuit using Quantum Machine Learning	Dr. Mayukh Sarkar, Dept. of CSE, NIT Jamshedpur, and, Prof. A.K. Singh, Dept. of CSE, MNNIT Allahabad	MeitY, Gol	19,40,000
9.	Design and Development of Artificial Intelligence based Model for Conversion from Santali to English	Dr. Koushendra Kumar Singh	JCSTI, Ranchi	4,00,000
10.	Design and development of system on chip based next generation IoT system for Industry 4.0 with functional safety and security features.	Dr. Amit Prakash & Dr. Kunal Singh	Chips to start-up (C2S) programme of MeitY	96,00,000
11.	Design and development of System on Chip based next generation IoT System for Industry 4.0 with Functional Safety and Security Feature	Dr. Amit Prakash (PI) Dr. Kunal Singh (Co-PI)	C2S(Meity)	96,00,000

12.	Channel coding for satellite communication	Dr. Kunal Singh	ISRO	3,30,000
13.	Smart and Effective IoT and GNSS Technology based Tea farming and Tourism for Tea Community Development	Dr. Surajit Kundu	HEFA	48,43,000
14.	Development of handheld/ drone-compatible, affordable 'Microwave Scanner-GNSS Station' (MSGS) for buried object detection with centimeter-level precision	Dr. Surajit Kundu	TEXMiN, IIT-ISM, DST	20,95,000
15.	Affordable Cognitive Radio 'Antenna-FSS' Development at 5G/beyond 5G and UWB/SWB Spectrums	Dr. Surajit Kundu	SERB, Govt. of India (Core Research Grant)	19,80,000
16.	Study of the requirements of Iron oxide powder for use in foundries	Dr. Binay Kumar (PI), DMME and Dr. CS Azad (Co-PI), DCSE	Bureau of Indian Standards	5,00,000
17.	Revitalizing the sacred art of ancient ironmaking: Documentation, recommendation, and future directions	Dr. Ramkrishna (PI) and Dr. Binay Kumar (Co-PI)	Indian Knowledge Systems Division, Ministry of Education, Govt. of India	9,50,000
18.	Development of an integrated tool for analysing performance of Government programs.	Dr. Kanika Prasad	UBA, NCI	50,000
19.	Use Case compilation of Smart Manufacturing in India	Dr. Shubham Tripathi	BIS	5,50,000
20.	Practical Implementation of Non-Fragile Sliding Mode Controller based Non-Isolated Universal On-Board Battery Charger for Electric Vehicle	Dr. Mrinal Kanti Sarkar	SERB, Govt. of India	27,43,100 lakhs
21.	Conversion of food/bio waste to energy and joint implementation at one of the DVC field stations	Dr. Dulari Hansdah, Dr. Omhari Gupta, Dr. Tushar Banerjee, Dr. Naveen Veldurthi	DVC, Kolkata	8,26,000
22.	Development of Advanced Cryptographic Primitives using Multivariate Public Key Cryptography as an Aid to IoT and Blockchain Technology	Dr. Sumit Kumar Debnath (Indian PI) Prof. Sihem Mesnager (French PI)	CEFIPRA	97,53,542
23.	GRAID Research Project	Dr. Sumit Kumar Debnath	IMU	11,37,822
24.	Magnetohydrodynamics of Hybrid Nanofluids with Dissipative Heat Transfer: Non-similar Analysis	Dr. Raj Nandkeolyar	SERB	6,60,000
25.	Preparation of Test Method for Vertical Fatigue Testing of Suspension Fork for Bicycles.	Dr. KSK Sudhamsu (PI) & Dr. Rinku Kumar Gouda (Co-PI)	Bureau of Indian Standards	3,62,230
26.	Numerical Modelling of Airborne Transmission of Covid-19 exposure in a Classroom -A CFD Approach	Dr. Satish Kumar	SERB (ASEAN-India collaborative R&D program)	30,90,000
27.	Experimental investigation and CFD modeling of centrifugal slurry pump for handling non -Newtonian solid liquid flow	Dr. Satish Kumar	SERB	37,10,000
28.	Hydraulic Design of Ash Disposal System of Thermal Plant to Minimize the Heavy Metal Contamination of Ground Water	Dr. Satish Kumar	DST	22,21,381
29.	Innovative Methods of Teaching to promote Science Outreach activities	Dr. Satish Kumar	DST SEED	16,50,000

	among students, teachers and common people in rural area of Jharkhan			
30.	Nanoparticle Oxygen Carrier Assisted Chemical Looping	Prof Sanjay and Dr M A Hassan	SERB, DST	39,91,000
31.	Design of Renewable Energy System for Rural and Remote Area	Prof. Shalendra Kumar Prof. R. V. Sharma Prof. Satish Kumar Dr. Kunal Kumar Singh	Ministry of Electronics & Information Technology R &D in Electronics Division, Govt. of India	28,40,000
32.	Development of Self-Healing Composite Materials	Dr. Deepak Kumar	DST	9,45,000
33.	Automated Portable Ball Milling Machine	Dr. Deepak Kumar	MSME, GOI	14,00,000
34.	Development of a cost-optimized 7.5T (7,500 kg) Fabricated Lift Axle Beam using High Strength steel for rigid truck application	Dr. Deepak Kumar, Dr.V.R. Kar, Dr.A.K. Mandal, Dr. Sankar K Roy	RSB Transmission Private Ltd. Jamshedpur	NITJSR-RSB MOU
35.	Minimizing Distortion during MIG Welding of Thick (> 15 mm) Steel Plates	Dr.V.R. Kar, Dr. Deepak Kumar, Dr.S.K. Sudhamsu K, Dr. Kuntal Manjhi	RSB Transmission Private Ltd. Jamshedpur	NITJSR-RSB MOU
36.	Educational Proposal: Education, Training and Skill Development	Dr. Deepak Kumar Dr. Vineet Sahoo Dr. Sankar K. Roy Dr. Dulari Hansdah	NTTM, Ministry of Textiles, GOI	1,61,00,000
37.	Design and Development of Remotely Operated BIO INSPIRED Underwater Vehicle	Dr. Vijay Kumar Dalla-PI, Dr. Prafulla Kumar Swain, GITAM University, Vishakhapatnam -CoPI	NMICPS TiHAN IIT Hyderabad	22,00,000
38.	Design and Development of Remotely Operated Underwater Vehicle	Dr. Vijay Kumar Dalla-PI, Dr. Prafulla Kumar Swain, GITAM University, Vishakhapatnam-CoPI, Dr. Ashok Kumar Barik, CoPI	IIT Guwahati Technology Innovation and Development Foundation	10,00,000
39.	USHA: Urine Sense towards Health Analysis of kidney	Dr. Pranab Kumar Kundu	ICMR	50,00,000
40.	Thermal Shock Analysis of Porous Functionally Graded Pre-Twisted Rotating Blad	Dr. Shashank Pandey	Science and Engineering Research board	19,14,264
41.	Mathematical modelling and Investigation of vibration and sound characteristics of Indian bowed stringed musical instruments	Dr. Ashok Kumar Mandal	AICTE (Indian Knowledge System)	14,48,000
42.	Design and Development of Semiautomatic Parboiling Machine with Dryer for Marginal Farming	Dr. A. K. Mandal and Dr. M. A. Hassan	DST-Agrotech	12,98,000
43.	Development of Zero Backlash Power Transmission Mechanism for Anthropomorphic Robots	Dr. Vineet Sahoo	DST India	12,15,000
44.	Development of Self-Healing Composite Materials	Dr. Deepak Kumar (PI) Dr. Neeraj Sharma (Co-PI)	DST	9,45,000
45.	Automated Portable Ball Milling Machine	Dr. Deepak Kumar	MSME, GOI	14,00,000
46.	Experimental and Numerical Investigation of Air Entrainment into Different Types of Infrared Suppression (IRS) Devices	Dr. Ashok Kumar Barik Dr. Sanjay	SERB	36,00,000

47.	Comparative analysis of TEG and WHR system used for energy harvesting from engines	Dr. Dulari Hansdah	SERB-DST	21,28,000
48.	Waste to Energy	Dr. Dulari Hansdah, Dr. Tushar Banerjee, Dr. Om Hari Gupta & Dr. Naveen Kumar Veldurthi	DVC, Thermal Station, Bengal Meja Power West	6,49,000
49.	Numerical Modelling of Airborne Transmission of Covid-19 exposure in a Classroom -A CFD Approach	Dr. Satish Kumar	SERB (ASEAN-India collaborative R&D program)	30,90,000
50.	Experimental investigation and CFD modeling of centrifugal slurry pump for handling non -Newtonian solid liquid flow	Dr. Satish Kumar	SERB	37,10,000
51.	Hydraulic Design of Ash Disposal System of Thermal Plant to Minimize the Heavy Metal Contamination of Ground Water	Dr. Satish Kumar	DST	22,21,381
52.	Innovative Methods of Teaching to promote Science Outreach activities among students, teachers and common people in rural area of Jharkhan	Dr. Satish Kumar	DST SEED	16,50,000
53.	Minimizing Distortion during MIG Welding of Thick (> 15 mm) Steel Plates	Dr. Vishesh Ranjan Kar, Dr. K. S. K. Sudhamshu, Dr. Deepak Kumar, Dr. Kuntal Maji	RSB Transmissions Ltd. (Unit II), Jamshedpur under MoU scheme	NA
54.	Development of weight optimized Fabricated Lift Axle Beam for Trucks using High Strength Steel	Dr. Deepak Kumar, Dr. A. K. Mandal, Dr. Vishesh Ranjan Kar, Dr. S K Roy	RSB Transmissions Ltd. (Unit II), Jamshedpur, Under MoU scheme	NA
55.	Nanoparticle Oxygen Carrier Assisted Chemical Looping Combustion	Prof. Sanjay and Dr M A Hasan	DST-SERB	39,91,400
56.	Air entrainment and infrared suppression by hybrid and convex types of IRS devices with louvered openings: Experimental and numerical studies	Dr. A. K. Barik	SERB CRG GRANT	37,12,192

4.2 CONSULTANCY SERVICES/TESTING PROJECTS

S. N.	Name of the Consultancy/Testing	Sponsoring Agency	Amount Earned (In Rs.)
DEPARTMENT OF CIVIL ENGINEERING			
1.	Sub-Soil Investigation for the Proposed Foundation for Multi- Storied Residential Towers (G+ 11) at Plot Nos. 536,537,538,539,540 & 541 In Khata No. 7 And Thana No. 1156, Sonari Jamshedpur".	M/S ADLN SUPERSTRUCTURES LLP, Sonari, Jamshedpur	5,38,000
2.	Third-Party Inspection (TPI) of the Construction work of Phase-A at Jawahar Navodaya Vidyalaya, Koderma (Jharkhand)	The Project Manager U.P. Project Corporation LTD. Ranchi, Jharkhand- 834002	3,60,000
3.	Structure audit for LIC Building	LIC Jamshedpur	7,00,000
4.	Sub-Soil Investigation for the Proposed Foundation for Multi- Storied Residential Towers (G+ 10) at Khata No. 7 and Thana No. 1156, Sonari Jamshedpur.	M/S ADLN SUPERSTRUCTURES LLP, Sonari, Jamshedpur	5,38,080
5.	TPQA visit for EMRS Dumri dist. Jharkhand	B. K. Singh DGM-East Cost (Co-Ord) Bridge & Roof Co. (I) Ltd.	2,24,508

6.	TPQA visit for EMRS Ghaghra dist. Jharkhand	B. K. Singh DGM-East Cost (Co-Ord) Bridge & Roof Co. (I) Ltd.	2,01,233
7.	Water test for construction of Eklavya Model Residential School (EMRS) at Majhgaon, Gurabandha, Hatgamaria and Dhalbhumgarh Blocks in the State of Jharkhand	Hindustan Steel Works Construction Ltd., Ranchi, Jharkhand	82,600
8.	Third-Party Quality Assurance (TPQA) Work for the EMRS at Rania, Jharkhand	Bridge & Roof Co. (I) Ltd.	2,28,000
9.	Estimation of safe bearing capacity of the soil for Satsang Sree Mandir at Adardih Village (near Chandil).	Satsang Kendra Adardih	1,05,000
10.	Consultancy work of Proof Checking	M/s Rajendra Prasad Mittal	1,18,000
11.	Consultancy work of Proof Checking (Rairangpur Railway Station)	M/s Chhaya Architect & Consultants	35,400
12.	Consultancy work for the construction of 16 nos. of EMRS	M/s Bridge & Roof Co.(I) Ltd.	1,90,401
13.	Proof Check of IIPA Delhi Commercial Building	M/s Outlook Design Heed Consultants Pvt. Ltd.	59,000
14.	Consultancy work of Proof Check of Structural Design	M/s Conviction Designs	1,18,000
15.	Checking and Vetting of Structural Design & Drawing	M/s A. B. Consultants & Co.	23,600
16.	Proof Check for Design & Drawing of Major and Minor Bridges	M/s Sri Ram Enterprises, Sriram Tower, MP Road, Naya Bazar, Bhagalpur	2,77,000
17.	Checking and Vetting of Structural Design & Drawing	M/s A. B. Consultant & Co.	47,200
18.	Checking and Vetting of Structural Design & Drawing	M/s A. B. Consultant & Co.	23,600
19.	Vetting Design of DC, Pump House, Road crossing, value chamber etc.	M/s Prathmesh Construction	1,18,000
20.	Testing Concrete used in Road Construction at CRM Bara	M/s Tata Steel Utilities and Infrastructure Services Ltd.	1,96,824
21.	Structural Design vetting of intake well OE3SR for Simdega UNSP under AMRUT 2.0	M/s Rockdrill Infrastructure Pvt. Ltd., Ranchi	1,77,000
22.	Checking and vetting of Structural Design Drawing of pre-fabricated steel canopy IOCL, Bihar	M/s A. B. Consultant Co.	47,200
23.	Design Mix of grade M-25 for construction of EMRS at Patna Phase II Odisha	M/s Cosmopolitan Engineers, D5/4, New Cable Colony, Po: Golmuri Jamshedpur	98,412
24.	Necessary Corrective measures for existing RCC structure of Type-IV building of Medical College Project-Chaibasa	M/s KMY Projects Ltd., 4th Floor, Flat No.-4D, A-Block, Radha Archana Apartment, Hata	3,78,000
25.	Proof Checking of Design of slip form setup in connection with the construction of 150 M Tall RCC Chimney	M/s ASP Engineering Consultant	70,800
26.	Consultancy work of construction of 16nos. EMRS school in the state of Jharkhand & West Bengal filling	M/s Bridge & Roof Co.(I)Ltd	89,660
27.	Checking and Vetting of Structural Design, Drawings of Pre-Fabricated Steel Canopy	M/s Mangala Builders Associates, Jamshedpur	47000
28.	Proof Checking of the Design and Drawing of Delivery Chamber for Weir and Lift irrigation system over Kharkai river in Jilinga Goda, Kharkai Canal Division (Adityapur)	M/s Mangala Builders Associates	23000
29.	Checking and Vetting of Structural Design, Drawings Canopy at Swarna Kisan Seva Kendra, Khandapara, Odisha,	A B Consultant & Co, Jamshedpur	47000

	Size 10x 14 x 6m Checking and Vetting of Structural Design, Drawings of Pre-Fabricated Canopy at Maruti Kisan Seva Kendra, Patkura, Jagatsinghpur, Odisha, Size 11 x 15 x 6m		
30.	Structural design Vetting of filter, sump and pump house, for Simdega Urban watersupply project UNDER AMRUT 2.0	M/s Rockdrill Infrastructure Pvt. Ltd., Ranchi	2,65,000
31.	Checking and Vetting of Hydraulic Design of Water Treatment Plants	M/S SurajmalOnkarmal Surface and UG Drilling Engineers.	70,000
32.	Checking and vetting for structural design and drawing of Master BalancingReservoir of Sankara Group Water Supply Scheme under JJM	M/S SurajmalOnkarmal Surface and UG Drilling Engineers.	23,000
33.	Structural Audit of Terminal Building of the Gaya Airport	M/s Mr. Parshuram, Asstt. G.M. (Engg-Civil), Gaya Airport, Airport Authority of India, Gaya, PIN-823004, Ranchi	1,29,000
34.	Structural Audit of Old Quarters of the Gaya Airport, Gaya.	M/s Mr. Parshuram, Asstt. G.M. (Engg-Civil), Gaya Airport, Airport Authority of India, Gaya, PIN-823004,	1,29,000
35.	Third Party Audit of Structural stability of Passenger Terminal Building and allied infrastructure at Jamshedpur Airport,	Mr. Sushovan Majumdar, Head Administration Aviation, Aviation Services Jamshedpur Airport, Tata Steel Limited, Jamshedpur-831011	1,41,600
36.	Proof Checking of Design and drawing of Substructure for "Final Location Survey", "Design and drawings" and & "Soil Exploration" along with preparation of L-Section and X-Section of Road and Railway line, Land Plans, Design and Drawing of all Bridges & RE Wall also collecting all required input data for design near New Prop. ROB in lieu of LC No. 35/B/T (S&T No. 13/B/T) at Km.- 217/10-12 between Demu – Latehar Section and LC No. 39/Spl/T at Km. 120/3-4 PTRU Stn. Limit between Bhurkunda-Patratu in CIC Section of Dhanbad Division under Dy. CE/Con/BRKA of East Central Railway,	M/s Sparsh Engineering Company (P) Limited., Sharda Sadan, H-55, Harmu Housing Colony, Ranchi-834002	70,800
37.	Proof Checking of Design and drawing of Substructure for "Final Location Survey", "Design and drawings" and & "Soil Exploration" along with preparation of L-Section and X-Section of Road and Railway line, Land Plans, Design and Drawing of all Bridges & RE Wall also collecting all required input data for design near New Prop. ROB in lieu of LC No. 35/B/T (S&T No. 13/B/T) at Km.- 217/10-12 between Demu – Latehar Section and LC No. 39/Spl/T at Km. 120/3-4 PTRU Stn. Limit between Bhurkunda-Patratu in CIC Section of Dhanbad Division under Dy. CE/Con/BRKA of East Central Railway,	M/s Sparsh Engineering Company (P) Limited., Sharda Sadan, H-55, Harmu Housing Colony, Ranchi-834002	1,18,000
38.	Proof check of Structural design of RCC TMD building and RUB box structural of span 1x6mx5.6m with different fill height	M/S S & T Associates, 6D, Engineers Colony, New Sanganer Road, Opp. MLA, Quarter, Mansarover, Jaipur-302020, Rajasthan	94,400
39.	Regarding Proof Checking of Design and drawing for Construction of i) Prop. ROB in lieu of LC No.35/B/T (S&T No. 13/B/T) at Km.-217/10-12 between Demu-Latehar Section of Dhanbad Division and ii) Prop.	M/s Sparsh Engineering Company (P) Limited., Sharda Sadan, H-55, Harmu Housing Colony, Ranchi-834002	82,600

	ROB in lieu of LC No.39/Spl/T at Km.-120/3-4 PTRU Stn. Limit between Bhurkunda-Patratu in CIC Section of Dhanbad Division		
40.	Core Cutting Test of Job Piles at 4x210 MW STPP, Kahalgaon, Bihar, POWER MECH PROJECTS LIMITED, Kahalgaon Stage-I STPP.	C/O BHEL- Site Office, 4X210 MW, NTPC Kahalgaon STPP, Bihar – 813214,	2,47,800
41.	Proof checking and vetting of the structural design and drawing of second lift structure of DRM office of Prayagraj	M/S Subham Yadav, - Myriad Studio Architects, 134/120Balrampur house MumfordanPrayagraj 21 1002	20,000
42.	Checking and vetting of the structural design and drawing of pre-fabricated steel canopy at M/s Deoshar, Filling station, Kantaganj, Balangir, Odisha & M/s Paras Fuel KSK, Sundargarh, Odisha	G.T Fabricators Traders, IchindaKeojhal, Odisha	40,000
43.	Vetting of the design and drawing of Light Steel Framed Super Structure for the construction of fire station (cat-VIII) and allied works at Gaya Airport, Gaya	M/s Mr. Parshuram, Asstt. G.M. (Engg-Civil), Gaya Airport, Airport Authority of India, Gaya, PIN-823004, Ranchi	20,000
44.	Proof checking and vetting of the structural design and drawing of offices for SSE at Aligarh Junction, Aligarh	M/S Subham Yadav, - Myriad Studio Architects, 134/120Balrampur house MumfordanPrayagraj 21 1002	30,000
45.	Vetting of the structural design and drawing of SHED at offices for SSE/S & T at Kanpur	M/S Subham Yadav, - Myriad Studio Architects, 134/120Balrampur house MumfordanPrayagraj 21 1002	20,000
46.	Checking and vetting of the structural design and drawing of pre-fabricated steel canopy at IchindaKeonjhar, Odisha	G.T Fabricators Traders, IchindaKeojhal, Odisha	20,000
47.	Checking and vetting of the structural design and drawing of pre-fabricated steel canopy at M/s Diwakar Fuel Centre Katihar, Bihar	G.T Fabricators Traders	20,000
48.	Construction of EMR school at Tonto Block West Singhbhum	M/S Residential School Tonto West Singhbhum	44,500
49.	Proof checking and vetting of the structural design and drawing of offices for SSE/SE-Sig at Allahabad (SHED)	M/S Subham Yadav, - Myriad Studio Architects, 134/120Balrampur house MumfordanPrayagraj 21 1002	20,000
50.	Proof checking and vetting of the structural design and drawing of offices for SSE/SE-RCC Allahabad	M/S Subham Yadav, - Myriad Studio Architects, 134/120Balrampur house MumfordanPrayagraj 21 1002	20,000
51.	Estimate and Quotation for different soil and water testing	M/s Bridge and Roof Co (I) Ltd.,	26,000
DEPARTMENT OF ELECTRICAL ENGINEERING			
1.	In the works IVA (Independent verification agency) has agreed upon by the Executive Engineer D.W & S Division Jamshedpur for the works of two Numbers of MVS (Multi village Scheme) for water supply: namely Chota Govindpur and Bagbera water supply Scheme. The consultancy works of IVA was given of worth of Rs 200 Lakhs. Out of this work, the Electrical part was approximately worth Rs 30 lakhs. This Electrical work was executed by Dr. Alok Priyadarshi (Assistant Professor, EED, NIT Jamshedpur).	D.W & S Division Jamshedpur	30,00,000
DEPARTMENT OF MECHANICAL ENGINEERING			
1.	Design of an octagonal-shaped Pole	NABA Diganta I.T.E.S PVT. LTD	35,000
2.	Waste to Energy	DVC, Mejia Thermal Power Station, West Bengal	6,49,000

3.	Grant-in-aid under the component IV- Education, Training and Skill Development of National Technical Textiles Mission (NTTM) Education Proposal ID- "Edu-23-00051"	National Technical Textiles Mission	1,61,00,000
4.	Approval of Pole Drawing with Design	NABA DIGANTO ITES Pvt Ltd	30,000

4.3 PATENTS (Filed/Published/Granted)

S. N.	Name of the Faculty	Patent Title	Application No.	Patent Status
DEPARTMENT OF CIVIL ENGINEERING				
1.	Dr. A.K Singh	A System and Method of Model of Ring Footing Fixed with Geogrid Strip and Loaded at Central Radius", Controller	Application No. 202431008750 Dated 15/03/2024	Published
2.	Dr. A.K Singh	A System and Method of Skirted Ring Footing under Combined Lateral and Concentric Vertical Loading at Central radius	Application No. 202431014655 A Dated 15/03/2024	Published
3.	Dr. A.K Singh	Geo-Grid Skirt Footing for Civil Construction	Dated 30/03/2024	Granted Design No. 412094-001
4.	Dr. A.K Singh	Portable Prefabricated Panel Wall for making Tunnel	Dated 25/05/2024	Granted Design No. 418034-001
5.	Prof A. K. Choudhary	System for studying the behaviour of plate anchors under different orientations of load	Dated 17/05/2024	Granted Design No. 410743-001
6.	Dr. A.K. Sinha	Binding wire hook in construction Industry	Dated 08/02/2024	Design no. 406989-001,
7.	Dr. S. Mondal	System for estimating thermally induced volume change (TIVC) of soils	202021015318 dated 07/04/2020	478152 Awarded Dated 07-12-2023
8.	Dr.B.K Prasad	Portable prefabricated panel wall for making tunnel	412094-001	Granted (412094-001)
9.	Dr. S. Metya	A Bio-inspired Assembly System for Early Warning System in Assessing Open-pit Mine Slope Stability and Product Thereof,	202431015608 Dated 02/03/2024	Published, 22/03/2024
10.	Dr. S. Metya	Framework for Defining the Critical Zone in Foundation-Cavity Interaction and the Method Thereof,	202431027378, Dated 02/04/2024	Published, 19/04/2024
11.	Dr. Virendra Kumar	Development of alternate building material using metallurgical slag		filed
DEPARTMENT OF CHEMISTRY				
1.	Dr. Balram Ambade	Integrable Laser Marker, (International UK Government IPR Design)	6300180 Date- 09/07/2023	Granted
2.	Dr. Balram Ambade	IOT-Based Portable Solar Powered Biogas Plant, (Indian Patent)	Patent, 40590 9-001,	Granted

			dated 29/01/2024	
3.	Dr. Balram Ambade	Air Purifier Based on Artificial Intelligence, (Indian Patent)	407230-001, dated 12/02/2024),	Granted
4.	Dr. Balram Ambade	Based Water Quality Monitoring Device", Indian Patent	Application no. 407229-001, cbr No. 202240, CBr date: 12/02/2024	Granted
5.	Dr. Balram Ambade	AI based water filtration device for cleaning drinking water", Indian Patent	Application no. 415471-001, Cbr No. 207292, CBr date: 01/05/2024	Granted
6.	Dr. Balram Ambade	Device for Humidity Measurement and Control in Greenhouse	Application no. 423193-001, CBr No. 212354	Granted
7.	Dr. Balram Ambade	Device for Measuring Atmospheric Carbon Dioxide Levels.	Application no. 423192, CBr No. 212353	Granted
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING				
1.	Dr. Binod Kumar Singh	A System for Patient Authentication in Emergency Healthcare Scenarios Using a Master Iris Template	202331047887, 2023/10/13	Published
2.	Dr. Jitesh Pradhan, Dr. Koushendra Kumar Singh, Dr. B Ramahcnadra Reddy, Dr. Danish Ali Khan	lot based smart ECG system and method of DNA encoding	202431028980, 19/04/2024	Published
3.	Sriramulu bojjagani, Mahesh kumarmorampudi, Neeraj kumarsharma, Uma sankararaovarri, Dr. B. Ramachandra Reddy	A system and method for predicting fraudulent activities within mobile banking applications	202441036543 17/05/2024	Published
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING				
1.	Dr. Ajay Kumar	Photoelectrochemical (pec) cell system for hydrogen production	202331043849 A 18/08/2023	Published
2.	Dr. Ajay Kumar	Optical 7-Segment Decoder using Electro-optic effect-based directional COUPLER	202331056079 A 06/10/2023	Published
3.	Dr. Ajay Kumar	Optical 7-Segment Decoder	424204-001, 22/07/2024	Granted
4.	Dr. Ajay Kumar	Data Modem For Cobots Operating at Terahertz Frequency Using Optical Fibers	424222-001, 22/07/2024	Filed
5.	Dr. Akhilesh Kumar	Method For Developing Miniaturized Quad-Band Frequency Selective Surface Based on Enclosed Cross Slots	202331015180, Date of Filing: 07/03/2023	Granted on 30/04/2024 , Patent No.: 535985
6.	Dr. Akhilesh Kumar	Method for ultra thin high frequency CeMgO ₂ /CeMnO ₂ /ACZTSSe/Perovskite	202331026332 A, Date of filing: 08/04/2023	Published on 14/04/2023
7.	Dr. Amit Prakash	Design and analysis of optical seven-segment decoder circuit using the electro-optic effect-based directional couplers	202331056079 A	Published

8.	Dr. Amit Prakash	Photoelectrochemical (PEC) cell system for hydrogen production	202331043849 A	Published
9.	Dr. B. Behera	Optical 7- Segment Decoder Using Electro-Optic Effect-Based Directional Couplers	Application No.202331056079, Date of filing: 22 August 2023	Published
10.	Dr. Kunal Singh	Solar Cell Utilizing Carbon Quantum Dots for Enhanced Energy Conversion	application no:202431034004, Date of filing: 29/04/2024	Filed
11.	Dr. Nagendra Kumar	Optical 7-Segment Decoder using Electro-optic effect-based directional Coupler	202331056079 A, 06/10/2023	Published
12.	Dr Rashmi Sinha	A Planar Via less Implantable Antenna For Wireless Communication Enabled Leadless Cardiac Pacemaker	202431030949 Date of filing- 18/04/2024	Published
13.	Dr. Surajit Kundu	Ultra-Compact Pentaband Polarization Insensitive and Angularly Steady Metasurface	202331066374 04/10/2023	Published
14.	Dr. Surajit Kundu	Three Layered Antenna Module for 5G FR-2 Spectrums	202431036854 A 09/05/2024	Published
15.	Dr. Mayank Srivastava	Interoperability requirements based intelligent system and method for virtualized service on a cloud infrastructure	202023107629	Granted
DEPARTMENT OF ELECTRICAL ENGINEERING				
1.	Dr. Ashok Kumar Mandal and Dr. Omhari Gupta	A System and Method for Flushing a Urinal	App. No. 202231054850, date of filing: 25/09/2022	Granted: 15/11/2023 , Patent No.: 469121
2.	Dr. Simanta Kumar Samal	Portable Charging Device For Electric Vehicles	408957-001 Date: 28/02/2024	Granted
3.	Dr. Alok Priyadarshi, Dr. Umesh Kumar Sinha	"Solar and Wind Powered Charging Station for Electric Cars"	(App. No. 414580-001, Issue Date: 06/06/2024)	Published
4.	Dr. Alok Priyadarshi,	"Solar Powered Device to Check Nutrients in Agricultural Land",	(App. No. 402764-001, Issue Date: 16/02/2024)	Published
5.	Dr. Mrinal Kanti Sarkar	IoT Based Hand-Held Medical Device for Detecting Diseases	402326-001 date 18/12/2023	Granted (402326-001 date 09/02/2024)
6.	Dr. Mrinal Kanti Sarkar	Portable Charging Device for Electric Vehicles	408957-001 Date 28/02/2024	Granted (408957-001 date 18/04/2024)
7.	Dr. Mrinal Kanti Sarkar	Advanced Robust Controller for Onboard Battery Charging in Electric Vehicles	202431012596 Date 22/02/2024	Published on 08/03/2024

8.	Dr. Mrinal Kanti Sarkar	Machine Learning Based Device for Soil Testing	408037-001 Date 19/02/2024	Filed
9.	Dr. Kumari Namrata	Robot For Farm Analysis	41 6579-001	Published
10.	Dr. Kumari Namrata	Solar Powered Cold Storage Device to Storage Agricultural Yield	6338051	Published
11.	Dr. Kumari Namrata	Industrial Predictive Maintenance Analyzing Device	404345-001	Published
DEPARTMENT OF PHYSICS				
1.	Dr. Rajeev Ranjan	Solar and wind powered charging station for electric cars	41 4580-001 Date: 23/04/2024 Date of issue: 06/06/2024	14580-001
2.	Dr. Uday Kumar, Prof. H. L. Yadav	A device for supplying sun light to the Photoelectrode in PEC Cell for Green Hydrogen Production	2023310869 41	Published
DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING				
1.	Dr. Kanika Prasad	An Emotion Driven Writing Apparatus and A Method Using Thereof	202431020871 A	Published
2.	Prof. Amaresh Kumar	Borewell Rescue Device	Design 410740-001	Granted
3.	Kuntal Maji, Avishek Samanta, Prakash Kumar, Sharifuddin Mondal	Arc Heating Based Metal Additive Manufacturing Process using Waste Machining Chips as Feedstock Material	202431027937 A	Filed
DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING				
1.	Dr Ram Krishna	Compact Hydro turbine	426041-001	Published
2.	Dr Ram Krishna	Bio-based Antifreeze composition	202431037668	Published
3.	Dr Ram Krishna	Design an Automated Guide Vehicle	202431037669	Published
4.	Dr Ram Krishna	Butter Churning Device	202431015375	Published
DEPARTMENT OF MECHANICAL ENGINEERING				
1.	Md Ashique Hassan, Dulari Hansdah, Amaresh Kumar	Borewell Rescue Device	16/03/2024	Awarded 410740-001
2.	Md Ashique Hassan	Air Filter System to Improve Air Filtration While Maintaining Optimal Airflow and Its Method Thereof	202431064908 28/08/2024	Filed
3.	R. V. Sharma Shalendra Kumar	Compound Solar Heat Collector	431406-001 Cbr No 217377 23/09/2024	Filed
4.	Dr. Deepak Kumar	Circular hole embedded piezoelectric energy harvester	362939-001 22/04/2022	Granted (Design) 362939-001 09/02/2024
5.	Dr. Deepak Kumar	Portable Ball Mill Machine System for Homogeneously Mixing Distinct Nanoparticles and Its Operating Method Thereof	202431008660 16/02/2024	Published
6.	Dr. Deepak Kumar	A Multi Usability Automated Portable Ball Mill System	202431015448 22/03/2024	Published
7.	Dr. Deepak Kumar	A Process for Developing Polydimethylsiloxane (PDMS) Based Conducting Flexible Elastomer Blend Reduced Graphene Oxide / Calcium Carbonate Nanocomposite	202431027740 19/04/2024	Published
8.	Dr. Deepak Kumar	A Process for Preparing a Hydroxyapatite/Reduced Graphene Oxide Reinforced Alginate/Acrylamide Double Network Bio Hydrogel	202431028861 19/04/2024	Published
9.	Dr. Deepak Kumar	A Process for Preparation of Functionalized Reduced Graphene Oxide (rGO)/Calcium Carbonate (Caco3) Nanocomposites	202431027741 19/04/2024	Published
10.	Arvind Kumar Patel	Electric Armored Vehicle	409263-001	Filed
11.	Dr. Rahul, M. K. Sinha, Dr. Mayank	Adjustable Tree Fencing with Water Pipe	Design No: 409685-001	Design Patent

	Srivastav, Dr. Abhishek Singh, Dr. Amit Kumar		dated 07/03/2024	Granted. Date of issue: 10/05/2024
12.	M. K. Sinha and Dr. Ram Krishna	A butter churning device	application no: 202431015375	Published dated 07/06/2024
13	Dr. Ram Krishna and M. K. Sinha	Design an Automated Guided Vehicle for Real Time Railway Track Inspection and Fault Finding	application no: 202431037669 dated 14/05/2024	Published date 31/05/2024
14	Dr. Ashok Kumar Mandal	A system and method for flushing a urinal	202231054850	Published
15	Dr. Ashok Kumar Barik	Air Purifier with Shrouded Wind Turbine	136678 16/02/2023	Filed
16	Prof. Sanjay	Swirler for micro gas turbine combustion chamber	Indian Patent: 387129-001	Granted
17	Mahapatra, B. N., Swain, R., Nayak, S., Barik, A. K., Pany, S, Das, S. S., Nayak, J., Sahoo, S. S., & Mallik, P. R.	Milk Churner Cum Mixer Cum Power Generator	Serial No: 166990	Filed

4.4 SEMINAR/CONFERENCES/FDP/WORKSHOPS ORGANIZED

S. N.	Title of the Conference/ seminar/workshop/STTP	Name of the coordinator	Name of the sponsor	Duration
DEPARTMENT OF CIVIL ENGINEERING				
1.	One month's summer internship program, SIP CIVIL	Dr. S. Madhuri Dr.K.K. Sharma, Dr. Awdhesh K Choudhary	Self-Sponsored	10.062024 to 10.07.2024
2.	Five Day National Workshop: Design of Bridges (DOB-2024)	Prof. Virendra Kumar Dr. S. Madhuri Dr.K.K. Sharma	Jharkhand Council on Science, Technology & Innovation (JCSTI), Govt. of Jharkhand, Ranchi,	19.04.2024 to 23.04.2024
3.	Five Day National Workshop: Limit State Design of Steel Structures	Prof. Virendra Kumar Dr. Awdhesh K Choudhary Dr.K.K. Sharma,	Jharkhand Council on Science, Technology & Innovation (JCSTI), Govt. of Jharkhand, Ranchi	17.05.2024 to 21.05.2024
4.	Research Trends and Future Scope in Civil Engineering. RTFSCE – 2023	Dr. J. Jayapal, Dr. Karthick Raja P, Dr. DebshriSwargiary, Dr. Bhupali Datta Conveners: Dr. Prahlad Prasad&Dr.A.K. Sinha	Self-Sponsored	1.09.2023 to 15.09.2023
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING				
1.	5 Days Workshop on LATEX For Manuscript Writing	Dr. Alekha Kumar Mishra	None	5 Days

2.	Workshop on Machine Learning and its Applications in IoT, Computer Science and Cloud Computing	Dr. C. Azad Dr. Dinesh Kumar Dr. J. Pradhan	Self	10.07.2024 to 14.07.2024
3.	Workshop on Machine Learning and its Applications in IoT, Computer Science and Cloud Computing	Dr. C. Azad Dr. Dinesh Kumar Dr. BR Reddy Dr. J. Pradhan	Self	27.05.2024 to 31.05.2024
4.	One Month SERB VRITIKA, A Training and Skill Internship on "Machine Learning and Deep Learning Applications on Brain, Breast, Skin, and Musculoskeletal Oncology"	Dr. Jitesh Pradhan	SERB	1 month
5.	International Conference on IoT and its Applications (ICIA-2024) organized during 21-22 June, 2024 (Springer)	Dr. Subrata Dutta, Dr. Sanjay Kumar, Dr. Chandrashekhar Azad, Dr. Amit Majumder	TechCurve Solutions	21.06.2024 to 22.06.2024

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

1.	Faculty Development Programme (FDP) on "Machine Learning Algorithms for Signal Processing and Communication Applications"	Dr. Amit Prakash, Dr. Hathiram Nenavath	In collaboration with E& ICT Academy, NIT Warangal at National Institute of Technology Jamshedpur, Sponsored by Ministry of Electronics and Information Technology (MeitY), Govt. of India.	21.12.2023 to 31.12.2023
2.	RISC-V & VLSI design flow using EDA tools" from 16th Feb to 20th Feb.	Dr. Kunal Singh & Dr. Amit Prakash	C2S(Meity)	5 days
3.	Design and Development of 'Antenna-FSS' for 5G and 6G Communication Technologies	Dr. Surajit Kundu	SERB (Accelerate Vigyan-VRITIKA), Govt. of India	05.06.2023 to 07.07.2023
4.	Concepts and Applications of GIS, Remote Sensing and Global Navigation Satellite Systems	Dr. Surajit Kundu	SERB (Accelerate Vigyan-KARYASHALA), Govt. of India	10.07.2023 to 16.07.2023
5.	Modern Antennas and Metasurfaces for Microwave, Millimeter-wave and Terahertz-wave Communication Technologies	Dr. Surajit Kundu	SERB (Accelerate Vigyan-KARYASHALA), Govt. of India	24.07.2023 to 30.07.2023
6.	Smart and Effective Agriculture using IoT and Global Navigation Satellite System	Dr. Surajit Kundu	MSME, Govt. of India	09.01.2024- 13.01.2024

DEPARTMENT OF ELECTRICAL ENGINEERING

1.	Conference Title: 5th Electric Power and Renewable Energy Conference (EPREC-2024)	Chairman: Prof. U. K. Sinha Organizing Secretaries: Dr. Ravi Bhushan	Self-sponsored	24.05.2024 to 26.05.2024
----	---	---	----------------	--------------------------------

		Dr. Arvind K. Prajapati Dr. Simanta K. Samal Conveners: Dr. Supriyo Das Dr. M. K. Sarkar Coordinators: Dr. O. H. Gupta Dr. Jitendra Kumar Dr. Shailendra Kumar Dr. Krishna Murari		
2.	1st One-Week Workshop On "Research Oriented Technical Writing (ROTW-2023)"	Chairperson: Prof. U. K. Sinha Coordinators: Dr. Arvind K. Prajapati Dr. Ravi Bhushan Dr. Simanta K. Samal Conveners: Dr. Jitendra Kumar Dr. Om Hari Gupta	Self-sponsored	04.07.2023 to 08.07.2023
3.	Pravardhan 2023	Faculty In-charge: Dr. Ravi Bhushan Co-Faculty In-charge: Dr. Arvind Kumar Prajapati	Self-sponsored	27.11.2023 to 29.11.2023
4.	Advanced Control Techniques for Switched- Mode Power Supply for Electric Vehicle Application	Chairman: Prof. U. K. Sinha Coordinators: Dr. Mrinal Kanti Sarkar	SERB, Govt. of India	11.03. 2024 to 17.03.2024
5.	Real Time Simulation for Power Electronics and Power Systems Applications	Chairman: Prof. U. K. Sinha Coordinators: Dr. Mrinal Kanti Sarkar, Dr. Simanta Kumar Samal Conveners: Dr. Madhu Singh Dr Ananyo Bhattacharya	dSPACE, OPAL-RT, Typhoon HIL	21.08.2023 to 25.08.2023
6.	Prospective Ecosystem of Women Entrepreneurship and Start-ups.	Dr. Madhu Singh Dr. Rashmi Sinha Dr. Swati Shudha	Institute sponsored	24.04.2024
7.	Raising Awareness on Criminal Law Reforms 2023	Dr. Madhu Singh Dr. Jayendra Kumar Dr. Swati Shudha	Institute sponsored	23.04.2024
DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING				
1.	Smart Manufacturing towards Industry 4.0 (SMI 4.0)	Dr. Kuntal Maji Dr. Tushar Banerjee Dr. Dinesh Kumar Dr. Kanika Prasad	NIT Jamshedpur	27.05.2.24 to 31.05.2024
DEPARTMENT OF MATHEMATICS				
1.	5-Day Workshop on Numerical and Machine Learning Techniques for Fluid Dynamics	Dr. Rajat Tripathi (Coordinator) Dr. Raj Nandkeolyar (Convener)	Self-sponsored	19.05.2024 to 23.05.2024
2.	Short Term Course on LaTeX Programming (LATEX 2024)	Dr. Sourav Das (Coordinator) Dr. Sumit Kumar Debnath (convener)	Self sponsored	01.04.2024 to 05.04.2.024
DEPARTMENT OF MECHANICAL ENGINEERING				
1.	Karyashala high end workshop on "Development of Nano-robots and their potential applications"	Dr. Rinku Kumar Gouda, Dr. K Sri Krishna Sudhamsu, Dr. Arvind Kumar Patel, Dr. Shailesh Kumar Jha	SERB, Govt. of India	1 week

2.	SERB Accelerate sponsored VRITIKA on Optimal design of hydraulic conveying system for Transportation of Minerals and Materials	Prof. Satish Kumar	DST SERB	12.03.2024 to 11.04.2024
3.	workshop on NEP-2020	Prof. Satish Kumar	DST	03.02.2024
4.	New direction in teaching and learning	Prof. Satish Kumar	DST	19.03.2024
5.	Wellness through Traditional Indian Knowledge System	Shalendra Kumar as Chairman	NIT Jamshedpur	01.03.2024 to – 03.03.2024
6.	Know Your India through Traditional Indian Knowledge System	Shalendra Kumar as Chairman	NIT Jamshedpur	01.03.2024 to – 03.03.2024
7.	NADI PARIKSHA	Shalendra Kumar as Chairman	NIT Jamshedpur	10 .06.2024
8.	Curriculum Development in Design	Dr. Ashok Kumar Mandal and Prof. Sanjay	NIT Jamshedpur	One day
9.	New direction in teaching and learning	Prof. Satish Kumar &Dr. Bipin Kumar	DST	19.03.2024 – 19.03.2024
10.	5-Days Training Program on ANSYS Software	Dr. Deepak Kumar	NA	29.11.2023 to 03.12.2023
11.	Short Term Training Program on Computational Techniques in Design and Thermal Applications	Dr. Rinku Kumar Gouda, Dr. Shailesh Kumar Jha, Dr. Arvind Kumar Patel, Dr. K S K Sudamshu	Self -sponsored	5 days (29th May- 2nd June 2023)
12.	SERB-Sponsored High-end workshop (KARYASHALA) on Industry Based Robotics, IoT and Automation (IRIA)	Organising Chairperson: Prof. Sanjay Co-cordinator: Dr. Vijay Kumar Dalla	DST SERB	June-19- 25 2023
13.	Outcome Based Education and NBA	Prof. Prabha Chand	National Institute of Technical Teachers' Training and Research, Kolkata	26.04.2024 to 30.04.2024

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

1.	5 Days National Workshop on Advancement in Minerals Processing Techniques with special reference to Iron and Coal (AMPTIC-2023), at Department of Metallurgical and Materials Engineering, National Institute of Technology Jamshedpur.	Dr. Rina Sahu	self-sponsored	04.09.2023 to 08.09.2023
2.	International Conference on Advancement in Materials Processing Technology (AMPT-2023), at Department of Metallurgical and Materials Engineering, National Institute of Technology Jamshedpur.	Dr. Rina Sahu	self-sponsored	13.07.2023 to 14.07.2023

3.	Modern Agriculture, Animal Husbandry and Processing	Dr Ram Krishna	MSME, Delhi	New	5 Days
DEPARTMENT OF HUMANITIES, SOCIAL SCIENCE & MANAGEMENT					
1.	Indian Knowledge System	Dr Manish Kr Jha	Self-Sponsored		30.06.2023
2.	Greater India of the past and the new India of Tomorrow as a Global Leader	Dr Manish Kr Jha	Self-Sponsored		30.08.2023 to 31.08.2023
3.	Know your India through Traditional Indian Knowledge System	Dr Manish Kr Jha	Self-Sponsored		17.05. 2024
4.	Wellness through Traditional Indian Knowledge	Dr Manish Kr Jha	Self-Sponsored		01.03.2024 to 03.03.2024

4.5 EDITORIAL BOARD MEMBER OF JOURNAL

S. N.	Name of the Faculty	Name of the Journal	Editor/Editorial member
DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING			
1.	Dr Ram Krishna	Special Issue Part C: Journal of Mechanical Engineering Science, https://journals.sagepub.com/home/JMS Sage Publishers	Guest Editor
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING			
1.	Dr. Chandrashekhar Azad	International Journal of Microsystems and IoT ISSN 2584-0495	Editor
2.	Dr. Jitesh Pradhan	Neural Computing and Applications, Springer	Guest Editor
3.	Dr Koushendra Kumar Singh	SN Computer Science, Springer	Guest editor
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING			
1.	Basanta Bhowmik	American Journal of Nano Research and Applications, Science Publishing Group	Editorial member
2.	Basanta Bhowmik	Current Indian Science, Bentham Science	Section Editor
DEPARTMENT OF ELECTRICAL ENGINEERING			
1.	Dr. Kumari Namrata	Journal of Renewable Energy, Hindwai	Editorial Member
DEPARTMENT OF MECHANICAL ENGINEERING			
1.	M A Hassan	JoVE, peer-reviewed, Web of Science-indexed	Guest Editor
2.	Dr. Vishesh Ranjan Kar	Journal of the Mechanical Behavior of Materials	Editorial Member
3.	Dr. Vishesh Ranjan Kar	Archives of Advanced Engineering Science	Editorial Member
4.	Dr. Vishesh Ranjan Kar	Green Nanotechnology	Editorial Member
5.	Dr. Pranab Kumar Kundu	Springer Nature Discovery Science	Editorial member
6.	Dr. Vishesh Ranjan Kar	Journal of the Mechanical Behavior of Materials	Editorial Member
7.	Dr. Vishesh Ranjan Kar	Archives of Advanced Engineering Science	Editorial Member
8.	Dr. A K Prasad	Engineering Failure Analysis	Editorial Member

4.6 Ph.D. AWARDED/SUBMITTED

S. N.	Thesis Title	Name of the Scholar	Supervisor(s)	Awarded/ Submitted
DEPARTMENT OF CIVIL ENGINEERING				
1.	Development of Pavement Composite Using Industrial By-Products	Bheem Pratap	Dr. Somenath Mandal	Awarded
2.	Geo-physical investigation of Jamshedpur city using active multi-channel analysis of surface waves	Ashhad Imam	Dr. K. K. Sharma and Prof. Virendra Kumar	Awarded
3.	Optimization of Water Distribution Network Using Hybrid Techniques	Abu Rashid	Dr. Sangeeta Kumari	Awarded
4.	Characterisation and evaluation of non-silicate-based alkali-activated slag concrete	Rajesh Kumar Paswan	Prof. Virendra Kumar	Awarded
5.	Geomorphological Assessment of Large River Basins Using Geospatial Technology	Srija Roy	Dr. C.M Rao	Awarded
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING				
1.	Design and Development of 2D and 3D Ear recognition System using Deep Learning Approaches	Ravi Shankar Mehta	Dr. Koushlendra Kumar Singh	Awarded
2.	Identification and Classification of Lung Nodule based on Meshfree Approach and Deep Learning Model	Onkar Singh	Dr. Koushlendra Kumar Singh	Awarded
3.	Detection and Defensive Approaches Towards Piracy Issues in Cloud Based Applications.	Dr. Kailash Chandra Mishra	Dr. Subrata Dutta	Awarded
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING				
1.	A deep learning based human gait trajectory generator for bipedal robots	Pravankar Kumar Challa	Dr. Akhilesh Kumar	Awarded
2.	Opto-electrical parameters enhancement of CIGSS _e /Perovskite based thin film solar cells	Raushan Kumar	Dr. Akhilesh Kumar	Awarded
3.	Design and analysis of CPW fed planar antenna for UWB applications	Pratyancha Prasad	Dr. Akhilesh Kumar	Awarded
4.	Electrical and Sensing Characteristics of Oxide Nanostructures Based Thin Film Transistor	Aditya Kumar Singh	Basanta Bhowmik	Awarded
5.	Development of Metal Oxide Nanostructure Micro Sensor for Volatile Organic Compound (VOC) Sensing	Nikita Kar Chaudhary	Basanta Bhowmik	Awarded
6.	Design And Development Of Sensors For Real-Time Health Assessment Of Engineering Components Exposed To High-Temperature	Chandan Dutta	Dr. Jayendra Kumar, Dr. Sarmishtha Palit Saga	Awarded
7.	Real-time Image Stitching using Network Synchronized Machine-Vision Cameras	Vasanth Subramanyam	Dr. Jayendra Kumar, Prof. S.N. Singh	Awarded

8.	Performance Analysis of Energy Harvesting based Wireless Communication Networks	Raghwendra Kishore Singh	Dr. Nagendra Kumar	Awarded
9.	Design of Efficient Channel Estimation Techniques for Underwater Communication	Anand Kumar	Dr. Prashant Kumar	Awarded
10.	Highly Isolated Miniaturized Planar MIMO Antenna using Mutual Coupling Suppression for Microwave Application	Praveen Kumar	Dr. Rashmi Sinha and Prof. Arvind Choubey	Awarded
11.	Performance Enhancement of Compact Micro strip Filtenna based on Co-design Approach for RF Front-end	Pravesh Pal	Dr. Rashmi Sinha and Dr. Santosh Kumar Mahto	Awarded
12.	Realizations of Low Noise Amplifier for High Frequency Applications using Current Reuse Technique	Dheeraj Kalra	Dr. Mayank Srivastava	Awarded
13.	Realization of Conventional and Non-conventional Memristive Behaviour using Electronically Tunable Active Elements	Kapil Bhardwaj	Dr. Mayank Srivastava	Awarded

DEPARTMENT OF ELECTRICAL ENGINEERING

1.	Design and Performance Evaluation of Resonant Converters for Induction Heating Applications	Kumaraswamy A	Dr. Ananyo Bhattacharya	Awarded
2.	Reactive Power Management Under Transmission Congestion with FACTS Devices	Lalit Kumar	Dr. Sanjay Kumar	Awarded
3.	Reactive Power Planning with FACTS Devices for Mitigation of Congestion Management using Evolutionary Algorithms	Sushil Kumar Gupta	Dr. Sanjay Kumar	Awarded
4.	Performance Evaluation of Multilevel Inverter for Electric Vehicle	Mr. Debanjan Roy	Dr. Madhu Singh	Awarded
5.	Study and Analysis of Effect of Control Mode Operation of FACTS Controllers on the Performances of Power System	RamaniahUpputuri	Prof. Niranjan Kumar	Awarded
6.	Enhanced Protection of PV-integrated Microgrid Feeders	Salauddin Ansari	Dr. Omhari Gupta	Awarded
7.	Performance Investigation of Hybrid Renewable Energy System	Sweta Kumari	Dr. U. K. Sinha	Awarded
8.	Assessment Of Islanding Detection Techniques in Multiple Distributed Generation Environment	Naveenkumar Tadikonda	Prof. R. N. Mahanty, Dr. Jeetendra Kumar	Awarded

DEPARTMENT OF MATHEMATICS

1.	On Magnetohydrodynamic Marangoni Convection Flows Over Different Geometries	Abha Kumari	Dr. Rajat Tripathi, Dr. Raj Nandkeolyar	Awarded
2.	Analysis of Hydromagnetic Flow Problems of Viscous, Incompressible and Electrically Conducting Fluids	Vineet Kumar Chaurasiya	Dr. Ramayan Singh, Dr. Rajat Tripathi	Awarded
3.	Design and Security Analysis of Post-Quantum Secure Multivariate Based Cryptographic Primitives as an Aid to IoT and Blockchain Technology	Vikas Srivastava	Dr. Sumit Kumar Debnath	Awarded
4.	Development of Cryptographic Schemes in Quantum Domain	Tapaswini Mohanty	Dr. Sumit Kumar Debnath	Awarded

5.	Geometric Properties and Representations of Some Special Functions Related to Fox-Wright Functions	Anish Kumar	Dr. Sourav Das	Awarded
6.	A Treatise on the MHD Flow and Heat Transfer Analysis of Nanofluids over Stretching Surfaces	Anindita Sahoo	Dr. Raj Nandkeolyar	Awarded
7.	Numerical Treatment of Fractional Order Initial Value Problem and Its Applications	Pawan Kumar Shaw	Dr. Sunil Kumar	Awarded
8.	Mathematical Study on Biological Models through Fractional Derivative	Ram Pratap Chauhan	Dr. Hari Shankar Prasad, Dr. Sunil Kumar	Awarded
9.	Mathematical Modelling and Analysis on Fractional order Dynamical Systems	Ajay Kumar	Dr. Sunil Kumar	Awarded
10.	Mathematical modeling of turbulence induced secondary currents in open channels under different bedforms	Titas Chattopadhyay	Dr. Snehasis Kundu	Awarded
DEPARTMENT OF MECHANICAL ENGINEERING				
1.	Investigation on Performance of Integrated Solar Collector with Nano Particle Enhanced PCM Based Thermal Storage System	Harish Kumar Sharma	Dr. Satish Kumar	Awarded
2.	Investigation of transportation characteristic of mineral slurry	Chandan Gupta	Dr. Satish Kumar	Awarded
3.	Study of High Concentrated Slurry Transportation Through Pump and Pipeline	Asisha Ranjan Pradhan	Dr. Satish Kumar	Awarded
4.	Thermorheological Characterization and Heat Transfer Investigation of Some Complex Nanofluids	N H Khan	M A Hassan, M K Paswan	Awarded
5.	Design, Development and performance Investigation of a Solar Parabolic Trough Collector with Bayonet Tube Receiver	Nishant Singh 2018RSME007	Prof R. V. Sharma and Shalendra Kumar	Awarded
6.	Coupled Thermoelastic Behaviour of Heterogeneous Composite Structures with Porosity	Samarjeet Kumar	Dr. Vishesh Ranjan Kar	Awarded
7.	Elastoplastic Behaviour of Multidirectional Functionally Graded Shell Panels	Kamal Kishore Joshi	Dr. Vishesh Ranjan Kar	Awarded
8.	"Thermomechanical --Vibration Behaviour of Advanced Composite Rotating Blades for High Performance Gas Turbines"	Souvik Singh Rathore	Prof. Sanjay &Dr. Vishesh Ranjan Kar	Awarded
9.	Experimental Investigation on EDM of Nimonic C-263	Dr. Prasan Ralph Dewan (NIT Sikkim)	Dr. Pranab Kumar Kundu Dr. Ranjan Basak (NIT Sikkim)	Awarded
10.	Numerical Study on Buoyancy Driven Flow through Heated Cylinder	Akhilesh Kumar	Prof. M. K. Sinha	Awarded
11.	Experimental Study on Fracture Parameters Using Laser Speckle Technique and Analytical Study	Abhijeet Kumar 2014RSME013	Shalendra Kumar	Awarded
12.	Analytical and Computational Analysis of Encapsulated Phase	Mayank Srivastava	Prof. M. K. Sinha	Awarded

	Change Thermal Energy Storage System			
13.	DYNAMIC ANALYSIS OF FUNCTIONALLY GRADED SANDWICH PLATE AND SHELL PANELS INCLUDING MULTIFIELD INTERACTION	Dr. Abhilash Karakoti	Dr. Shashank Pandey; Dr. Vishesh Ranjan kar	Awarded
14.	Performance Analysis of Double Slope Solar Still with Nanoembedded Binary Eutectic Phase Change Material Solar Energy	Rahul Agarwal	Dr KDP Singh	Awarded
15.	HEAT TRANSFER ANALYSIS OF ABSORBER TUBES USED IN FLAT PLATE SOLAR COLLECTOR USING DIFFERENT NANOFLUIDS	RAM CHANDRA PANDA	SUDHANSU SEKHAR SAHOO (OUTR, BBSR) & ASHOK KUMAR BARIK (NIT, JSR)	Awarded
16.	Some Studies on the Flexural Responses of Perforated FGM Panels under Thermomechanical Loading	Shyam Kumar Chaudhary	Dr. Vishesh Ranjan Kar & Prof. Karunesh Kumar Shukla	Awarded
17.	Dynamic Analysis of Functionally Graded Sandwich Plate and Shell Panels Including Multifield Interaction	Abhilash Karakoti	Dr. Shashank Pandey	Awarded
18.	Control and Optimization of Multi-Axes Space Robot Motion	Abhishek Shrivastava	Dr. Vijay Kumar Dalla	Awarded
19.	Model based diagnosis for sun gear tooth crack in wind turbine drivetrain under constant and ramp up speed	Rishi Kumar (NIT Patna)	Dr. Sankar Kumar Roy	Awarded
20.	Thermo-rheological characterization and heat transfer investigation of some complex nanofluids	N H Khan	Dr. M A Hassan, Dr.MK Paswan	Awarded
21.	A strategic approach to minimize the major losses in process industry through total productive maintenance technique	Mr Raju Ranjan	Dr. Malay Niraj	Awarded
22.	Experimental Investigation of the Performance and Emission of a Diesel Engine Fueled by Bio diesel- Diesel Blends with Oxygenated Additives	Iffikhar Ahmed Khan	Dr. Naresh Prasad	Awarded
23.	Design and Thermal Investigation of Finned Radiator Operated with Hybrid Nano coolant	Ashutosh Kumar	Prof. Prabha Chand	Awarded
DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING				
1.	Synthesis and characterization of rigid polyurethane foam composites loaded with various ceramic fillers	Dr. Srihith Polimera	Dr. Aravind Gali, Dr. S K Nath (Co-supervisor)	Awarded
DEPARTMENT OF PHYSICS				
1.	The Effects of The Screened-Coulomb Potentials In Quantum Mechanics And Related Topics	Patitapaban Sahoo	Dr. U. Laha	Awarded

2.	Studies In Nuclear Scattering Using Manning-Rosen Potential	Bidhan Khirali	Dr. U. Laha	Awarded
DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING				
1.	Application of multi-criteria decision-making methods for sustainable waste management in developing economy	Jogendra Jangre	Dr. Kanika Prasad Dr. Dharmendra Patel	Awarded
2.	Mathematical modelling and analysis of perishable inventory policies	Ranveer Singh Rana	Dr. Dinesh Kumar Dr. Kanika Prasad	Awarded
3.	Modelling Two warehouse Inventory Policies for Perishable Items	Vikas Murmu	Dr. Dinesh Kumar Dr. Ashok Kumar Jha	Awarded
4.	Analyze Machining Characteristics of Nickel-Titanium Shape Memory Alloy using Electrochemical Arc Machining	Nitish Kuma	Prof. Amaresh Kumar	Awarded
5.	Friction Stir Welding of Aluminium and Magnesium Alloys: Fabrication and Characterization	Mukesh kumar	Dr. Ashish Das, Prof. Raj Ballav	Awarded
6.	Process Optimization in Chassis Assembly Line of Automobile industries	Pankaj Kumar	Dr. Dharmendra patel, Prof. Shashi Bhushan Prasad	Awarded

4.7 PUBLICATIONS

4.7.1 JOURNAL (INTERNATIONAL/NATIONAL)

DEPARTMENT OF CIVIL ENGINEERING

- Azhar, Md., Mondal, S., Singh, D. N., & Singh, A. K. (2023). Establishing zone of influence (ZOI) for cylindrical heat source in dry sand. *International Journal of Geotechnical Engineering*, 17(2), 151–161.
- Azhar, Md., Mondal, S., Tang, A. M., & Singh, A. K. (2024). Effect of temperature on the mechanical properties of fine-grained soils - A review. *Journal of Geothermic*, 116, 102863.
- Swarnkar, D. C., & Singh, A. K. (2024). Characteristic of ring footing fixed with geogrid strip resting on sand using numerical technique. *Indian Geotechnical Journal*. Springer.
- Swarnkar, D. C., Singh, A. K., & Kumar Shubham. (2024). Application of ANN for Prediction of Settlement of Ring Foundation. *Journal of Signal, Image and Video Processing*. Springer Nature.
- Swarnkar, D. C., Singh, A. K., & Kumar Shubham. (2024). Application of ANN for Prediction of Settlement of Ring Foundation. *Journal of Signal, Image and Video Processing*. Springer Nature.
- Ghani, S., Kumari, S., & Choudhary, A. K. (2023). Geocell Mattress Reinforcement for Bottom Ash: A Comprehensive Study of Load-Settlement Characteristics. *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, Springer Nature.
- Kumar, A., Gupta, A., Choudhary, A. K., & Choudhary, A. K. (2024). Influence of Geometrical Parameters of Geocell Reinforcement on the Load Carrying Capacity of Footing. *Arabian Journal for Science and Engineering*, 49, 13539–13557.
- Zargar, T. I., Choudhary, A. K., & Choudhary, A. K. (2024). Performance evaluation of recycled concrete aggregates with geosynthetics as an alternative subbase course material in pavement construction. *Road Materials and Pavement Design*.
- Thapa, I., Ghani, S., Kumari, S., & Choudhary, A. K. (2024). Enhancing Soil Performance and Foundation Stability: Leveraging Shredded Recycled Rubber Pieces (SRRP) for Improved Geotechnical Engineering Solutions. *Transportation Infrastructure Geotechnology*.
- Chanda, N., Chintalacheruvu, M. R., & Choudhary, A. K. (2024). Site Selection and Hydropower Potential Assessment in Upper Sutlej River Basin: A Case Study of Indian and Tibetan Regions Using RS-GIS, SWAT, and T-F Models. *International Journal of Hydrology Science and Technology*, Elsevier (Accepted).
- Kumar, S., Mehta, S., & Sinha, A. K. (2023). Surrogate Model-Based Prediction of Settlement in Foundation

- Over Cavity for Reliability Analysis. *Journal of Transportation Infrastructure Geotechnology*, Springer.
- Sinha, A. K., Chittaranja, M., Devayani, S., Gadikota, C. R., Kansara, J. N., & Vadivel, M. (2023). Experimental investigations on self compacting concrete using polymeric waste. *International Journal of Corrosion and Protection*, 51(2), 405–416.
 - Kumar, S., Metya, S., & Sinha, A. K. (2024). Optimizing shallow foundation design: A machine learning approach for bearing capacity estimation over cavities. *Journal of Geomechanics and Engineering*, 37(6), 629–641.
 - Naskar, S., Gupta, S. K., & Choudhary, A. K. (2024). 3D finite element analysis of stone Column behaviour in layered soil with geosynthetic reinforced soil beds. *Arab J Sci Eng* (Accepted).
 - Kumar, A., Choudhary, A. K., & Babu, G. L. S. (2023). Behavior of two plate groups in reinforced soil under uplift load. *International Journal of Civil Engineering*, 21, 1463–1475.
 - Shiwani, Choudhary, A. K., & Rathod, G. W. (2023). Three-dimensional numerical analysis on the behaviour of geocell-reinforced retaining Structures. *Transp. Infrastruct. Geotech.*
 - Singh, P., Prasad, B. K., & Kumar, V. (2024). Influence of elevated temperature on compressive strength of LD slag aggregate concrete. *Journal of Structural Fire Engineering*, 15(1), 76–90.
 - Roy, S., & Chintalacheruvu, M. R. (2023). Google Earth Engine-based morphometric parameter evaluation and comparative analysis of soil erosion susceptibility using statistical and machine learning algorithms in large river basins. *Earth Sci Inform*, 1-23.
 - Roy, S., & Chintalacheruvu, M. R. (2023). Delineating Hydro-geologically Constrained Groundwater Zones Through Innovative Ensemble of Hypsometric Analysis and Machine Learning Algorithms. *Earth Sci Inform*.
 - Gogineni, A., & Chintalacheruvu, M. R. (2023). Assessing temporal snow cover variation in the Sutlej River basin using google earth engine and machine learning models. *Earth Sci Inform*.
 - Gogineni, A., Chintalacheruvu, M. R., & Kale, R. V. (2024). Modelling of snow and glacier melt dynamics in a mountainous river basin using integrated SWAT and machine learning approaches. *Earth Science Informatics*, 1-23.
 - Chintalacheruvu, M. R., & Modi, P. (2023). Application of best subset method for river water quality modeling: A study on Godavari River, India. *Environmental Quality Management*, 33(1), 393–409.
 - Modi, P., & Chintalacheruvu, M. R. (2023). Investigating river water quality assessment through non-parametric analysis: A case study of the Godavari River in India. *Environmental Quality Management*.
 - Roy, S., & Chintalacheruvu, M. R. (2023). Enhanced morphometric analysis for soil erosion susceptibility mapping in the Godavari River basin, India: leveraging Google Earth Engine and principal component analysis. *ISH Journal of Hydraulic Engineering*.
 - Maji, S., Swargiary, D., Senapati, A., & Sikdar, U. (2024). ML and AI-based prediction of precipitation trends. *Procedia Computer Science*, 235, 2279–2287.
 - Pratap, B., Mondal, S., & Rao, B. H. (2023). NaOH molarity influence on mechanical and durability properties of geopolymer concrete made with fly ash and phosphogypsum. *Structures*, 56, 105035. Elsevier.
 - Pratap, B., Mondal, S., & Rao, B. H. (2024). Prediction of compressive strength of bauxite residue-based geopolymer mortar as pavement composite materials: An integrated ANN and RSM approach. *Asian Journal of Civil Engineering*, 25(1), 597–607.
 - Pratap, B., Mondal, S., & Rao, B. H. (2024). Mechanical and durability assessment of phosphogypsum-bauxite residue-fly ash-based alkali-activated concrete. *Construction and Building Materials*, 411, 134670.
 - Pratap, B., Bhunia, D., Azhar, M., Hanumantha Rao, B., & Mondal, S. (2024). Synthesis of sustainable subgrade geocomposite material using phosphogypsum stabilized with red mud. *Indian Geotechnical Journal*, 1-11.
 - Pratap, B., Kumari, P., Rao, B. H., & Mondal, S. (2024). Mechanical and durability performance of fly ash on bauxite residue and ground granulated blast slag based geopolymer composite. *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, 1-17.
 - Kumar, M., Pratap, B., Azhar, M., Mondal, S., & Singh, R. P. (2024). The utilization of plastic waste for stabilizing expansive soil subgrade: A critical review. *Civil Engineering Infrastructures Journal*.
 - Pal, S., & Deb, K. (2023). Filtration capability of geotextile encasement to minimize clogging of stone column during consolidation. *International Journal of Geomechanics, ASCE*, 23(6), 04023060.
 - Sahu, A., Kumar, S., Srivastava, A. K. L., & Pratap, B. (2024). Performance of recycled aggregate concrete using copper slag as fine aggregate. *Journal of Building Engineering*, 82, 1–17. Elsevier.
 - Sahu, A., Kumar, S., Srivastava, A. K. L., & Chithambaram, S. J. (2024). Performance of recycled aggregate concrete incorporating copper slag at elevated temperature. *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, Springer.
 - Alam, M. F., Kumar, S., Kumar, S., & Srivastava, A. K. L. (2024). Enhancing high-strength self-compacting concrete properties through Nano-silica: Analysis and Prediction of Mechanical Strengths. *Journal of Building Pathology and Rehabilitation*, 43, 1–15.
 - Alam, M. F., Pratap, B., Azhar, M., Kumar, S., & Srivastava, A. K. L. (2024). Microstructure and durability properties of high strength self-compacting concrete using micro silica and nano silica. *Asian Journal of Civil Engineering*, 43, 1–15.
 - Nivedita, K., Prahlad, P., & Seeram, M. (2024). Optimality of reinforced concrete coupled shear wall using machine learning. *Asian Journal of Civil Engineering*.
 - Madhuri, S., & Pramod, K. (2023). Response of asymmetric reinforced concrete buildings under directional seismic loads. *Asian Journal of Civil Engineering*.
 - Mohanty, R. S., & Sangeeta Kumari. (2024). A physical-based semi-distributed continuous hydrological modelling for Brahmani River Basin, Eastern India. *International Journal of River Basin Management*, 1-13.

- Mohanty, R. S., & Sangeeta Kumari. (2024). A physical-based semi-distributed continuous hydrological modelling for Brahmani River Basin, Eastern India. *International Journal of River Basin Management*, 1-13.
- Abu, R., & Sangeeta, K. (2024). Simulation-optimization of water distribution networks using ANFIS-evolutionary techniques. *KSCE Journal of Civil Engineering*, 28, 484-494.
- Abu, R., & Sangeeta, K. (2023). Performance evaluation of ANN and ANFIS models for estimating velocity and pressure in water distribution networks. *Water Supply*, 23(9), 3925-3949.
- Shubham, K., Metya, S., Sinha, A. K., & Gobinath, R. (2024). One-Dimensional-Convolutional Neural Network (1D-CNN) based reliability analysis of foundation over cavity incorporating the effect of simulated noise. *Advances in Civil Engineering*.
- Shubham, K., Metya, S., & Sinha, A. K. (2024). Optimizing shallow foundation design: a machine learning approach for bearing capacity estimation over cavities. *Geomechanics and Engineering, An International Journal*, 37(6), 629-641.
- Chaudhary, N., Metya, S., & Sharma, K. K. (2024). Influence of hydraulic distribution pattern on the rock slope stability under block toppling failure. *KSCE Journal of Civil Engineering*, 28(4).
- Singh, P., Prasad, B., & Kumar, V. (2024). Influence of elevated temperature on compressive strength of LD slag aggregate concrete. *Journal of Structural Fire Engineering*, 15(1), 76-90.
- Singh, S., Sharma, M., & Prasad, P. (2024). Examining the association among various ground motion parameters of earthquakes for near and far field ground motions in context of seismic analysis. *Civil Engineering*.
- Singh, S., Sharma, M., & Prasad, P. (2024). Examining the association among various ground motion parameters of earthquakes for near and far field ground motions in context of seismic analysis. *Civil Engineering*.
- Murmu, S. K., & Mardi, M. (2023). Simulation and investigation into the pluvial effect on peri-urban unsewered drainage basin of Kolkata due to rapid urbanization. *Environmental Monitoring and Assessment*, 195(6), 654.
- Murmu, S. K., & Mardi, M. (2023). Simulation and investigation into the pluvial effect on peri-urban unsewered drainage basin of Kolkata due to rapid urbanization. *Environmental Monitoring and Assessment*, 195(6), 654.

DEPARTMENT OF CHEMISTRY

- Sau, M., Dubey, S., Roy, S., Samanta, S., & Das, T. (2023). DBU Promoted Deformylative /Dehalogenative Difunctionalization to Access β -Bromovinyl Aldehydes Derived from Tetralones. *European Journal of Organic Chemistry*, 2023, e202300788.
- Dubey, S., Sau, M., Roy, S., Mandal, S., Sahoo, G., Ghorai, D., Mukherjee, A., Mondal, S., & Das, T. (2024). Metal-Free C(sp²)-H Functionalization of Cyclopentene-1,3-dione: A Greener Approach for C-N and C-O Bond Formation Using Sodium Azide. *ChemistrySelect*, 9, e202400747.
- Shivangini, S., Manas, M., Trilochan, M., Anbumozhi, A., Naveen, K. V., & Sudhanshu, S. P. (2023). Facile Synthesis of Citric Acid Functionalized Fe₃O₄@Activated Carbon Magnetic Nanocomposite for Efficient Adsorption of Brilliant Green Dye from Wastewater. *ChemistrySelect*, 38(8), e202205045.
- Deole, S., & Pati, S. S. (2024). Recent advances in magnetic nanomaterials in wastewater treatment: a review. 13, 12-31.
- Moulick, D., Ghosh, D., Gharde, Y., Majumdar, A., Upadhyay, M. K., Chakraborty, D., Mahanta, S., Das, A., Choudhury, S., Brestic, M., Alahmadi, T. A., Ansari, M. J., Santra, S. C., & Hossain, A. (2024). An assessment of the impact of traditional rice cooking practice and eating habits on arsenic and iron transfer into the food chain of smallholders of Indo-Gangetic plain of South-Asia: Using AMMI and Monte-Carlo simulation model. *Heliyon*, 10, e28296.
- Moulick, D., Mukherjee, A., Das, A., Roy, A., Majumdar, A., Dhar, A., Pattanaik, B. K., Chowardhara, B., Ghosh, D., Upadhyay, M. K., Yadav, P., Hazra, S., Sarkar, S., Mahanta, S., Santra, S. C., Choudhury, S., Maitra, S., Mishra, U. N., Bhutia, K. L., Skalicky, M., Obročník, O., Bárek, V., Brestic, M., & Hossain, A. (2024). Selenium—An environmentally friendly micronutrient in agroecosystem in the modern era: An overview of 50-year findings. *Ecotoxicology and Environmental Safety*, 270, 115832.
- Moulick, D., Hossain, A., Bárek, V., Chowardhara, B., Mukherjee, A., Pattnaik, B. K., Roy, P., Mahanta, S., Hazra, S., Sarkar, S., Garai, S., Ghosh, S., Bhutia, K. L., Choudhury, S., Ghosh, D., Santra, S. C., Pramanik, B., Karmakar, S., Atta, K., Dutta, D., Shankar, T., Sahoo, U., Sairam, M., Gangundi, S., Maitra, S., Brestic, M., & Skalicky, M. (2024). Heavy metal stress in the agro-environment: consequences, adaptations and remediation. *International Journal of Environmental Science and Technology*.
- Ghosh, S., Loya, M., Giri, S., Pramanik, N., & Atta, A. K. (2024). Carbohydrate-modified simple efficient fluorometric probe for sensing Cu²⁺ ions in aqueous solution. *Journal of Molecular Structure*, 139662.
- Kant, K., Naik, P., Patel, C. K., Some, S., Banerjee, S., Aljaar, N., Atta, A. K., & Malakar, C. (2024). Organocatalytic Approaches towards the Synthesis of Asymmetric Tetrahydroquinoline (THQ) Derivatives. *Synthesis*.
- Kant, K., Patel, C. K., Reetu, R., Teli, Y. A., Naik, P., Some, S., Hazra, C. K., Aljaar, N., Atta, A. K., & Malakar, C. C. (2024). Comprehensive Strategies for the Synthesis of 1,3-Enyne Derivatives. *Synthesis*.
- Dey, B., Ghosh, S., Malakar, C. C., & Atta, A. K. (2024). Review on pyrene-based fluorometric chemosensing materials for picric acid and their AIE properties. *Microchemical Journal*, 200, 110486.
- Dey, B., Boje, D., Giri, S., & Atta, A. K. (2024). Triazole-Bridged Anthracene-Sugar Derivative for the Detection of Picric Acid and Au (III) Ions in Water Medium and Real Applications. *Journal of Analytical Chemistry*, 79(4), 389-399.
- Shaibur, M. R., Ahmmed, I., Sarwar, S., Karim, R., Hossain, M. M., Islam, M. S., ..., & Ambade, B. (2023).

- Groundwater quality of some parts of coastal Bhola district, Bangladesh: exceptional evidence. *Urban Science*, 7(3), 71.
- Mandal, S., Manna, S., Biswas, K., Nag, S., & Ambade, B. (2023). Effect of gamma ray irradiation on optical and luminescence properties of CeO₂ doped bismuth glass. *Ceramics International*, 49(14), 23878–23886.
 - Mahato, D. K., Sankar, T. K., Ambade, B., Mohammad, F., Soleiman, A. A., & Gautam, S. (2023). Burning of municipal solid waste: An invitation for aerosol black carbon and PM_{2.5} over mid-sized city in India. *Aerosol Science and Engineering*, 7(3), 341–354.
 - Sankar, T. K., Kumar, A., Ambade, B., Mahato, D. K., Hussain, A. J., Sethi, S. S., & Gautam, S. (2023). Impact of COVID-19 on Black Carbon and Carbon monoxide levels and its health risk assessment over East India. *Aerosol Science and Engineering*, 7(3), 368–379.
 - Sethi, S. S., Ambade, B., Mohammad, F., Al-Lohedan, H. A., & Soleiman, A. A. (2023). Accumulation and Toxicity of Polycyclic Aromatic Hydrocarbons in long-term soil irrigated with treated Wastewater. *Sustainability*, 15(18), 13581.
 - Dumka, U. C., Kosmopoulos, P. G., Baxevanaki, E., Kaskaoutis, D. G., Huda, M. N., Khan, M. F., ..., & Munshi, P. (2023). Surface Radiative Forcing as a Climate-Change Indicator in North India due to the Combined Effects of Dust and Biomass Burning. *Fire*, 6(9), 365.
 - Patidar, K., Ambade, B., Mohammad, F., & Soleiman, A. A. (2023). Microplastics as heavy metal vectors in the freshwater environment: distribution, variations, sources and health risk. *Physics and Chemistry of the Earth, Parts a/b/c*, 131, 103448.
 - Verma, R. L., Gunawardhana, L., Kamyotra, J. S., Ambade, B., & Kurwadkar, S. (2023). Air quality trends in coastal industrial clusters of Tamil Nadu, India: A comparison with major Indian cities. *Environmental Advances*, 13, 100412.
 - Ambade, B., Sankar, T. K., Gautam, S., Mahato, D. K., Dumka, U. C., Mohammad, F., ..., & Gautam, A. S. (2023). Black carbon vs carbon monoxide: Assessing the impact on Indian urban cities. *Water, Air, & Soil Pollution*, 234(11), 710.
 - Sankar, T. K., Ambade, B., Mahato, D. K., Kumar, A., & Jangde, R. (2023). Anthropogenic fine aerosol and black carbon distribution over urban environment. *Journal of Umm Al-Qura University for Applied Sciences*, 9(4), 471–480.
 - Perumpully, S. J., Kumar, R. P., Gautam, S., Ambade, B., & Gautam, A. S. (2023). An inclusive trend study of evaluation and scientometric analysis of microplastics. *Physics and Chemistry of the Earth, Parts A/B/C*, 132, 103455.
 - Rajpoot, A. S., Chelladurai, H., Choudhary, A. K., Ambade, B., & Choudhary, T. (2023). Thermal and environmental assessment of Botryococcusbraunii green biodiesel with nanoparticles using energy-exergy-emission-sustainability (3ES) analysis in a diesel engine. *Sustainable Energy Technologies and Assessments*, 60, 103473.
 - Ambade, B., Singh, S. K., Choudhary, A., & Kumar, P. (2023). Introduction to the special issue "Environment and Climate: Role of Humans and Technologies". *Environmental Science and Pollution Research*, 30(60), 125238–125240.
 - Patidar, K., Ambade, B., Verma, S. K., & Mohammad, F. (2023). Microplastic contamination in water and sediments of Mahanadi River, India: An assessment of ecological risk along rural-urban area. *Journal of Environmental Management*, 348, 119363.
 - Gautam, A. S., Kumar, S., Gautam, S., Singh, K., Ram, K., Singh, D., & Sharma, M. (2024). Regional air quality: biomass burning impacts of SO₂ emissions on air quality in the Himalayan region of Uttarakhand, India. *Air Quality, Atmosphere & Health*, 17(1), 1–18.
 - Karri, R. R., Ravindran, G., Mubarak, N. M., Ambade, B., Dehghani, M. H., Hassan, S. K. M., & Vera, T. (2024). Overview of diseases and health consequences due to air pollution. In *Diseases and Health Consequences of Air Pollution* (pp. 1–26). Academic Press.
 - Shaibur, M. R., Sarwar, S., Hossain, M. S., Ambade, B., Chakraborty, T. K., & Ahmed, F. F. (2024). Plastic waste production and management in Jashore municipality and its surrounding areas, Bangladesh: An overview. *Physics and Chemistry of the Earth, Parts A/B/C*
 - Kusumlata, Ambade, B., Kumar, A., & Gautam, S. (2024). Sustainable Solutions: Reviewing the Future of Textile Dye Contaminant Removal with Emerging Biological Treatments. *Limnological Review*, 24(2), 126–149.
 - Patidar, K., Ambade, B., & Alshehri, M. (2024). Microplastics and associated polycyclic aromatic hydrocarbons in surface water and sediment of the Bay of Bengal coastal area, India: sources, pathway and ecological risk. *Environmental Geochemistry and Health*, 46(5), 1–18.
 - Isinkaralar, O., Isinkaralar, K., & Ambade, B. (2024). Assessment of societal health risks: Spatial distribution and potential hazards of toxic metals in street dust across diverse communities. *Water, Air, & Soil Pollution*, 235(5), 302.
 - Rahman, M., Hasan, K., Siddique, M. A. B., Ambade, B., Hussain, M. A., Salam, M. A., & Ibrahim, M. (2024). Particulate matter concentrations around natural gas-fired power plants and their associated health impact assessment. *Journal of King Saud University-Science*, 103270.
 - Patidar, K., Ambade, B., Younis, A. M., & Alluhayb, A. H. (2024). Characteristics, fate, and sources of microplastics contaminant in surface water and sediments of river water. *Physics and Chemistry of the Earth, Parts A/B/C*, 134, 103596.
 - Shaibur, M. R., Khatun, Y., Howlader, M., Islam, M. M., Rahman, M. W., Khan, A. S., & Ambade, B. (2024). Determination of water quality and efficient removal of arsenic and iron from groundwater using mahogany fruit husk and banana peduncle charcoals. *Results in Engineering*, 22, 102220.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

- Kumar, R., & Azad, C. (2024). Comprehensive overview of Alzheimer's disease utilizing Machine Learning approaches. *Multimedia Tools and Applications*, 1-53.

- Mahato, K. D., Kumar Das, S. S., Azad, C., & Kumar, U. (2024). Machine learning based hybrid ensemble models for prediction of organic dyes photophysical properties: Absorption wavelengths, emission wavelengths, and quantum yields. *APL Machine Learning*, 2:1.
- Mahato, K. D., Das, S. G. K., Azad, C., & Kumar, U. (2024). Stokes shift prediction of fluorescent organic dyes using machine learning based hybrid cascade models. *Dyes and Pigments*, 222, 111918.
- Dhal, P., & Azad, C. (2024). A fine-tuning deep learning with multi-objective-based feature selection approach for the classification of text. *Neural Computing and Applications*, 36(7), 3525-3553.
- Dhal, P., & Azad, C. (2024). Hybrid momentum accelerated bat algorithm with GWO based optimization approach for spam classification. *Multimedia Tools and Applications*, 83(9), 26929-26969.
- Mahato, K. D., Saini, C., Das, S. G. K., Kumar, A., Azad, C., & Kumar, U. (2024). Breast Cancer Prediction Using Oversampling Technique, Particle Swarm Optimization, and Fuzzy Logic. *Journal of Intelligent Systems in Current Computer Engineering*, 2, 1-16.
- Mahato, K. D., Das, S. G. K., Azad, C., & Kumar, U. (2024). Prediction of Organic Dyes Absorption Wavelength Using Different Machine Learning Boosting Models. *AIJR Abstracts*, 13.
- Gavel H., Azad C., (2024) Fundus Image Enhancement through Multichannel Analysis and Particle Swarm Optimization using Raspberry Pi4, *IEEE COMSOC MMTC Communications-Frontiers* 19 (1), 4-9.
- Dhal, P., & Azad, C. (2023). A lightweight filter-based feature selection approach for multi-label text classification. *Journal of Ambient Intelligence and Humanized Computing*, 14(9), 12345-12357.
- Devara, S. R., & Azad, C. (2023). Improved database security using cryptography with genetic operators. *SN Computer Science*, 4(5), 570.
- Joy Gorai, D.K. Shaw. A BERT-encoded ensembled CNN model for suicide risk identification in social media posts. *Neural Computing & Application*. 36, 10955–10970 (2024).
- Joy Gorai, D.K. Shaw. 'Semantic difference-based feature extraction technique for fake news detection'. *Journal of Supercomputing* (2024).
- Pal, A., Kumar, V., Hassan, K. L., & Singh, B. K. (2024). A framework for leaf disease analysis and estimation using MAML with DeepLabV3. *Microsystem Technologies*, 1-19.
- Raj, S., & Singh, B. K. (2024). SpFusionNet: deep learning-driven brain image fusion with spatial frequency analysis. *Multimedia Tools and Applications*, 1-22.
- Kumar, S., Verma, S., Singh, B. K., Kumar, V., Chandra, S., & Barde, C. (2024). Entropy based adaptive color image watermarking technique in YCbCr color space. *Multimedia Tools and Applications*, 83(5), 13725-13751.
- Gaurav, K., Singh, B. K., & Kumar, V. (2024). Intelligent fault monitoring and reliability analysis in safety-critical systems of nuclear power plants using SIAO-CNN-ORNN. *Multimedia Tools and Applications*, 1-25.
- Sahoo, C., Wankhade, M., & Singh, B. K. (2023). Sentiment analysis using deep learning techniques: a comprehensive review. *International Journal of Multimedia Information Retrieval*, 12(2), 41.
- Saxena, M., Dutta, S., K. Singh, B., & Neogy, S. (2023). Multi-objective-based route selection approach using AOMDV in MANET. *SN Computer Science*, 4(5), 581.
- Gaurav, K., Kumar, V., & Singh, B. K. (2023). Dependability analysis of a system using state-space modeling techniques: a systematic review. *IEEE Transactions on Reliability*.
- Baranwal, G., Kumar, D., Biswas, A., & Yadav, R. (2024). A Blockchain Framework for Efficient Resource Allocation in Edge Computing. *IEEE Transactions on Network and Service Management*.
- Baranwal, G., Kumar, D., & Vidyarthi, D. P. (2023). Blockchain based resource allocation in cloud and distributed edge computing: A survey. *Computer Communications*.
- Krishna, C., Kumar, D., & Kushwaha, D. S. (2023). A comprehensive survey on pandemic patient monitoring system: enabling technologies, opportunities, and research challenges. *Wireless Personal Communications*, 131(3), 2125-2172.
- Agrawalla, B., Shukla, A. K., Tripathi, D., Singh, K. K., & Ramachandra Reddy, B. (2024) Ensemble feature ranking approach for software fault prediction. *Journal of Intelligent & Fuzzy Systems*, (Preprint), 1-14.
- Tripathi, D., Reddy, B. R., Dwivedi, S., Shukla, A. K., Chandramohan, D., & Dewangan, R. K. (2024). Nature-inspired optimization algorithms-based feature selection: Application in credit scoring. *Journal of Intelligent & Fuzzy Systems*, (Preprint), 1-11.
- Saxena, M., Dutta, S., & Singh, B. K. (2023). Optimal routing using whale optimization and lion optimization algorithm in WSN. *Wireless Networks*, 1-18.
- Dutta, S., Giri, A., Giri, D., Neogy, S., Dahal, K., & Chen, W. (2023). Optimum Node Deployment Policy (ONDP) for WSN: Trade-off between Maximization of Area Coverage and Lifetime. *Wireless Personal Communications*, 133(2), 1055-1080.
- Saxena, M., Dutta, S., K. Singh, B., & Neogy, S. (2023). Multi-objective-based route selection approach using AOMDV in MANET. *SN Computer Science*, 4(5), 581.
- Mishra, K. C., Dutta, S. (2023). Colluder detection in SaaS cloud applications with subscription-based license. *Multimedia Tools and Applications*, 82(8), 12135-12149.
- Mishra, K. C., Dutta, S. (2023). A simple and secure user authentication scheme using Map Street View with usability analysis based on ISO/IEC 25022. *International Journal of Information Security*, 22(2), 403-415
- Saxena, M., Dutta, S., (2024) Energy-Efficient and QoS-Aware Cluster-Based Routing in Wireless Sensor Networks: A Hybrid Approach towards Optimal Cluster Head Selection, *Ad Hoc and Sensors Wireless Networks*, Old City Publications, AHSWN 59.1-2, p. 1-23
- Mandal, S., Khan, D.A. Enhanced-Longest Common Subsequence based novel steganography approach for cloud storage. *Multimedia Tools & Applications* 82, 7779–7801 (2023).
- Paikaray, D., Mehta, A.K. & Khan, D.A. Optimized convolutional neural network for the classification of lung cancer. *Journal of Supercomputing* 80, 1973–1989 (2024).

- Bahuguna, A., Bhaumik, G., & Govil, M. C. (2024). Local Extrema Min-Max Pattern: A novel descriptor for extracting compact and discrete features for hand gesture recognition. *Biomedical Signal Processing and Control*, 93, 106203.
- Barnwal, S.K., Prakash, A. & Yadav, D.K. (2023). Improved African Buffalo Optimization-Based Energy Efficient Clustering Wireless Sensor Networks using Metaheuristic Routing Technique. *Wireless Pers Commun* 130, 1575–1596.
- Yadav, G., & Yadav, D. K. (2023). Contrast enhancement of region of interest of backlit image for surveillance systems based on multi-illumination fusion. *Image and Vision Computing*, 135, 104693.
- Amar, T. A., Kumar, A., & Yadav, D. K. (2023). Experimental Investigation and Weibull Statistical Analysis on Tensile Behaviour of Carbon/Epoxy Composites. *Journal of The Institution of Engineers (India): Series D*, 1-11.
- Kumar, C., Jha, S. K., Yadav, D. K., Prakash, S., & Prasad, M. (2024). A generalized approach to construct node probability table for Bayesian belief network using fuzzy logic. *The Journal of Supercomputing*, 80(1), 75-97.
- Amar, T. A., Kumar, A., & Yadav, D. K. (2024). A Comparative Study on the Properties of Carbon Fiber-Reinforced Polymer Composites Developed by Hand Layup and Vacuum Bagging Molding Techniques. *Journal of The Institution of Engineers (India): Series D*, 1-13.
- Yadav, G., & Yadav, D. K. (2024). Multi-illumination Mapping-Based Fusion Method for Low-Light Area's Visibility and Backlit Image Enhancement. *Arabian Journal for Science and Engineering*, 49(3), 3095-3108.
- RAHMAN, U., & YADAV, D. K. (2024). Integrating Different Colour Spaces for Colour and Contrast Correction in Underwater Images.
- Barnwal, S. K., Prakash, A., & Yadav, D. K. (2024). Fuzzy Logic Based Energy Efficient Simultaneous Wireless Information and Power Transfer for Wireless Sensor Networks. *Wireless Personal Communications*, 1-26.
- Kumar, A., Kumari, J., & Pradhan, J. (2023). Explainable deep learning for mental health detection from English and Arabic social media posts. *ACM Transactions on Asian and Low-Resource Language Information Processing*.
- Pradhan, J., Pal, A. K., Islam, S. H., & Bhaya, C. (2023). DNA encoding-based nucleotide pattern and deep features for instance and class-based image retrieval. *IEEE Transactions on NanoBioscience*.
- Pradhan, J. (2023). A DCT probability histogram-based ROI features for content-based natural and medical image retrieval applications. *Digital Signal Processing*, 141, 104152.
- Muduli, D., Kumar, R. R., Pradhan, J., & Kumar, A. (2023). An empirical evaluation of extreme learning machine uncertainty quantification for automated breast cancer detection. *Neural Computing and Applications*, 1-16.
- Mehta, R., Shukla, S., Pradhan, J., Singh, K. K., & Kumar, A. (2023). A vision transformer-based automated human identification using ear biometrics. *Journal of Information Security and Applications*, 78, 103599.
- Sharma, S. K., Muduli, D., Priyadarshini, R., Kumar, R. R., Kumar, A., & Pradhan, J. (2024). An evolutionary supply chain management service model based on deep learning features for automated glaucoma detection using fundus images. *Engineering Applications of Artificial Intelligence*, 128, 107449.
- Raj, M., Ayub, A., Pal, A. K., Pradhan, J., Varish, N., Kumar, S., & Varikasuvu, S. R. (2024). Diagnostic Accuracy of Artificial Intelligence-Based Algorithms in Automated Detection of Neck of Femur Fracture on a Plain Radiograph: A Systematic Review and Meta-analysis. *Indian Journal of Orthopaedics*, 1-13.
- Pradhan, J., Verma, R., Kumar, S., & Sharma, V. (2024). An Efficient Sarcasm Detection using Linguistic Features and Ensemble Machine Learning. *Procedia Computer Science*, 235, 1058-1067.
- M. Sarkar, J. Pradhan, A. K. Singh and H. Nenavath (2023), "A Novel Hybrid Quantum Architecture for Path Planning in Quantum-Enabled Autonomous Mobile Robots," in *IEEE Transactions on Consumer Electronics*,
- Kumar, A., Reddy, Singh, B. R., and K. K., (2024) "Vision transformer based effective model for early detection and classification of lung cancer," *SN Computer Science*.
- Ohm, A. K. and Singh, K. K., (2024) "Study of tokenization strategies for the santhali language," *SN Computer Science*.
- Singh, O. and Singh, K. K., (2024) "Lung and colon cancer classification of histopathology images using convolutional neural network," *SN Computer Science*, pp. 1–17.
- Mehta, R. and Singh, K.K., (2024). Ensemble of transfer learning and light-weight convolutional neural network model for an effective ear recognition system. *Evolving Systems*, 15(1), pp.115-131.
- Mehta, R. and Singh, K.K., (2023). Deep convolutional neural network-based effective model for 2D ear recognition using data augmentation. *The Imaging Science Journal*, pp.1-18.
- Mehta, R., Ujjwal, G. and Singh, K.K., (2023). 3D Ear recognition using rigid point set registration and coherent point drift algorithm.
- Singh, O. and Singh, K.K., (2023). An approach to classify lung and colon cancer of histopathology images using deep feature extraction and an ensemble method. *International Journal of Information Technology*, 15(8), pp.4149-4160.
- Mehta, R., Shukla, S., Pradhan, J., Singh, K.K. and Kumar, A., (2023). A vision transformer-based automated human identification using ear biometrics. *Journal of Information Security and Applications*, 78, p.103599.
- Mehta, R. and Singh, K.K., (2023). An efficient ear recognition technique based on deep ensemble learning approach. *Evolving Systems*, pp.1-17.
- Saikia, T., Singh, K.K., Vityazev, S. and Sheikh Akbari, A., (2023). Introduction to various optimization techniques. *IETE Technical Review*, pp.1-13.
- Singh, O., Kashyap, K.L. and Singh, K.K., (2023). Mesh-free technique for enhancement of the lung CT image. *Biomedical Signal Processing and Control*, 81, p.104452.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

- Yadav, A., Kumar, A., & Prakash, A. (2023). Design and analysis of all-optical half and full adder/subtractor using nonlinear asymmetric directional couplers. *Optik (Elsevier)*, 288, 171190.
- Srivastava, M., Kumar, A., Bharadwaj, K., Mahanty, S., & Singh, D. K. (2023). Compact and high-speed all-optical 2n:1 multiplexer scheme using MRRs. *Journal of Circuits, Systems, and Computers (World Scientific)*, 33(5), 2450087.
- Yadav, A., Kumar, A., & Prakash, A. (2024). Harnessing electro-optic effect in directional coupler for implementation of optical digital data transmission circuits. *Indian Journal of Pure & Applied Physics (IJPAP)*, 62(3), 196-211.
- Yadav, A., Kumar, A., & Prakash, A. (2024). Harnessing XPM effects in non-linear directional couplers for 4-bit gray code conversion and even parity verification. *Journal of Electrical Engineering*, 75(1), 14-23.
- Singh, R. R., Kumar, A., Singh, S. N., & Yadav, A. (2024). Realization of all-optical full-adder and subtractor circuit based on cross-phase modulation in a phase shifted fiber Bragg grating. *Indian Journal of Pure & Applied Physics (IJPAP)*, 62(6), 464-477.
- Srivastava, M., Kumar, A., Bhardwaj, K., Kumar, D., & Singh, R. (2024). Implementation of Fredkin gate suitable for compact and ultra-fast reversible Fredkin gate using MRR. *Indian Journal of Pure & Applied Physics (IJPAP)*, 62(6), 451-463.
- Mahanty, S., & Kumar, A. (2024). Design and implementation of performance specific ALU unit using the phase shifted fiber Bragg grating structure assisted with directional couplers-based on controller unit. *Optical and Quantum Electronics (Springer Nature)*. [ACCEPTED]
- Mahanty, S., Yadav, A., & Kumar, A. (2024). 3D-Modelling and analysis of all-optical carry look-ahead Adder circuits using nonlinear structures. *Indian Journal of Pure and Applied Physics (IJPAP)*, (2024), 62(8), 642 – 655.
- Prasad, P., & Kumar, A. (2023). A miniaturized quintuple-band frequency selective surface based on enclosed cross slots. *Journal of Electrical Engineering*, 74(4), 293-301.
- Challa, S. K., Kumar, A., Semwal, V. B., & Dua, N. (2023). An optimized deep learning model for human activity recognition using inertial measurement units. *Expert Systems*, 40(10), e13457.
- Kumar, R., Kumar, A., & Priya, A. (2023). Efficiency enhancement of the CIGSSe/Perovskite inorganic and organic thin-film solar cell. *Optik*, 295, 171466.
- Kumar, R., Priya, A., & Kumar, A. (2023). Effect of perovskite HTL on the efficiency enhancement of CIGSSe photovoltaics cell. *Materials Today: Proceedings*.
- Kumar, R., & Kumar, A. (2024). Impact of CeMgO2 window and CeMnO2 buffer layer nanomaterials parameters on the performance of ACZSSe/Perovskite solar cell. *Materials Today Communications*, 38, 108300.
- Pachori, K., Prakash, A., & Kumar, N. (2023). Performance prediction of metasurface-loaded ceramic-based MIMO antenna for B41/n41 bands using ML algorithms. *Electromagnetics*, 43(6), 441-451.
- Pachori, K., Prakash, A., & Kumar, N. (2024). Effective modeling of metasurface-loaded circularly polarized dielectric resonator-based MIMO antenna for sub-6.0-GHz band using machine learning algorithms. *International Journal of Communication Systems*, 37(8), e5738.
- Barnwal, S. K., Prakash, A., & Yadav, D. K. (2024). Fuzzy Logic Based Energy Efficient Simultaneous Wireless Information and Power Transfer for Wireless Sensor Networks. *Wireless Personal Communications*, 1-26.
- Barnwal, S. K., & Prakash, A. (2024). Comparative Analysis of LEACH Network Routing Protocol in Wireless Sensor Networks: A Survey. *Wireless Personal Communications*, 1-30.
- Kumar, B. B., Bhowmik, B., Singh, A. P., Jit, S., & Singh, K. (2024). Room temperature ZnO nanorods based TFT ammonia sensor: An experimental and simulation study. *Applied Physics A*, 130(5), 308.
- Kumar, S., Bhowmik, B. (2024). Frequency-tuned selectivity enhancement of Mg@ ZnO-TiO2 nanoflake-based heterojunction sensor devices. *Analyst*, 149(6), 1895-1906.
- Chowdhury, N. K., Singh, A. K., Hazra, A., & Bhowmik, B. (2024). Highly Reproducible and Reliable Methanol Sensor Based on Hydrothermally Grown TiO2 Nanoparticles. *IEEE Transactions on Device and Materials Reliability*, 23, 591 – 598.
- Singh, A. K., Chowdhury, N. K., Hazra, A., & Bhowmik, B. (2024). Room-Temperature Au/TiO2Nanorods/Ti TFT Butanone Sensor: Role of Surface States. *Journal of Electronic Materials*, 52(6), 3622-3632.
- Singh, A. K., & Bhowmik, B. (2024). A highly stable room temperature titania nanostructure-based thin film transistor (TFT) alcohol sensor. *Sensors & Diagnostics*, 2(1), 225-235.
- Turuk, B. K., & Behera, B. (2024). A Review of one port SAW resonator for Application in the Communication systems. *IOP Engineering Research Express*, 6, 1-17.
- Kumari, N., Yadagani, A., Behera, B., Semwal, V. B., & Mohanty, S. D. (2024). Human Motion Activity Recognition and Pattern Analysis using Compressed Deep Neural Networks. *Taylor and Francis Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization*, 12(1).
- Nagmani, A., & Behera, B. (2024). Design and Performance Analysis of a High-Temperature Sensor with a Low-Temperature Coefficient of Frequency. *Springer Journal of Electronics Materials*, 53, 2488–2497.
- Behera, B., & Bhatkar, S. (2024). Design and simulation of Nanorod-based SAW gas sensor to detect hazardous gases. *Indian Journal of Pure & Applied Physics*, 62(2), 155-163.
- Tiwary, A., Kumar, J., & Behera, B. (2023). Analysis of CNT-based SAW sensor for the detection of volatile organic compounds. *Physica B: Physics of Condensed Matter*, 669, 415279.
- Turuk, B., & Behera, B. (2023). Design of Heterostructure One-Port SAW Resonator with Improved Bandwidth Using Si and LiNbO3 Layer. *Taylor & Francis Ferroelectrics*, 615(1), 1-08.
- Dutta, C., Kumar, J., Hawaldar, R., Sagar, S. P., & Das, T. K. (2023). NDE-based failure analysis of an LTCC-eddy

- current sensor exposed to high temperature using 3D X-ray μ -CT. *IEEE Sensors Journal*.
- Sahu, M., Ghosh, A., Kumar, J., Singh, S. N., & Sagar, S. P. (2023). Probability analysis in predicting creep life of power plant material using high power ultrasound. *Journal of Materials Engineering and Performance*.
 - Subramanyam, V., Kumar, J., & Singh, S. N. (2023). A hybrid descriptor for low-textural image stitching in real-time surface inspection systems. *Multimedia Tools and Applications*.
 - Agrawal, A. K., Kumar, J., Kumar, A., & Arvind, P. (2024). Analogous sign language communication using gesture detection. *Australian Journal of Electrical and Electronics Engineering*.
 - Sahu, M., Ghosh, A., Dutta, C., Kumar, J., & Sagar, S. P. (2024). Creep strain prediction in power plant material via ANN modelling of nonlinear ultrasonic test results. *Nondestructive Testing and Evaluation*.
 - Kumar, R., Kumar, G., Zhao, W., Yadav, A. R., Yu, G., Kumar, J., & Amponsah, E. (2024). Identification of earthquake-induced structural damage based on synchroextracting transform. *Earthquake Engineering and Engineering Vibration*.
 - Agrawal, A. K., & Kumar, J. (2024). Humanoid left arm collaboration empowered by IoT and synchronization of human joints. *Journal of Scientific & Industrial Research*.
 - Das, S., Kumar, B. B., Bundela, P., Singh, K. (2024). Performance assessment of Si based dual metal double gate vertical TFET biosensor. *Micro and Nanostructures*, 191, 207864.
 - Kumar, B. B., Kumar, S., Tiwari, P. K., Yadav, A. B., Dubey, S., & Singh, K. (2024). Performance Investigation of Bottom Gate ZnO Based TFT for High-Speed Digital Display Circuit Applications. *Transactions on Electrical and Electronic Materials*, 25, 314–326.
 - Kumar, B. B., Dubey, S., Jit, S., & Singh, K. (2024). Cd_{0.22}n_{0.80} nanowire thin film transistor for low kickback high-speed AMLCD circuit applications. *Micro and Nanostructures*, 189, 207796.
 - Kumar, B. B., Bhowmik, B., Singh, A. P., Jit, S., & Singh, K. (2024). Room temperature ZnO nanorods based TFT ammonia sensor: An experimental and simulation study. *Applied Physics A*, 130, 308.
 - Kumar, B. B., & Singh, K. (2024). Consistent Performance ZnO TFT Based Single Transistor Nonvolatile Memory with Minimal Charge Loss. *Transactions on Electrical and Electronic Materials*.
 - Raj, A., Singh, K., & Sharma, S. K. (2023). Performance analysis of short channel effects immune JLFET with enhanced drive current. *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, 19, 3109.
 - Sannakashappanavar, B. S., Yadav, A. B., Singh, K., & Sai, T. A. (2023). Fabrication and characterization of ultra-thin ZnO based bottom gate thin film transistor for UV detection. *Micro and Nanostructures*, 179, 207581.
 - Kumar, N. (2024). Impact of NLP and imperfect CSI on ASER performance of QAM schemes for two-way 3P-ANC multiple-relay networks. *Annals of Telecommunications* (Accepted).
 - Singh, R. K., Das, S., Dixit, D., & Kumar, N. (2024). Performance Analysis of Energy Harvesting-Enabled Relay Networks in κ - μ Fading Channels. *Transactions on Emerging Telecommunications Technologies*, 35, e4976.
 - Pachori, K., Prakash, A., & Kumar, N. (2024). Effective modeling of metasurface-loaded circularly polarized dielectric resonator-based MIMO antenna for sub-6.0-GHz band using machine learning algorithms. *International Journal of Communication Systems*, 37(8), e5738.
 - Sahoo, S., & Kumar, N. (2024). On the performance of SWIPT-enabled two-way AF relay networks in κ - μ fading. *Physical Communication*, 64, 102308.
 - Pachori, K., Prakash, A., & Kumar, N. (2023). Performance Prediction of Dielectric Resonator Based MIMO Antenna for Sub-6.0 GHz using Machine Learning Algorithms. *Electromagnetics*, 43, 539-550.
 - Pachori, K., Prakash, A., & Kumar, N. (2023). Performance Prediction of Metasurface Loaded Ceramic based MIMO Antenna for B41/n41 Bands using ML Algorithms. *Electromagnetics*, 43, 441-451.
 - Chatterjee, S., Dixit, D., Kumar, N., Verma, P. K., & Pandey, P. (2023). Exact Analysis of Two-Branch SC Receiver over α - κ - μ Fading. *Internet Technology Letters (Wiley)*, 6(6), e479.
 - Singh, R. K., Kumar, N., & Dixit, D. (2023). On the performance of energy harvesting-assisted Nth best relay cooperative networks in Nakagami-m fading. *International Journal of Communication Systems*, 36(15), e5564.
 - Mistri, R. K., Mahto, S. K., & Sinha, R. (2024). A compact quad element human face-shaped wideband MIMO antenna for 5G applications. *International Journal of Communication Systems*, e5872.
 - Singh, K. K., Singh, A. K., Mahto, S. K., Sinha, R., & Al-Gburi, A. J. A. (2024). Enhanced accuracy and high sensitivity in dielectric characterization through a compact and miniaturized metamaterial inspired microwave sensor. *Sensors and Actuators A: Physical*, 370, 115271.
 - Kumar, P., Singh, A. K., Kumar, R., Sinha, R., Mahto, S. K., Choubey, A., & Al-Gburi, A. J. A. (2024). High Isolated Defected Ground Structure Based Elliptical Shape Dual Element MIMO Antenna for S-Band Applications. *Progress in Electromagnetics Research C*, 143.
 - Singh, K. K., Mahto, S. K., & Sinha, R. (2024). Differential metamaterial-based sensor for solid dielectric characterization with improved sensitivity. *Sensor Review*, 44(3), 221-230.
 - Kumar, P., Singh, A. K., Kumar, R., Mahto, S. K., Pal, P., Sinha, R., & Al-Gburi, A. J. A. (2024). Design and analysis of low profile stepped feedline with dual circular patch MIMO antenna and stub loaded partial ground plane for wireless applications. *Progress In Electromagnetics Research C*, 140, 135-144.
 - Singh, A. K., Mahto, S. K., Sinha, R., Alibakhshikenari, M., Al-Gburi, A. J. A., Ahmad, A., & Dalarrsson, M. (2023). Low-Loss Paper-Substrate Triple-Band-Frequency Reconfigurable Microstrip Antenna for Sub-7GHz Applications. *Sensors*, 23(21), 8996.
 - Mistri, R. K., Mahto, S. K., Singh, A. K., Sinha, R., Al-Gburi, A. J. A., Alghamdi, T. A., & Alathbah, M. (2023). Quad element MIMO antenna for C, X, Ku, and Ka-band applications. *Sensors*, 23(20), 8563.

- Pal, P., Sinha, R., Kumar, R., Kumar, P., & Mahto, S. K. (2024). Filter Synthesis-Based Compact Dual-Band Filtenna for C-Band Applications. In *Advances in Microwave Engineering* (pp. 213-225). CRC Press.
- Mahto, S. K., Singh, A. K., Sinha, R., Alibakhshikenari, M., Khan, S., & Pau, G. (2023). High isolated four element MIMO antenna for ISM/LTE/5G (Sub-6GHz) applications. *IEEE Access*.
- Mistri, R. K., Singh, A. K., Mahto, S. K., & Sinha, R. (2023). Quad element millimetre-wave MIMO antenna for 5G communication. *Journal of Electromagnetic Waves and Applications*, 37(15), 1258-1273.
- Yadav, S., Sinha, R., Deo, N., & Nath, V. (2024). Design of Holographic Condenser Lens for Visible Light Lithography. *IETE Journal of Research*, 1-8.
- Pandey, D., Dhara, R., Bhunia, S., & Kundu, S. (2024). Design and analysis of a compact millimeter-wave pentaband antenna for 5G FR-2 band wireless technologies. *AEU-International Journal of Electronics and Communications*, 155409.
- Raj, T., Mishra, R., Kapoor, A., Bhunia, S., & Kundu, S. Development and analysis of small Multi Input Multi Output antenna with better isolation for Frequency Range-2 5th Generation band applications. *International Journal of Communication Systems*, e5897.
- Kundu, S. (2024). A simple planar single layered frequency selective surface with band-stop and bandpass characteristic. *Sādhanā*, 49(1), 50.
- Mukherjee, S., Roy, A., Mukherjee, A., Kundu, S., Sarkar, P. P., & Bhunia, S. (2024). Notch band characteristics improvement of a printed ultra wideband antenna by embedding frequency Selective Surface. *AEU-International Journal of Electronics and Communications*, 178, 155276.
- Tewary, T., Maity, S., Roy, A., Mandal, K., Kundu, S., & Bhunia, S. (2024). Design and analysis of frequency selective surface embedded broadband high gain miniaturized antenna. *International Journal of Communication Systems*, 37(8), e5754.
- Kundu, S., Pandey, D., & Chatterjee, A. (2023). A quadband polarization insensitive and angularly steady frequency Selective surface for gain enlargement of multiband antenna. *AEU-International Journal of Electronics and Communications*, 168, 154713.
- Kundu, S. (2023). Design and characteristic analysis of uniplanar multiband frequency selective surface for GSM, LTE, WLAN, ISM, WiMAX and X-band applications. *Microwave and Optical Technology Letters*, 65(10), 2721-2724.
- Kundu, S. (2023). A Compact Super Wideband Planar Monopole Antenna for Microwave Imaging Applications. *National Academy Science Letters*, 46(4), 337-341.
- Ranjan, S., & Sahoo, S. (2024). Hexagon Enclosed Modified G- Shaped Polarization and Incident Angle Independent Metamaterial Absorber for S, C, X and Ku Band Frequency Reference. *AEU - International Journal of Electronics and Communications*, 2024, 183, 155348.
- Rayon, A., & Sahoo, S. (2024). Environmental pollution detection from susceptibility and conductivity measurement under microwave field: pollution detection under microwave field. *International Journal of Environmental Science & Engineering* (Accepted).
- Ranjan, S., & Sahoo, S. (2023). Review of metamaterial-based microwave absorber and sensor. *Journal of Electronic Materials*, 53(2), 571-595.
- Pandey, A., & Sahoo, S. (2023). Synthesis and dielectric characterization of iron doped forsterite coated titanium based medical implant. *IEEE SENSORS JOURNAL*, 23(24), 31171-31177.
- Pandey, A., & Sahoo, S. (2023). Impact of Tetra Ethyl Ortho-Silicate and Magnesium Nitrate Hexahydrate on Dielectric Characteristics of Forsterite Powder. *Physica Scripta*, 98, 095921.
- Pandey, A., & Sahoo, S. (2023). Dielectric Performance of forsterite coated titanium substrate based medical implant. *IEEE SENSORS JOURNAL*, 23(13), 14847-14853.
- Pandey, A., & Sahoo, S. (2023). Progress on Medical Implant: A Review and Prospects. *Journal of Bionic Engineering*, 20, 470-492.
- Pandey, A., & Sahoo, S. (2024). Impact of zinc oxide on dielectric properties of forsterite coated titanium based medical implants. *Physica Scripta*, 99(6), 0659a5.
- Bhardwaj, K., Narayana, R., Kalra, D., & Srivastava, M. (2024). Integrable emulation of a Floating Incremental/Decremental Inverse Memristor for Memristor Bandwidth Extension. *Journal of Electrical Engineering*, 75(1), 1-7.
- Kalra, D., & Srivastava, M. (2024). Design and optimization of variable gain LNA for IoT applications using meta-heuristics search algorithms. *Microelectronics Engineering*, 286, 112125.
- Srivastava, M., Kumar, A., Bharadwaj, K., Mahanty, S., Srivastava, D. K., & Singh, R. (2023). Compact and High-Speed All-optical 2n: 1 Multiplexer Scheme using MRRs. *Journal of Circuits, Systems, and Computers* (SCI Indexed). Accepted for publication Sept 2023.
- Bhardwaj, K., & Srivastava, M. (2023). A high bandwidth compact integrable configuration of Floating Memristor Emulator. *Journal of Circuits, Systems, and Computers*. Accepted for publication July 2023.
- Bhardwaj, K., Semenov, D., Sotner, R., Chen, J., Carrara, S., & Srivastava, M. (2024). Emulating multi-memristive behavior of Silicon Nanowire-based biosensors by using CMOS-based implementations. *IEEE Sensor Journal*, 24(6).
- Srivastava, M., Kumar, A., Bharadwaj, K., Srivastava, D. K., Singh, R., & Prasad, D. (2024). New All-Optical Implementation of Fredkin Gate Suitable for Compact and Ultrafast Reversible Computing Applications. *Indian Journal of Pure & Applied Physics*, 62(6), 451-463.

DEPARTMENT OF ELECTRICAL ENGINEERING

- Jagtap, M.K., Bhushan, R., Kuppusamy, R., Teekaraman, Y., Radhakrishnan, A. (2024). Optimal planning of solar and wind energy systems in electricity price-driven distribution systems considering correlated uncertain variables. *Energy Science & Engineering*, 12:8, pp.: 3356-3378.
- Bhushan, R., Chatterjee, K. (2024). An optimal regulation of grid-connected doubly-fed induction generator angular speed and the DC-link voltage. *Wind Engineering*.

- Choudhary, D., Mahanty, R. N., & Kumar, N. (2024). Plug-in electric vehicle dynamic pricing strategies for bidirectional power flow in decentralized and centralized environment. *Sustainable Energy, Grids and Networks*, 38, 101317.
- Tadikonda, N., Kumar, j., & Mahanty, R. N. (2024). Teager-Kaiser Energy Operator (TKEO) Based Islanding Detection Technique for Microgrid. *IETE Journal of Research* 70 (1), 1053-1070
- Gupta, N. K., Singh, A., & Mahanty, R. N. (2023). Load frequency control with moth-flame optimizer algorithm tuned 2-DOF-PID controller of the interconnected unequal three area power system with and without non-linearity. *International Journal of System Assurance Engineering and Management*, 14(5), 1912-1932.
- Kumar, M. L. S. S., Kumar, j., & Mahanty, R. N. (2023). Fault classification in a TCSC compensated transmission line during power swing using Wigner Ville transform. *IETE Journal of Research*, 69(9), 6483-6504.
- Das A., Bhattacharya A. (2024) Design and validation of a DC-DC converter-based inductive power transfer system with increased efficiency and reduced voltage stress across switches, *Measurement*, Volume 236, pp. 1-15.
- Kumaraswamy A, Bhattacharya A., Sadhu P. K. (2024) Design and analysis of a single-stage three-leg resonant converter with PFM-ADC control, *Electrical Engineering*.
- Kumaraswamy A., Bhattacharya A., Sadhu P. K. (2023) Dual Output and Dual-Frequency Resonant Inverter-based Induction Heating Using ADC Control, *IETE Journal of Research*, 70 (3), Pages 3087-3099.
- Priyadarshi, A., Yadav, K. B., & Rathore, V. (2023). Synchrophasor assisted load frequency control of interconnected system with multiple fuel inputs using honey badger algorithm. *International Journal of Modelling, Identification and Control*, 43(1), 54-63.
- Priyadarshi, A., & Yadav, K. B. (2023). Bad data detection and multilevel classification of events in synchrophasor measurements using AXGBoost algorithm. *Electrical Engineering*, 13(6), 3062-3073.
- Kumar, R., Kumar, A., Pushkar, R., & Priyadarshi, A. (2023). The impact of SnMnO₂ TCO and Cu₂O as a hole transport layer on CIGSSe solar cell performance improvement. *Journal of Computational Electronics*, 22(4), 1107-1127.
- Yadav, S. K., Yadav, K. B., & Priyadarshi, A. (2024). Performance analysis of three-phase solar PV, BESS, and wind integrated UPQC for power quality improvement. *Computers and Electrical Engineering*, 116, 109230.
- Prajapati, A. K., & Prasad, R. (2024). A new model reduction technique for the simplification and controller design of large-scale systems. *IETE Journal of Research*, 70(2), 1682-1698.
- Bharti, I. P., Singh, N. K., Gupta, O. H., & Singh, A. K. (in press). New passive loss of mains detection scheme using characteristics of differential impedance of series inductor. *IETE Journal of Research*, 1-13. [Accepted: Sept 27, 2023].
- Bharti, I. P., Singh, N. K., Gupta, O. H., & Singh, A. K. (in press). A novel passive technique based on superimposed negative sequence impedance to detect islanding in AC microgrids. *Electric Power Components and Systems*, 1-13. [Accepted: Nov 14, 2023].
- Ansari, S., Gupta, O. H., & Malik, O. P. (in press). An innovative relaying scheme for protection of AC microgrid feeders using incremental negative sequence power. *CSEE Journal of Power and Energy Systems*, 1-13 [Accepted: Nov 20, 2023].
- Bharti, I. P., Singh, N. K., Gupta, O. H., & Singh, A. K. (in press). Unplanned islanding detection of renewable energy sources using sequence impedance with zero NDZ. *Electrical Engineering*, 1-13 [Accepted: Nov 28, 2023].
- Sahu, S., Ansari, S., & Gupta, O. H. (in press). Universal adaptive differential wavelet energy-based protection scheme for an AC microgrid. *Electric Power Components and Systems*, 1-19 [Accepted: Jan 29, 2024].
- Bharti, I. P., Singh, N. K., Gupta, O. H., Singh, A. K., & Sood, V. K. (2024). Unintentional islanding detecting in AC microgrid using superimposed sequence impedance. *Distributed Generation & Alternative Energy Journal*, 39(3), 559-592.
- Kumar, G., & Kumar, S. (2024). Techno-economic and graded evaluation of hybrid renewable energy systems for A&N electrification using traditional fisher swarm optimization. *Electrical Engineering*, 1-18.
- Kumar, G. K. L., Kumar, L., & Kumar, S. (2023). Multi-objective control-based home energy management system with smart energy meter. *Electrical Engineering*, 105(4), 2095-2105.
- Kar, M. K., Singh, A. K., Kumar, S., & Rout, B. (2024). Application of fractional order PID controller to improve stability of a single machine infinite bus system. *Journal of the Institution of Engineers (India), Series B*, 105(1), 77-92.
- Kumari P, Singh K A, Kumar N (2023), Electric vehicle battery state-of-charge estimation based on optimized deep learning strategy with varying temperature at different C Rate, *Journal of Engineering Research*, Volume 11, Issue 3, 2023, Pages 158-163.
- Kumari P, Kumar N (2024). Hybrid optimized deep learning approach for prediction of battery state of charge, state of health and state of temperature. *Electr Eng* 106, 1283-1290.
- Kumari P, Kumar N (2024). Multi-agent intelligent optimization approach for optimal wireless rapid charging and SOC estimation of hybrid electric vehicle. *Electr Eng* 106, 1275-1282.
- Kumari P, Singh K A, Kumar N (2023). Optimized deep learning strategy for estimation of state of charge at different C-rate with varying temperature. *Electr Eng* 105, 3853-3860.
- Sahay S, Upputuri R, Kumari P, Kumar N (2024). An enhanced arithmetic optimization algorithm for optimal control of reactive power. *Optim Control Appl Meth*. 2024; 45(1): 362-392.
- Upputuri, R., Kumar, N., & Suresh, C. V. (2023). Optimal Power Flow Using a Hybrid Improved Harris Hawks Optimization Algorithm-Pattern Search Method. *IETE Journal of Research*, 70(3), 2684-2704.
- Sahay S, Upputuri, R., Kumar, N (2023). Optimal power flow-based approach for grid dispatch problems

through Rao algorithms, *Journal of Engineering Research*, Volume 11, Issue 2, 2023, 100032, ISSN 2307-1877.

- Pattanayak, B., Nanda, S., Kumari, P., & Kumar, N. (2023). Performance evaluation of a 3MWp grid-connected solar PV plant with FLC & ANN based MPPT. *TIJER - International Research*.
- Bonela, A. K., & Sarkar, M. K. (2024). Experimental study on robust non-fragile control of DC-DC buck converter. *Asian Journal of Control*, 26(3), 1249-1263.
- Bonela, A. K., Sarkar, M. K., & Kumar, K. (2024). Robust non-fragile control of DC-DC buck converter. *Electrical Engineering*, 106, 983-991.
- Ranjan, M., Shankar, R., Raj, U., Kumar, S., & Kumar, J. (2024). Cyber-attack and defense method for load frequency control in smart grid systems with electric vehicles. *Optimal Control Applications and Methods*. [Accepted].
- Roy, D., & Singh, M. (2023). Realization of a three-level neutral point clamped inverter using a novel region selection approach of bus clamping PWM for electric vehicle application. *Revue Roumaine de Sciences Techniques - Électrotechn. et Énerg.*, 68(2), 139-145.
- Basu, A., & Singh, M. (2023). Performance analysis of PV based battery integrated e-rickshaw with regenerative braking. *Microsystem Technologies*.
- Basu, A., & Singh, M. (2024). An efficient energy recovery approach of a PMLDLC driven e-rickshaw in regenerating braking mode. *Scientia Iranica*.
- Basu, A., & Singh, M. (2024). Energy regeneration of a position sensorless BLDC driven PV e-rickshaw with regenerative braking. *Electrical Engineering*.
- Iqbal, A., & Das, S. (2024). The estimation of breakdown voltage of vegetable oil using support vector machine. *ECTI Transactions on Electrical Engineering, Electronics and Communication*, 1-9.
- Mounica, M., Rajpathak, B. A., Kolhe, M. L., Naik, K. R., Moparthy, J. R., & Kotha, S. K. (2024). Piece-wise droop controller for enhanced stability in DC-microgrid-based electric vehicle fast charging station. Accepted in 2024, 12, 892.
- DebBarman, S., Namrata, K., Kumar, N., & Meena, V. (2024). Optimising power distribution systems: Solar-powered capacitors and cost reduction through meta-heuristic methods. *International Journal of Intelligent Engineering and Informatics*, 12(2), 188-212.
- Kumar, M., Namrata, K., Kumar, N., et al. (2023). Solar irradiance prediction using an optimized data-driven machine learning model. *Journal of Grid Computing*, 21, 28.
- Samadhiya, A., Namrata, K., & Kumar, N. (2023). An experimental performance evaluation and management of a dual energy storage system in a solar-based hybrid microgrid. *Arab Journal of Science and Engineering*, 48, 5785-5808.
- Kumar, N., Namrata, K., & Samadhiya, A. (2023). Bi-level decision making in techno-economic planning and probabilistic analysis of community-based sector-coupled energy systems. *Applied Intelligence*, 53, 6604-6628.
- Kumar, M., Namrata, K., & Kumar, N. (2023). Data-driven hyperparameter optimized extreme gradient boosting

machine learning model for solar radiation forecasting. *Advances in Electrical and Electronic Engineering*, 20(4), 549-559.

- Vardhan, A. S. S., & Sinha, U. K. (2024). Control strategies and performance analysis of doubly fed induction generator for grid-connected wind energy conversion system. *Electrical Engineering*, 106(2), 1203-1224.

DEPARTMENT OF HUMANITIES, SOCIAL SCIENCE AND MANAGEMENT

- Mahato, J., & Jha, M. K. (2023). Does financial inclusion promote sustainable livelihood development? Mediating effect of micro-entrepreneurship. *Journal of Financial Economic Policy*, 15(4/5), 485-499.
- Mahato, T., & Jha, M. K. (2023). Empowerment of women through participation in self-help groups: A bibliometric analysis and systematic review. *Emerald Journal of Enterprising Communities: People and Places in the Global Economy*.
- Mahato, J., & Jha, M.K. (2024). Does social capital promote sustainable livelihood? Mediating effect of women entrepreneurship. *International Journal of Sociology and Social Policy*.

DEPARTMENT OF MATHEMATICS

- Chand, M., & Tripathi, R. (2024). Application of machine learning in the investigation of entropy generation incurred during electroosmotic flows of Casson nanofluid. *Mathematical Methods in the Applied Sciences*, 47(4), 2656-2678.
- Mandal, A., Mondal, H., & Tripathi, R. (2023). Activity of motile microorganism in bioconvective nanofluid flow with Arrhenius activation energy. *Journal of Thermal Analysis and Calorimetry*, 148(17), 9113-9130.
- Mandal, A., Mondal, H., & Tripathi, R. (2024). A mathematical model of magnetohydrodynamics unsteady nanofluid flow containing gyrotactic microorganism through a bidirectional stretching sheet. *BioNanoScience*, 14, 1410-1427.
- Chaurasiya, V. K., Kumar, A., Tripathi, R., & Singh, R. (2024). Impact of magnetic induction on the flow of self-wetting power-law fluid over a disk surface: Onset of Marangoni convection. *Numerical Heat Transfer, Part A: Applications*.
- Sarkar, S. (2024). Generalization of some weighted zero-sum theorems and related extremal sequence. *Journal of Ramanujan Mathematical Society (In Press)*.
- Molla, A. E., & Sarkar, S. (2024). A generalization of Toth identity involving a Dirichlet character in $F_1[T]$. *Publ. Math. Debrecen*, 104(1-2), 67-88.
- Mohanty, T., Srivastava, V., Debnath, S. K., Das, A. K., & Sikdar, B. (2023). Quantum secure threshold private set intersection protocol for IoT-enabled privacy-preserving ride-sharing application. *IEEE Internet of Things Journal*.
- Mohanty, T., Srivastava, V., Mesnager, S., & Debnath, S. K. (2023). A constant round quantum secure protocol for oblivious polynomial evaluation. *Journal of Information Security and Applications*, 77, 103560.
- Mohanty, T., & Debnath, S. K. (2023). An information-theoretically secure quantum multiparty private set intersection. *Journal of Information Security and Applications*, 78, 103623.

- Rao, Y. S., Srivastava, V., Mohanty, T., & Debnath, S. K. (2024). Designing quantum-secure attribute-based encryption. *Cluster Computing*, 1-17.
- Sarkar, S., Srivastava, V., Mohanty, T., Debnath, S. K., & Mesnager, S. (2024). An efficient quantum oblivious transfer protocol. *Cluster Computing*, 1-12.
- Yadav, V. K., & Prasad, S. (2024). Generalized class of factor-type exponential imputation techniques for population mean using simulation approach. *Journal of Statistical Computation and Simulation*, 94(09), 1997-2039.
- Yadav, V. K., & Prasad, S. (2024). Some exponential estimators in sample survey using robust regression method in the presence of outliers. *Lobachevskii Journal of Mathematics*, 45(04), 1674-1690.
- Yadav, V. K., & Prasad, S. (2024). Some efficient ratio-type exponential estimators using the robust regression's Huber M-estimation function. *Communications for Statistical Applications and Methods*, 31(03), 291-308.
- Sarkar, S., Das, S., & Mondal, S. R. (2024). Geometric properties of normalized Galué type Struve function. *Symmetry*, 16(2), 211.
- Kumar, A., & Das, S. (2023). Integral transforms and probability distributions for a certain class of Fox–Wright type functions and its applications. *Mathematics and Computers in Simulation*, 203, 803-825.
- Mehrez, K., Das, S., & Kumar, A. (2023). Monotonicity properties and functional inequalities for the Barnes Mittag-Leffler function. *Miskolc Mathematical Notes*, 24(2), 893-907.
- Mondal, S. R., & Das, S. (2023). Bounds for extreme zeros of classical orthogonal polynomials related to birth and death processes. *Symmetry*, 15(4), 890.
- Ranjan, R., Prasad, H. S., & Kiltu, G. G. (2024). A novel fitted three-term method for the numerical treatment of singularly perturbed differential-difference equations. *Mediterranean Journal of Mathematics*, 21, Article no. 53.
- Alam, M. J., Prasad, H. S., & Ranjan, R. (2023). A novel fitted method for a class of singularly perturbed differential-difference equations with small delay exhibiting twin layer or oscillatory behavior. *Comput. Math. and Math. Phys.*, 63, 2528–2550.
- Gupta, P., & Mishra, R. K. (2023). Some results on pure projective modules. *Palestine Journal of Mathematics*, 12(Special Issue III), 91–96.
- Mishra, R. K., Pratibha, & Mohan, R. (2023). Projective modules over commutative noetherian graded rings. *Palestine Journal of Mathematics*, 12(Special Issue III), 19–23.
- Sahni, A. K., Pandey, J. T., & Mishra, R. K. (2023). On fuzzy projective modules—its modified classes and estimation of projective dimension. *Palestine Journal of Mathematics*, 12(Special Issue III), 97–106.
- Kumar, A., Shaw, P. K., & Kumar, S. (2024). Numerical investigation of pine wilt disease using fractal–fractional operator. *Indian Journal of Physics*, 1-27.
- Agrawal, K., Kumar, S., Alkahtani, B. S., & Alzaid, S. S. (2024). A numerical study on fractional order financial system with chaotic and Lyapunov stability analysis. *Results in Physics*, 60, 107685.
- Agrawal, K., Kumar, S., & Akgül, A. (2024). An algorithm for numerical study of fractional atmospheric model using Bernoulli polynomials. *Journal of Applied Mathematics and Computing*, 1-34.
- Hariharan, S., Shangerganesh, L., & Kumar, S. (2024). Dynamical analysis of a spatio-temporal model encompassing the avian flu transmission in human population. *Journal of Applied Mathematics and Computing*, 1-22.
- Chauhan, R. P., Kumar, S., Alkahtani, B. S. T., & Alzaid, S. S. (2024). A study on fractional order financial model by using Caputo–Fabrizio derivative. *Results in Physics*, 57, 107335.
- Agrawal, K., & Kumar, S. (2024). Wavelet Collocation Method for HIV-1/HTLV-I Co-Infection Model Using Hermite Polynomial. *Advanced Biology*, 2300629.
- Kumar, P., Kumar, S., Alkahtani, B. S. T., & Alzaid, S. S. (2024). A robust numerical study on modified Lumpy skin disease model. *AIMS Mathematics*, 9(8), 22941-22985.
- Chauhan, R. P., Kumar, S., Momani, S., & Hadid, S. (2024). A dynamical study of the fractional order King Cobra model. In *Computation and Modeling for Fractional Order Systems* (pp. 135-154). Academic Press.
- Kumar, S., Chauhan, R. P., Momani, S., & Hadid, S. (2024). Numerical investigations on COVID-19 model through singular and non-singular fractional operators. *Numerical Methods for Partial Differential Equations*, 40(1), e22707.
- Ghanbari, B., & Kumar, S. (2024). A study on fractional predator–prey–pathogen model with Mittag–Leffler kernel-based operators. *Numerical Methods for Partial Differential Equations*, 40(1), e22689.
- Kumar, S., Shaw, P. K., Abdel-Aty, A. H., & Mahmoud, E. E. (2024). A numerical study on fractional differential equation with population growth model. *Numerical Methods for Partial Differential Equations*, 40(1), e22684.
- Kumar, P., Kumar, A., & Kumar, S. (2023). A study on fractional order infectious chronic wasting disease model in deers. *Arab Journal of Basic and Applied Sciences*, 30(1), 601-625.
- Kumar, S., Singh, R., Chauhan, R. P., & Thakur, N. K. (2023). Investigation of an interacting fractional-order predator–prey system in presence of fear and harvesting. *Iranian Journal of Science*, 47(5), 1739-1749.
- Roshan, T., Ghosh, S., Chauhan, R. P., & Kumar, S. (2023). A robust study on fractional order HIV/AIDS model by using numerical methods. *Engineering Computations*, 40(7/8), 1545-1569.
- Alkahtani, B. S. T., Agrawal, K., Kumar, S., & Alzaid, S. S. (2023). Bernoulli polynomial based wavelets method for solving chaotic behaviour of financial model. *Results in Physics*, 53, 107011.
- Momani, S., Chauhan, R. P., Kumar, S., & Hadid, S. (2023). Analysis of social media addiction model with singular operator. *Fractals*, 31(10), 2340097.
- Baleanu, D., Pinto, C., & Kumar, S. (2023). Introduction to the special issue on mathematical aspects of computational biology and bioinformatics. *CMES-Computer Modeling in Engineering & Sciences*, 136(1).
- Kumar, S., Chauhan, R. P., Osman, M. S., & Mohiuddine, S. A. (2023). A study on fractional HIV-AIDS transmission model with awareness effect. *Mathematical Methods in the Applied Sciences*, 46(7), 8334-8348.
- Kumar, S., Kumar, R., Momani, S., & Hadid, S. (2023). A study on fractional COVID-19 disease model by using Hermite wavelets. *Mathematical Methods in the Applied Sciences*, 46(7), 7671-7687.
- Alzaid, S. S., Kumar, A., Kumar, S., & Alkahtani, B. S. T. (2023). Chaotic behavior of financial dynamical system with generalized fractional operator. *Fractals*, 31(04), 2340056.

- Azmoon, A., Chakraverty, S., & Kumar, S. (2023). Fractional Legendre Kernel Functions: Theory and application. In Learning with Fractional Orthogonal Kernel Classifiers in Support Vector Machines: Theory, Algorithms and Applications (pp. 69-91). Singapore: Springer Nature.
- Shaw, P. K., Kumar, S., Momani, S., & Hadid, S. (2023). Two new quadratic scheme for fractional differential equation with world population growth model. *Progress in Fractional Differentiation and Applications*, 9(4), 545-564.
- Shaw, P. K., Kumar, S., Momani, S., & Hadid, S. (2023). Two new quadratic scheme for fractional differential equation with world population growth model. *Progress in Fractional Differentiation and Applications*, 9(4), 545-564.
- Nandkeolyar, M., Sarkar, A., Sahu, B., & Nandkeolyar, R. (2024). Implications of homogeneous-heterogeneous reactions, Hall current, and dissipative radiative heat transfer on MHD Casson fluid flow over a bi-directional stretching sheet. *Numerical Heat Transfer, Part A: Applications*, 1-18.
- Kar, A. K., Kumar, P., Singh, R., & Nandkeolyar, R. (2024). Numerical and statistical analysis of unsteady hydromagnetic hybrid nanofluid flow in a porous medium over an inclined disk with dissipative heat transfer. *ZAMM—Journal of Applied Mathematics and Mechanics/Zeitschrift für Angewandte Mathematik und Mechanik*, 104(4), e202300439.
- Sahoo, A., & Nandkeolyar, R. (2024). Radiative heat transport of Cattaneo-Christov double diffusive Casson nanofluid flow between two rotating disks with Hall current and activation energy. *ZAMM—Journal of Applied Mathematics and Mechanics/Zeitschrift für Angewandte Mathematik und Mechanik*, 104(2), e202200419.
- Kumar, P., Prashu, & Nandkeolyar, R. (2024). Modeling the hydromagnetic transient three-dimensional stagnation point flow of a couple-stress Casson fluid over a bi-directional stretching sheet. *Numerical Heat Transfer, Part B: Fundamentals*, 1-19.
- Kumar, P., & Nandkeolyar, R. (2024). Spectral simulation of hydromagnetic flow with dissipative and radiative heat transfer over an inclined rotating disk within a non-Darcy porous medium. *ZAMM—Journal of Applied Mathematics and Mechanics/Zeitschrift für Angewandte Mathematik und Mechanik*, 104(1), e202200395.
- Sarkar, A., Mondal, H., & Nandkeolyar, R. (2023). Effect of thermal radiation and nth order chemical reaction on non-Darcian mixed convective MHD nanofluid flow with non-uniform heat source/sink. *International Journal of Ambient Energy*, 44(1), 1931-1947.
- Sahoo, A., & Nandkeolyar, R. (2023). Mathematical modelling of entropy generation in radiative non-Darcy flow of a Carreau-Yasuda nanofluid in a rotating channel with activation energy, Hall current and the Cattaneo-Christov heat flux. *Numerical Heat Transfer, Part B: Fundamentals*, 1-30.
- Kumar, P., & Nandkeolyar, R. (2023). A new mathematical model for the magnetohydrodynamic couple-stress Casson fluid flow in a channel with stretching wall. *Numerical Heat Transfer, Part A: Applications*, 1-18.
- Sarkar, A., Mondal, H., & Nandkeolyar, R. (2023). The behaviour of ethylene glycol-based rotating nanofluid flow with thermal radiation and heat generation. *Pramana*, 97(4), 164.
- Mondal, H., Sarkar, A., & Nandkeolyar, R. (2023). Investigation of viscoelastic magnetohydrodynamics (MHD) flow over an expanded lamina surrounded in a permeable media. *Mathematics and Computer Science Volume 2*, 223-238.
- Sahoo, A., & Nandkeolyar, R. (2023). Analyses of entropy generation and Hall influence in the Cattaneo-Christov double diffusive radiative Non-Darcy flow of a Casson nanofluid within rotating disks. *Numerical Heat Transfer, Part A: Applications*, 1-38.

DEPARTMENT OF MECHANICAL ENGINEERING

- Gouda, R. K., Ranjan, A., Pathak, M., & Khan, M. K. (2024). Combined effect of structured surface and biosurfactant in pool boiling heat transfer enhancement. *International Journal of Heat and Mass Transfer*, 221, 125102.
- Gouda, R. K., Srinivasan, G., Umesh, V., & Raja, B. (2023). Surface enhancement for boiling heat transfer through micro holes for electronic cooling applications. *Sadhana*, 48, 210.
- Nayak, S., Hassan, M. A., & Paswan, M. (2024). Thermo-fluid characteristics of a flat-plate collector with different riser tube configurations employing ZnO/water nanofluids: An experimental and numerical analysis. *Arabian Journal for Science and Engineering*, 1-15.
- Hassan, M. A., Kumar, R., & Khan, N. H. (2024). Rayleigh-Benard convection of Carbopol yield stress Fe_3O_4 nanofluids under magnetic field: An experimental investigation and ANN modelling. *International Journal of Thermophysics*, 45(7), 95.
- Kumar, R., & Hassan, M. A. (2024). Biosurfactant augmented characterization and heat transport assessment of MWCNT-H₂O nanofluid in solar collector. *International Journal of Thermophysics*, 45(5), 66.
- Nayak, S., Hassan, M. A., & Paswan, M. (2024). Investigation on thermo-fluid behavior of flat-plate solar water heater employing titanium dioxide-water nanofluid: An experimental and computational approach. *Journal of Mechanical Science and Technology*, 38(3), 1507-1516.
- Kumar, A., & Hassan, M. A. (2024). Heat transfer in flat tube car radiator with CuO-MgO-TiO₂ ternary hybrid nanofluid. *Powder Technology*, 434, 119275.
- Kumar, R., & Hassan, M. A. (2023). Enhanced energy transport in high-mass flow solar parabolic trough collectors using Fe₂O₃-laden nanofluids. *Journal of Thermal Analysis and Calorimetry*, 148(24), 14145.
- Nayak, S., Hassan, M. A., & Paswan, M. (2023). Experimentally validated axisymmetric simulation for thermo-fluid performance of an active flat-plate solar water heater at low flow rates. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 44, 1-15.
- Kumar, A., Chand, P., & Hassan, M. A. (2023). Louvered finned car radiator with MWCNT-SiO₂ hybrid nanofluid: An experimental approach. *Powder Technology*, 415, 118176.
- Khan, N. H., Paswan, M., & Hassan, M. A. (2023). Thermo-rheological characterization and ANN modelling of aqueous carbopol-titania yield stress nanofluid. *Thermochemica Acta*, 720, 179418.
- Pandey, S. (2024). Size-dependent nonlinear transient analysis of rotating porous thick and thin FGM

- microblade under cooling thermal shock. ZAMM—Journal of Applied Mathematics and Mechanics.
- Pandey, S. (2024). Phase field thermal shock analysis of rotating porous cracked pretwisted FGM microblade using exact shear correction factor. *The Journal of Strain Analysis for Engineering Design*.
 - Pandey, S. (2024). Effect of porosity on the free vibration analysis of a rotating pretwisted sandwich blade with a functionally graded core in the thermal environment. *Defence Science Journal*, 74(3), 360-364.
 - Pandey, S. (2024). Transient thermal stress analysis of a thin rotating FGM blade based on the exact shear correction factor: A comparison of ROM and LRVE homogenization models. *Mechanics Based Design of Structures and Machines*, 1-28.
 - Kumar, A., & Pandey, S. (2024). Transient analysis of size-dependent S-FGM micro-folded plates based on exact shear correction factor in the thermal environment. *Archive of Applied Mechanics*, 94, 1335-1357.
 - Rizwee, M., Kumar, D., & Husain, M. M. (2024). Enhancing the tribological characteristics of the biocompatible Ti-6Al-4V alloy via heat treatment: An experimental analysis. *Tribology International*, 199, 110052.
 - Rizwee, M., & Kumar, D. (2024). Contribution of geometrical infill pattern on mechanical behaviour of 3D manufactured polylactic acid specimen: Experimental and numerical analysis. *Progress in Rubber, Plastics and Recycling Technology*.
 - Mandal, S. K., Kumar, R., Rizwee, M., & Kumar, D. (2024). Tuning thermal and structural properties of nano-filled PDMS elastomer. *Polymer Composites*.
 - Chaurasia, B. K., & Kumar, D. (2024). High strain rate modeling of CFRP composite under compressive loading. *Defence Science Journal*, 74(3).
 - Mandal, S. K., Kumar, D., Bishwakarma, H., Kumar, R., & Medasetty, T. G. (2024). Influence of reduced graphene oxide on the morphology, structural, and thermal properties of calcium carbonate nanocomposites. *Ceramics International*, 50(6), 9913-9918.
 - Mandal, S. K., & Kumar, D. (2023). Effect of rGO nanoparticles on the structural, optical, and electrical properties of CaCO₃ nanocomposite. *Fullerenes, Nanotubes and Carbon Nanostructures*, 31(10), 921-930.
 - Mandal, S. K., & Kumar, D. (2023). Study of PDMS-based flexible conductive elastomeric composite filled with rGO-CaCO₃ nanocomposite. *Polymer-Plastics Technology and Materials*, 62(13), 1776-1788.
 - Mandal, A. K., & Wahi, P. (2023). Equipartition of modal energy in an ideal string vibrating in the presence of a boundary obstacle. *Nonlinear Dynamics*, 112, 215-232.
 - Mangal, S., Kambhammettu, S. K., & Chellapandi, P. (2024). Prediction of mechanical response of nickel-based superalloy subjected to creep fatigue interaction loading using unified mechanics theory. *Defence Science Journal*, 74(3).
 - Kambhammettu, S. K., Mangal, S., & Chellapandi, P. (2024). A unified mechanics theory-based damage model for creep in nickel-based superalloys. *Defence Science Journal*, 74(3).
 - (2023). Variation of heat flow rate of vertically arranged plumbene sheets with number of layers and sample size. *Modern Physics Letters B*, 38(11), 2450033.
 - (2024). Fracture analysis of cracked bimaterial plate by NURBS-aided extended finite element method. *Mechanics of Solids*, 59, 222-238.
 - (2023). Fracture analysis of cracked thin plate by NURBS-based extended finite element method. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 45, 192.
 - (2023). Frequency analysis of variable thickness Kirchhoff plates by isogeometric approach. *Journal of the Institution of Engineers (India): Series C*, 104, 271-280.
 - Pandey, A., Hansdah, D., & Kumar, S. (2024). Rheological characteristics of high ash Indian coal with sodium dodecyl sulfate as additive. *Journal of Solid Fuel Chemistry*, 58(4), 326-336.
 - Pandey, A., Hansdah, D., & Kumar, S. (2023). Impact of anthracite blending and SDS addition on slurryability and stability of Indian high ash coal water slurry. *International Journal of Coal Preparation and Utilization*, 1-22.
 - Ansari, M. M. A., Mishra, V. K., Sahu, K. B., Chaudhuri, S., Ghose, P., & Kar, V. R. (2024). Decision support system based on a hybrid genetic algorithm-Kohonen map for combined mode conduction-radiation heat transfer in a porous medium: A comparative assessment of three variations of the Kohonen map. *Heat Transfer*, 53(5), 1556-1585.
 - Joshi, K. K., & Kar, V. R. (2023). Elastoplastic behaviour of multidirectional porous functionally graded panels: A nonlinear FEM approach. *Iranian Journal of Science and Technology, Transactions of Mechanical Engineering*, 48(1), 307-329.
 - Acharya, S., Mishra, V. K., Chaudhuri, S., Patel, J. K., Ghose, P., & Kar, V. R. (2023). Decision support system for porous ceramic matrix-based burner by hybrid genetic algorithm-supervised Kohonen map: A comparative assessment of performance of neural network under different minor attributes. *Arabian Journal for Science and Engineering*, 49(2), 2179-2197.
 - Rathore, S. S., Kar, V. R., & Sanjay. (2024). Thermodynamic analyses of an intercooled gas turbine from ceramic material. *Arabian Journal for Science and Engineering*, 49(2), 1405-1419.
 - Kumar, M., Rathore, S. S., Kar, V. R., & Chandravanshi, M. L. (2024). Non-linear thermoelastic vibration and optimum frequency prediction of sandwich composite corrugated panels with honeycomb auxetic core. *Polymer Composites*, 45(1), 581-604.
 - Joshi, K. K., Kar, V. R., & Kumar, S. (2024). Nonlinear bending characteristics of multidirectional functionally graded porous panels using higher-order finite element solution with parametric optimization. *Mechanics of Advanced Materials and Structures*.
 - Kumar, M., Kar, V. R., & Chandravanshi, M. L. (2023). Non-linear vibration and parametric optimization of sandwich composite curved shell panels with graphene reinforced skins and auxetic honeycomb core. *Mechanics Based Design of Structures and Machines*, 52(8), 5088-5117.
 - Kumar, S., & Kar, V. R. (2023). Transient thermal characteristics of unidirectional (1D) and multidirectional (2D/3D) functionally graded panels. *Steel and Composite Structures*, 49(5), 587-602.
 - Ghatage, P., Sudhagar, E., & Kar, V. R. (2023). Free vibrational behavior of perfect and imperfect multidirectional FG plates and curved structures. *Geomechanics and Engineering*, 35(4), 367-383.

- Khudayarov, B. A., Turaev, F., Kar, V. R., & Verlan, A. A. (2023). A study on dynamic characteristics of the flutter for three-layer plates and shells flown around by a gas flow. *International Journal of Computational Materials Science and Engineering*, 2350039.
- Kumar, S., & Kar, V. R. (2023). Nonlinear fully-coupled thermoelastic analysis of bidirectional porous functionally graded doubly-curved shell panels with optimum material distribution. *Mechanics of Advanced Materials and Structures*.
- Patel, A. K., & Jain, R. (2023). Exploring Zr influence on microstructure and mechanical property in Fe-Co-Ni-Cr-Cu-Zr eutectic high entropy alloy. *Metals and Materials International*.
- Lahre, P., Patel, A. K., & et al. (2023). Unveiling advanced modelling and analysis: The integrated system and formula for mass spring damper with hydraulic damper system. *Multiscale and Multidisciplinary Modelling, Experiments and Design*.
- Dewan, P. R., & Kundu, P. K. (2023). Optimizing process parameters for EDM of Nimonic C-263 under green dielectric. *Sādhanā*, 48(230).
- Ghosh, A. P., Mullick, S. H., Tupakula, R. K., Banerjee, S., Singh, Y., DasGupta, D., & Kundu, P. K. (2024). Relative analysis between step and sinusoidal temperature distribution during natural convection inside a square porous enclosure actuated from below. *International Journal of Thermal Analysis and Calorimetry*, 149, 3225–3246.
- Dewan, P. R., & Kundu, P. K. (2024). Assessment of electro-discharge machining for Nimonic C-263 utilizing aluminum powder-infused green dielectric. *Materials and Manufacturing Processes*, 39(10), 1409–1419.
- Dewan, P. R., & Kundu, P. K. (2024). Optimization of parameters of powder-added EDM of Nimonic C-263 using TOPSIS. *Sādhanā*, 49(190).
- Mullick, S. H., DasGupta, D., & Kundu, P. K. (2024). Impact of inclination on free convection and entropy generation inside a tilted air-occupied porous quadrantal contour: A numerical study. *International Journal of Thermal Analysis and Calorimetry*, 149, 6161–6177.
- Prasad, S. K., & Sinha, M. K. (2023). Lessen pressure drop and forecasting thermal performance in U-tube heat exchanger using chimp optimization and deep belief neural network. *Optical Memory and Neural Networks*, 32(4), 275–294.
- Kumar, A., & Sinha, M. K. (2024). CFD analysis of buoyancy-driven flow in an infinite surrounding: Comparison of effects of solid and hollow cylinders. *Arabian Journal for Science and Engineering*.
- Kumar, A., & Sinha, M. K. (2024). Enhancing heat transfer in buoyancy-driven laminar flow: A numerical investigation of heated concentric cylinders with porous fins. *Multiscale and Multidisciplinary Modeling, Experiments and Design*.
- Prasad, S. K., & Sinha, M. K. (2024). Horse herd optimization and LSTM configuration for minimizing pressure drop and predicting thermal performance in shell and U-tube heat exchanger. *Journal of Engineering Thermophysics*, 33(1), 110–142.
- Kumar, A., Barik, A. K., & Sinha, M. K. (2024). Natural convection heat transfer from a uniform wall temperature, vertical barrel-shaped solid/hollow cylinder to air in infinite surroundings: Numerical study. *Numerical Heat Transfer, Part A: Applications*, 85(16).
- Singh, N., Sharma, R. V., & Kumar, S. (2023). Experimental analysis of a bayonet tube at constant wall temperature conditions under laminar, transition, and turbulent flow. *Journal of Heat and Mass Transfer*, 145, 041802-1–041802-10.
- Kumar, A., & Pandey, S. (2023). Assessment of Voigt and LRVE models for thermal shock analysis of thin FGM blade: A neutral surface approach. *Structural Engineering and Mechanics*, 85(1), 105–118.
- Sinha, R., Sahoo, V., & Paswan, M. (2023). Radial load distribution by balls in a ball bearing with variable clearance. *Mechanics Based Design of Structures and Machines*, 51(6), 3538–3563.
- Pradhan, A. R., & Sahoo, V. (2023). Inter-chamber leakage flow through the transition contacts in epitrochoid generated star and ring hydrostatic units. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, 237(5), 1244–1263.
- Singh, R. R., Kumar, D., & Paswan, M. (2023). Numerical simulation of bimorph piezoelectric beam with circular holes. *Journal of The Institution of Engineers (India), Series D*, 104(1), 309–318.
- Mandal, S. K., & Kumar, D. (2023). Effect of rGO nanoparticles on the structural, optical, and electrical properties of CaCO₃ nanocomposite. *Fullerenes, Nanotubes and Carbon Nanostructures*, 1–10.
- Swain, P. K., Dora, S. P., & Barik, A. K. (2023). Energy extraction performance of tandem flapping foil undergoing elliptical motion trajectory. *Ocean Engineering*, 268, 113390.
- Swain, P. K., Challa, B. N. S. A., Naga Alkhyia, G., Dora, S. P., & Barik, A. K. (2023). Effect of flapping trajectory and inter-foil distance on propulsive performance of a tandem flapping foil. *ASME Journal of Offshore Mechanics and Arctic Engineering*, 145(1), 010902.
- Panda, R. C., Panigrahi, L., Nayak, M. K., Chamkha, A. J., Sahoo, S. S., & Barik, A. K. (2023). Nanofluid-based pipe flow analysis in absorber pipe of a flat plate solar collector: Effect of inclination and porosity. *JP Journal of Heat and Mass Transfer*, 12(2), 458–464.
- Dash, M. K., & Barik, A. K. (2023). A comparative study on air entrainment pressure distribution for natural convection cooling of a hybrid IRS device. *International Journal of Thermal Sciences*, 187, 108196.
- Mukherjee, A., Senapati, J. R., & Barik, A. K. (2023). Field synergy and thermodynamic evaluation of mini duct with several protrusions utilizing the cross-flow method: A numerical exercise. *International Communications in Heat and Mass Transfer*, 106, 106817.
- Swain, P. K., Dora, S. P., Barik, A. K., Abhishikt, C. B. N. S., & Senapati, J. R. (2023). Study of lift-enhancing mechanisms via comparison of flapping trajectory of tandem flapping foil. *Physics of Fluids*, 35, 083603.
- Patel, A. K., Rajput, S. P. S., Kumar, R., Sharma, A., Saxena, K. K., Agrawal, M. K., & Kadhim, I. K. (2023). Experimental and numerical investigation of metal oxide-based nanoparticles for VCRS test rig. *International Journal on Interactive Design and Manufacturing (IJIDeM)*.
- Pandey, A., Hansdah, D., & Kumar, S. (2023). Improving the slurrability of high ash coal by blending anthracite of different particle size range. *International Journal of Coal Preparation and Utilization*, 1–23.
- Pradhan, A. R., & Kumar, S. (2023). Enhancing the flowability of limestone water suspension for

- economical transportation by variation in particle size distribution. *Particulate Science and Technology*.
- Singh, A., Kumar, S., & Kumar, H. (2023). A comparative study of erosion performance of thermally sprayed Ni-based composite coatings. *Journal of Materials Engineering and Performance*.
 - Pradhan, A. R., & Kumar, S. (2023). *Sapindus laurifolia*: An eco-friendly alternative to synthetic dispersants for limestone transportation. *Journal of Dispersion Science and Technology*, 1–10.
 - Gupta, C., & Kumar, S. (2023). Characterization and stabilization of iron ore suspension and influence of the mixture of natural additive *Sapindus mukorossi* and SDS on the slurryability. *Journal of Dispersion Science and Technology*.
 - Gupta, C., & Kumar, S. (2023). Influence of natural additive on slurryability and flowability of iron ore. *Journal of Mining Science*, 59(2), 242–255.
 - Pandey, A., Hansda, D., & Kumar, S. (2023). Improving the slurryability of high ash coal by blending anthracite of different particle size range. *International Journal of Coal Preparation and Utilization*.
 - Kumar, A., Chand, P., & Hassan, M. A. (2023). Louvered finned car radiator with MWCNT-SiO₂ hybrid nanofluid: An experimental approach. *Powder Technology*, 415, 118176.
 - Konni, R. R., Kumar, A., & Chand, P. (2023). CFD analysis of a flat tube with semi-circular fins using graphene nanofluid and to compare performance with square type of fins. *Heat Transfer*, 52(2), 1673–1688.
 - Jha, S. K., & Narayanan, S. (2023). On the acoustic emission characteristics of airfoils with different trailing edge configurations. *Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering*, 237(9), 2008–2026.
 - Rathore, S. S., Kar, V. R., & Sanjay. (2023). Thermoelastic eigen frequency of pre-twisted FG sandwich straight/curved blades with rotational effect. *Structural Engineering and Mechanics*, 86(4), 519–533.
 - Kumar, S., & Kar, V. R. (2023). Nonlinear fully-coupled thermoelastic transient analysis of axial functionally graded composite panel. *Mechanics Based Design of Structures and Machines*.
 - Joshi, K. K., & Kar, V. R. (2023). Elastoplastic behaviour of multidirectional porous functionally graded panels: A nonlinear FEM approach. *Iranian Journal of Science and Technology, Transactions of Mechanical Engineering*.
 - Rathore, S. S., Kar, V. R., & Sanjay. (2023). Large-amplitude vibration of rotating functionally graded blades including geometrical nonlinearity and stress stiffening effects. *Mechanics Based Design of Structures and Machines*.
 - Rathore, S. S., Kar, V. R., & Sanjay. (2023). Influence of cooled SiCf/SiC ceramic-matrix-composite blades on the efficiencies of basic and intercooled gas turbine power plants. *Arabian Journal for Science and Engineering* (Accepted).
 - Kumar, S., & Kar, V. R. (2023). Transient heat transfer analysis of the porous nonhomogeneous material structure. *International Journal of Advances in Engineering Sciences and Applied Mathematics*.
 - Chaudhary, S. K., Kar, V. R., & Shukla, K. K. (2023). Thermoelastic deformation characteristics of perforated functionally graded cylindrical panels. *Advances in Aircraft and Spacecraft Science*, 10(2), 127–140.
 - Alam, A., & Prasad, A. K. (2023). Analysis of performance, combustion, and emission characteristics of a CI engine fueled with blends of diesel-biodiesel-nitromethane. *European Chemical Bulletin (Special Issue 4)*, 12, 1025–1037.
 - Alam, A., & Prasad, A. K. (2023). Enhancing diesel engine performance and reducing emission characteristics using ternary blends of diesel-biodiesel-CH₃NO₂. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 45(2), 5205–5220.
 - Alam, A., & Prasad, A. K. (2023). Performance and exhaust emission characteristics of a CI engine fuelled with diesel-biodiesel-methane-nitromethane. *Journal of Process Mechanical Engineering*, 1–10.
 - Fracture analysis of cracked thin plate by NURBS-based extended finite element method. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 45, 192 (2023).
 - Frequency analysis of variable thickness Kirchhoff plates by isogeometric approach. *Journal of the Institution of Engineers (India), Series C*, 104, 271–280 (2023).
 - Sinha, A. A., Sanjay, et al. (2023). Thermodynamic assessment of biomass-fueled solid oxide fuel cell integrated gas turbine hybrid configuration. *Sustainable Energy Technologies and Assessments*, 57,
 - Sinha, A. A., Sanjay, et al. (2023). Comprehensive review on integration strategies and numerical modeling of fuel cell hybrid system for power and heat production. *International Journal of Hydrogen Energy*.
 - Rathore, S. S., Kar, V. R., & Sanjay. (2023). Thermodynamic analyses of an intercooled gas turbine from ceramic material. *Arabian Journal for Science and Engineering*.
 - Sinha, A. A., Saini, G., Sanjay, et al. (2023). A novel comparison of energy-exergy, and sustainability analysis for biomass-fueled solid oxide fuel cell integrated gas turbine hybrid configuration. *Energy Conversion and Management*, 283, 116923.
 - Farhan, H. A., Nayak, S., & Sanjay, et al. (2023). Numerical analysis with experimental validation for thermal performance of flat plate solar water heater using CuO/distilled water nanofluid in closed loop. *Journal of Mechanical Science and Technology*, 37, 2649–2656.
 - Rathore, S. S., Kar, V. R., & Sanjay. (2023). Large-amplitude vibration of rotating functionally graded blades including geometrical nonlinearity and stress stiffening effects. *Mechanics Based Design of Structures and Machines*.
 - Sinha, A. A., Choudhary, T., Ansari, M. Z., & Sanjay. (2023). Estimation of exergy-based sustainability index and performance evaluation of a novel intercooled hybrid gas turbine system. *International Journal of Hydrogen Energy*, 48(23), 8629–8644.
 - Sanjay, Mishra, S., & Alam, T. (2023). Performance analysis of induced draft cooling tower integrated with rotary silica gel mesh. *Heat Transfer*, 52(2), 1275–1299.
 - Shrivastava, A., Dalla, V. K., & Kumar, A. (2023). Optimum joint and trajectory tracking control of multi-axes space manipulator based on amnesia feedback controller. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*.
 - Singh, N., Sharma, R. V., & Kumar, S. (2023). CFD analysis of constant wall temperature with different materials bayonet tubes in variable flow regimes. *Multiscale and Multidisciplinary Modelling, Experiments and Design*.

- Kumar, R., & Kumar, P. (2023). Thermophysical analysis of $\text{Al}_2\text{O}_3/\text{CuO}$ nanofluid in water/EG basefluid for hybrid louvered heat exchanger. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 237(5), 1229–1243.
- Nag, M. K., & Kumar, P. (2023). Fabrication and characterization of woven and comingled nonwoven sheet polypropylene hybrid composite by recycling and alkali-treated jute waste fibers. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science.
- Nag, M. K., & Kumar, P. (2023). Optimization of cost and performance of the material used in the mechanism unit of Air Circuit Breaker (ACB) based on various analysis approaches. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture.
- Nag, M. K., & Kumar, P. (2023). Fabrication and characterization of laminated natural fibers and SS303 wire mesh reinforced epoxy-based hybrid composite. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications.
- Nayak, S., Hassan, M. A., & Paswan, M. (2023). Experimentally validated axisymmetric simulation for thermo-fluid performance of an active flat-plate solar water heater at low flow rates. Energy Sources, Part A, 45, 6797–6812.
- Khan, N. H., Paswan, M. K., & Hassan, M. A. (2023). Thermorheological characterization and ANN modelling of aqueous carbopol/titania yield stress nanofluid. Thermochemica Acta, 720, 179418.
- Rajan, A., Raj, R., Sneha, S., Kumar, S., & Prasad, L. (2023). Mechanics of heat transfer through twisted tape fitted in heat exchanger tube in turbulent regime. International Journal of Advances in Engineering Sciences and Applied Mathematics, 1–8.
- Saurabh, S., Suman Kumar, P., Chand, P., & Yadav, U. S. (2024). Multi-objective optimization and fracture analysis of laser weld joints of Ni-Cr superalloy 80A for gas turbine components. Journal of Mechanical Science and Technology, 1–10.
- Sharan, B. B., Chand, P., Baruah, M., & Krishna, K. G. (2023). Optimization of CMT welding process parameters of dissimilar hot rolled E250 and polymer sandwich steel lap joints. Welding International, 37(10), 563–578.
- Konni, R. R., Kumar, A., & Chand, P. (2023). CFD analysis of a flat tube with semi-circular fins using graphene nanofluid and comparison with square type fins. Heat Transfer, 52(2), 1673–1688.
- Kumar, A., Chand, P., & Hassan, M. A. (2023). Louvered finned car radiator with MWCNT-SiO₂ hybrid nanofluid: An experimental approach. Powder Technology, 415, 118176.
- Sharan, B. B., & Chand, P. (2024). Effect of weld line energy on mechanical properties and formability of cold metal transfer-welded dissimilar DP600-780 thin sheets. Journal of Materials Engineering and Performance, 1–19.
- Saurabh, S., Suman Kumar, P., Chand, P., & Yadav, U. S. (2024). Optimizing laser beam welding performance parameters on Nimonic 80A superalloy: A study on experimentation, TGRA, and PCA. Soldagem&Inspeção, 29, e2904.
- Saurabh, S., Suman Kumar, P., Chand, P., & Yadav, U. S. (2024). Study of the effect of laser beam welding on joint of Nimonic 80A superalloy: An experimental approach. The International Journal of Advanced Manufacturing Technology, 133(11), 5501–5513.
- Kumar, A., Singh, K. D., & Prasad, D. (2024). Intensification of thermal characteristics of flat plate solar water heater using triangular perforated wavy tape. Journal of Mechanical Engineering Science, Part C, 1–12.
- Pradhan, A. K., Barik, A. K., Roul, M. K., & Swain, P. K. (2023). Impact of flapping trajectory and foil gap on induced thrust of a flapping foil. Ocean Engineering, 290, 116387.
- Swain, P. K., Dora, S. P., & Barik, A. K. (2023). Energy extraction performance of tandem flapping foil undergoing elliptical motion trajectory. Ocean Engineering, 268, 113390.
- Swain, P. K., Naga Sai, C. B., Alekhya, G. N., Dora, S. P., & Barik, A. K. (2023). Effect of flapping trajectory and interfoil distance on propulsive performance of a tandem flapping foil. Journal of Offshore Mechanics and Arctic Engineering, 145(1), 010902.
- Panda, R. C., Panigrahi, L., Nayak, M. K., Chamkha, A. J., Sahoo, S. S., & Barik, A. K. (2023). Nanofluid-based pipe flow analysis in the absorber pipe of flat plate solar collector: Effects of inclination and porosity. Journal of Nanofluids, 12(2), 458–464.
- Dash, M. K., & Barik, A. K. (2023). A computational study on air-entrainment and pressure distribution for natural convection cooling of a hybrid IRS device. International Journal of Thermal Sciences, 187, 108196.
- Mukherjee, A., Senapati, J. R., & Barik, A. K. (2023). Field synergy and thermodynamic evaluation of a mini-duct with several protrusions utilizing the cross-flow method: A numerical exercise. International Communications in Heat and Mass Transfer, 145, 106817.
- Swain, P. K., Dora, S. P., Barik, A. K., Abhishikt, C. B. N. S., & Senapati, J. R. (2023). Study of lift enhancing mechanisms via comparison of the flapping trajectory of tandem flapping foil. Physics of Fluids, 35, 083603.
- Kumar, A., Barik, A. K., & Sinha, M. K. (2023). Natural convection from solid and hollow cylinders with concave surface: A numerical approach. Numerical Heat Transfer, Part A: Applications, 1–23.
- Barik, A. K., Rout, S., Senapati, J. R., & Awad, M. M. (2024). Effects of velocity, thermal, and concentration slips on the entropy generation of nanofluid over an inclined sheet. International Journal of Numerical Methods for Heat & Fluid Flow, 34(2), 117–1148.
- Kumar, A., Barik, A. K., & Sinha, M. K. (2024). Natural convection heat transfer from a uniform wall temperature, vertical barrel-shaped solid/hollow cylinder to air in infinite surroundings: A numerical study. Numerical Heat Transfer, Part A: Applications, 1–19.
- Barik, A. K., & Swain, P. K. (2024). Effects of axial electric and transverse magnetic fields on a rotating electro-osmotic flow in micro-parallel plates. European Journal of Mechanics-B/Fluids, 107, 148–164.
- Mishra, R. C., Barik, A. K., & Mallik, R. K. (2024). Numerical investigation of air entrainment and outlet temperature characteristics of an infrared suppression device with obstacles. Applied Thermal Engineering, 257, 124225.
- Kumar, S., Singh, S. K., Jha, S., Baskaran, K., Srinivasan, K., & Narayanan, S. (2024). On the reductions of airfoil broadband noise through circular dimples. Applied Acoustics, 217, 109819.

DEPARTMENT OF METALLURGICAL & MATERIAL ENGINEERING

- Chaurasiya, R., Maji, P., & Mukhopadhyay, G. (2023). High cycle fatigue behaviour of advanced high strength steel sheet (HS1000) in automotive application. *Materials Today: Proceedings*
- Chaurasiya, R., Maji, P., Mukhopadhyay, G., & Das, S. (2023). Fractography analysis on tensile and fatigue performance of ferrite-pearlite 800 steel. *International Research Journal of Engineering and Technology*, 10(11), 615-622.
- Chaurasiya, R., Mukhopadhyay, G., & Maji, P. (2024). Effect of prestrain on tensile behavior of HS800 steel sheet. *Materials Today Communications*, 38, 108047.
- Chaurasiya, R., Mukhopadhyay, G., & Maji, P. (2024). Comparative analysis of high cycle fatigue performance of HS1000 and C80 steel. *Materials Today: Proceedings*.
- Patra, S., Singh, G., Mandal, M., Chakraborty, R., & Arora, S. K. (2023). Non-destructive evaluation and corrosion study of magnetic pulse welded Al and low C steel joints. *Materials Chemistry and Physics*, 309, 128315.
- Murugesan, P. A., Mandal, M., Poddar, P., & Bagui, S. (2023). Effect of alloying elements on the dry sliding wear characteristics of gravity-cast Mg-Sn based alloys. *Journal of Materials Engineering and Performance*, 32(23), 10767-10782.
- Mishra, H. S., Sahu, R., & Padan, D. S. (2023). Effect of Sn alloying on the microstructural features and mechanical properties of gray cast iron. *Journal of Materials Engineering and Performance*, 1-11.
- Mishra, A., Sahu, R., Khajenoori, M., & Jha, S. K. (2024). An exhaustive review on recycling trends of spent lithium ion batteries: Current scenario, key process, challenges in India. *IFERP*, 11(5), 1-12.
- Kumar, S., Gupta, R. K., Archana, K., & Kumari, R. (2023). Development of ternary hydroxyapatite-Al₂O₃-TiO₂ nanocomposite coating on Mg alloy by electrophoretic deposition method. *Journal of Materials Engineering and Performance*.
- Kumari, R., Das, A. K., Murmu, A., & Kumari, K. (2023). Laser cladding of HA-TiO₂ composite coating on Mg-alloy: microstructural characterisation and wettability analysis. *Advances in Materials and Processing Technologies*.
- Yadav, K. B., & Kumari, R. (2024). Development of functionally graded HA-Al₂O₃-TiO₂ composite coating on Ti alloy: Microstructural characterization, nano-mechanical properties, and wear behaviour. *Journal of Materials Engineering and Performance*.
- Kumari, R. (2024). Effect of thermal oxidation temperature on microstructural characterization, mechanical behaviour and wettability. *Material Science Forum* (Accepted).
- Prasad, C., & Gali, A. (2024). Microstructure, mechanical, and tribological properties of TiC- and Ni-reinforced AA6061 matrix composite fabricated through stir casting. *Transactions of the Indian Institute of Metals*, 1-12.
- Prasad, C., Kumar, S., & Gali, A. (2024). Effects of TiC and Ni reinforcements on the microstructure, corrosion resistance and wear behaviour of AA6061 matrix composite. *Bulletin of Materials Science*, 47(3), 1-14.
- Kumar, B., Sen, P. K., & Roy, G. G. (2024). Role of Exergy-Based Process Evolution for Sustainable Steel Making: Rotary Hearth Furnace with Electric Arc Furnace Smelting. *Steel Research International*.
- Arun, K., Sunil, K., & Ashok, K. (2023). Structural phase transformation in single-crystal Fe-Cr-Ni alloy during creep deformation using molecular dynamics simulation and regression-based machine learning methodology. *Bulletin of Materials Science*, 47(7), 1-11.
- Arun, K., Ashish, A., Ashok, K., & Sunil, K. (2023). Prediction of hot metal temperature in a blast furnace iron making process using multivariate data analysis and machine learning methodology. *Metallurgical Research & Technology*, 120(6), 605.
- Arun, K., Roshan, K., Sunil, K., & Ashok, K. (2023). Atomistic structural transformation of Fe-Cr-Ni single crystal alloy under uniaxial deformation using molecular dynamics simulation. *Materials Today: Proceedings*.
- Sunil, K., Arun, K., Sukalpan, N., Krishnendu, M., Ashok, K., & Ranjan, K. S. (2024). Review on the application of multi-scale simulation and machine learning for the estimation and prediction of creep properties of steel. *Journal of Metallurgy and Materials Science*, 64(3-4), 69-82.
- Gaurav, N., Arora, K. S., Singh, J., & Ashok, K. (2023). Influence of process parameters on bead geometry and its effect on mechanical properties of CMT welding of automotive grade steel and aluminium alloy using aluminium based filler wire. *Welding International*, 37(9), 493-506.
- Gaurav, N., Arora, K. S., Singh, J., & Kumar, A. (2024). Influence of Different Process Parameters on Microstructural and Mechanical Properties of Cold Metal Transfer Joining of DP 600 Steel and Al 5052 Alloy. *Journal of Materials Engineering and Performance*, 33(7), 3338-3352.
- Ganguly, S., Chaubey, A. K., Sahoo, R., Kushwaha, A., Basu, A., Majhi, J., Gupta, M. (2023). Influence of ultrasonic shot peening on the microstructure and impression creep performance of squeeze-cast AZ91 alloy reinforced with graphene nanoplatelets. *Journal of Alloys and Compounds*, 938, 168640.
- Madheswaran, D. K., Krishna, R., Colak, I., et al. (2024). Green hydrogen: Paving the way for India's decarbonization revolution. *Environmental Science and Pollution Research*, 1-21.
- Dipali, N., Krishna, R., Ghosh, S., Sahu, S. K., Sinha, S., & Prasad, R. (2024). An experimental investigation and predictive modeling using machine learning technique for reclamation of metal values from scrap NdFeB magnets. *Journal of Industrial and Engineering Chemistry*, 1-15.
- Krishna, R., Sreenivasan, M., Lyutyk, M., Barosh, M., & Colak, I. (2024). Radio Frequency Plasma Spheroidization of Alumina as a Feedstock Material for Ceramic 3D Printing. *Journal of Materials Engineering and Performance*, 1-12.
- Krishna, R., Dhass, A. D., Arya, A., et al. (2023). An assessment of the strategies for the energy-critical elements necessary for the development of sustainable energy sources. *Environmental Science and Pollution Research*, 30, 90276-90297.
- Madheswaran, D. K., Thangavelu, P., Krishna, R., et al. (2023). Carbon-based materials in proton exchange

membrane fuel cells: A critical review on performance and application. *Carbon Letters*, 33, 1495–1518.

DEPARTMENT OF PHYSICS

- Sahoo, P., Swain, B., & Laha, U. (2023). Off-energy-shell scattering by additive interactions under an approximation scheme. *Acta Physica Polonica B*, 54(8-A2).
- Khirali, B., Swain, B., Laha, S., & Laha, U. (2024). Low-energy n-p and n-d scatterings with the Deng-Fan potential. *Ukrainian Journal of Physics*, 69(4).
- Khan, A. A., & Yadav, H. L. (2024). Experimental assessment of a low-cost aberration-free compact double aperture four-hololens imaging system: Application to the enhancement of sensitivity and accuracy of in-plane displacement measurement. *Applied Optics*, 63, 3069–3078.
- Khan, A. A., & Yadav, H. L. (2023). Recording and analysis of off-axis multiplexed volume holographic lens for wavelength selective wide acceptance angle operation in concentrator photovoltaics. *Optical Engineering*, 62(8), 085103.
- Mahato, K. D., & Kumar, U. (2023). A review of organic dye-based nanoparticles: Preparation, properties, and engineering/technical applications. *Mini-Reviews in Organic Chemistry*, 20(7), 655–674.
- Mahato, K. D., & Kumar, U. (2024). Optimized machine learning techniques enable prediction of organic dyes' photophysical properties: Absorption wavelengths, emission wavelengths, and quantum yields. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 308, 123768.
- Mahato, K. D., Kumar Das, S. S. G., Azad, C. S., & Kumar, U. (2024). Stokes shift prediction of fluorescent organic dyes using machine learning-based hybrid cascade models. *Dyes and Pigments*, 222, 111918.
- Mahato, K. D., Kumar Das, S. S. G., Azad, C. S., & Kumar, U. (2024). Machine learning-based hybrid ensemble models for prediction of organic dyes' photophysical properties: Absorption wavelengths, emission wavelengths, and quantum yields. *APL Machine Learning*, 2, 016101.
- Kumar, S., Bhuiya, M., Palai, D. K., & Agnihotri, N. (2024). Computational studies on nitrogen-doped graphene quantum dots as a potential sensor for hazardous gases. *Journal of Electronic Materials*, 53, 3548–3559.
- Bhuiya, M., Kumar, S., Kumar, A., & Agnihotri, N. (2024). Nitrogen-doped graphene quantum dots for efficient detection of toxic gas. *Journal of Electronic Materials*, 53, 3569–3581.

DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING

- Srivastava, S., Kumar, N., Kumar, A., Prasad, K., Mohan, A. and Malvi, C.S. (2024). Performance Investigation of Protective Clothing against Low Pressure Steam and Molten Aluminium. *Indian Journal of Fibre & Textile Research*. (Accepted)
- Bharti, S. S., Prasad, K. and Sudha, S. (2024). A sentiment analysis approach for prediction of customer acceptability for Artificial Intelligence-enabled banking. *International Journal of Electronic Marketing and Retailing*. (Accepted)

- Mishra T., N., Kumar A., Prasad S., B. (2024). Magnesium based implants: Alloying and coating strategies for improvement in its biomechanical and biocorrosion properties. *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications*, 0(0).
- Kumar, N., Kumar, A., Sethy, S. et al. (2023). Investigation and optimization in electrochemical arc drilling of Ni55.7Ti nickel-titanium shape memory alloy with molybdenum electrode. *J Braz. Soc. Mech. Sci. Eng.*, 45, 448.
- Arka, G. N., Kumar, N., Kumar, A., & Singh, S. (2023). Insight on turning of stainless steel 431 and modelling by ANN. *Materials and Manufacturing Processes*, 1-9.
- Das, S. R. (2023). Electrochemical arc drilling of nickel-titanium shape memory alloy using molybdenum electrode: Investigation, modeling, and optimization. *Surface Review and Letters*, 30(08), 23500579.
- Noor, M. F., Kumar, A., Tripathi, S., & Gupta, V. (2024). Challenges in adopting Industry 4.0 for Indian automobile industries: A key experts' perspective. *Journal Européen des Systèmes Automatisés*, 57(1), 239-253.
- Prakash A, Kumar A, Ballav R. (2024). Process capability of electrochemical discharge machining: A review. *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications*. 238(2), 282-300.
- Barik T, Parida S, Pal Kamal (2024). Optimizing Process Parameters in Drilling of CFRP Laminates: A Combined MOORA-TOPSIS-VIKOR Approach, *Fibers and Polymers*, Vol.25, pp.1859-1876.
- Goswami N., K., Pal Kamal, Bisoyi R K. and Nayak S S. (2024). Monitoring of Weld Bead Profile in Friction Stir Lap Welding for Polycarbonate Sheets Using Wavelet Packets of Power Signal, *Arabian Journal for Science and Engineering*.
- Kumar, A., Maji, K., Shrivastava, A. (2023). Investigations on deposition geometry and mechanical properties of wire arc additive manufactured Inconel 625, *International Journal of Precision Engineering and Manufacturing* 24(8), 1483-1500.
- Kumar, M., Das, A., Ballav, R., Kumar, N., & Sharma, K. K. (2023). Enhancing the tensile performance of Al/Mg alloy dissimilar friction stir welded joints by reducing brittle intermetallic compounds. *International Journal of Materials Research*, 115.
- Kumar, M., Das, A., & Ballav, R. (2023). Influence of the Zn interlayer on the mechanical strength, corrosion and microstructural behavior of friction stir-welded 6061-T6 aluminum alloy and AZ61 magnesium alloy dissimilar joints. *Materials Today Communications*, 35.
- Prakash, A., Kumar, A., & Ballav, R. (2024). Process capability of electrochemical discharge machining: A review. *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications*, 238.
- Lader, S. K., Baruah, M., & Ballav, R. (2023). Improvement in the weldability and mechanical properties of CuZn40 and AA1100-O dissimilar joints by underwater friction stir welding. *Journal of Manufacturing Processes*, 85, 1154-1172.
- Lader, S. K., Baruah, M., & Ballav, R. (2023). Significance of underwater friction stir welding on the weld integrity of thin sheets of aluminum (AA1050-O) and brass (CuZn34) joints. *Materials Science and Engineering: A*, 865.

- Lader, S. K., Baruah, M., & Ballav, R. (2023). Recent Developments in Friction Stir Welding Tools for Weld Bead Defects Minimization – A Review. *Soldagem and Inspecao*, 28, 1-41.
- Tripathi, S., Tudu, N., Baruah, M., Ballav, R., & Prasad, S. B. (2023). Influence of parameters on mechanical and micro-structural properties of tungsten inert gas (TIG)

welded joint of 1 mm thin Inconel 625 plates. *Indian Journal of Engineering & Materials Sciences*, 30(1).

- Kumar, S., Banerjee, T., & Patel, D. (2024). Structural, mechanical, tribological and corrosion characteristics of dual layer Ni-P/Sr-P coating on AZ91D Mg alloy through environmentally-friendly chemical conversion and electroless routes. *Surface and Coatings Technology*, 485, 130922.

vegetable crops: A threat to sustainable agro-ecosystem. (Accepted)

4.7.2 CONFERENCES

DEPARTMENT OF CIVIL ENGINEERING

- Maji S, Swargiary D, Senapati A and Sikdar U (2023). ML and AI-Based Prediction of Precipitation Trends. 2nd International Conference on Machine Learning and Data Engineering (ICMLDE) 2023, November 23-24th, 2023, UPES, Dehradun, India.
- Deb, K. and Pal, S. (2024) Equal Strain Liquefaction Analysis for Stone Column-Reinforced Soil Considering Clogging Effect, 18th World Conference on Earthquake Engineering, Milan, Italy, June 30th to July 5th, 2024
- Das, K., Singh, A. K., Prasad, B. K., (2023). Geotechnical Investigation and Design of Elephant Pass: A Case Study, Indian Geotechnical Conference Roorkee, INDIA, Paper ID- Case Studies 303
- Das, K., Kumar, S, Pandey, S., Singh, A. K., and Prasad, B. K. (2024.) Exploring the relationship between laminate orientation and bending behavior of delaminated composite conoidal shell roofs. In Third International Conference on Advances in Concrete, Structural & Geotechnical Engineering (ACSGE) 2024
- Virendra K., Rajnikant U., & Sharma K. K. (2024). Effect of elevated temperature on the residual strength of chemically activated binder concrete. Proceedings of the 9th International Conference on Building Materials and Construction (ICBMC-2024), Feb 26-29, 2024, Tokyo University of Japan.
- Kumar, V., Upadhya R., Sharma, K. K., and Choubey, B. (2023). Strength Assessment of Chemically Activated Binder Concrete. Proceedings of the 13th Structural Engineering Convention (SEC-2023), 07-09 Dec., 2023, Dept. of Applied Mechanics VNIT Nagpur, India.
- Kumar, V., Ranjan, V., and Choubey, B. (2023). Response of lateral resisting support system on high-rise building. Proceedings of the 13th Structural Engineering Convention (SEC-2023), 07-09 Dec., 2023, Dept. of Applied Mechanics VNIT Nagpur, India.

DEPARTMENT OF CHEMISTRY

- Hussain, A. J., Sankar, T. K., Ambade, B., Kumar, A., & Sethi, S. S. (2024). Emission of black carbon in heavy traffic areas of Jamshedpur and Ranchi: Risk exposure to humans. *Brazilian Journal of Development*, 10(2), e67541-e67541
- Moulick D., Khan F.R, Siddiqui N., Pradhan J, Khamari P. & Mahanta S. (2024) Applications of nanotechnology in abiotic stress management and biofortification, *The Nanotechnology Driven Agriculture*, Page: 50-66, CRC Press. (Scopus index)
- Mahanta S., Mubarak KP, Sen P., Kundu R., Shaw S. & Hossain A., Dhar A., Sarkar S., Shubhas Chandra Santra, Debojyoti Moulick (2024) Heavy metal accumulation in

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

- Tripathy, A. K., Mishra, A. K., & Panda, R. (2024, February). Performance Comparison and Analysis of Machine Learning and Deep Learning Models for Network Intrusion Detection In IoT-Edge Frameworks. In 2024 Second International Conference on Emerging Trends in Information Technology and Engineering (ICETITE) (pp. 1-6). IEEE
- Kumar, D., Sinha, N., Mishra, A. K., & Tripathy, A. K. (2024, January). An Experimental Comparison and Impact Analysis of Various RPL-Based IoT Security Threats Using Confiki Simulator. In 2024 16th International Conference on Communication Systems & NETWORKS (COMSNETS) (pp. 111-116). IEEE.
- Mishra, A. K., Khatik, S., & Puthal, D. (2023, October). A 2-Colorable DODAG Structured Hybrid Mode of Operations Architecture for RPL Protocol to Reduce Communication Overhead. In IFIP International Internet of Things Conference (pp. 212-224). Cham: Springer Nature Switzerland.
- Dey, A. K., Behera, G. G., & Mishra, A. K. (2023, August). An English Sentence Dictionary Based Secure Text Steganographic Technique for Message-Data Confidentiality. In International Conference on Computing, Communication and Learning (pp. 297-307). Cham: Springer Nature Switzerland.
- Mishra, A. K., & Puthal, D. (2023). Data Sampling in Federated Learning: Principles, Features and Taxonomy. *IEEE Communications Standards Magazine*, 7(4), 28-33.
- Majumder, A., Bi-directional LSTM with character and dependency embedding based approach for bio-molecular event trigger extraction. *AIP Conf. Proc.* 28 May 2024; 3164 (1): 050003.
- Majumder, A., Bio-molecular event trigger extraction using differential evolution-based parameter optimization, *IET Conference Proceedings*, 2023, p. 92-98, IET Digital Library
- Ayus, I., & Azad, C. (2023, November). Recent Advances in Multimodal Machine Learning for Parkinson's Disease Diagnosis: A Comprehensive Review. In 2023 2nd International Conference on Ambient Intelligence in Health Care (ICAHC) (pp. 1-7). IEEE.
- Das, S. G. K., Mahato, K. D., Azad, C., & Kumar, U. (2023, June). Heart Disease Prediction Using Different Boosting Models. In 2023 International Conference on Advanced & Global Engineering Challenges (AGEC) (pp. 131-136). IEEE.
- Kumar, A., Mahato, K. D., Azad, C., & Kumar, U. (2023, June). Liver Disease Prediction Using Different Machine Learning Algorithms. In 2023 International Conference on Advanced & Global Engineering Challenges (AGEC) (pp. 1-6). IEEE.
- Gorai J., Shaw D.K.. Multi-modal sentiment analysis of product reviews. 2nd International Conference on

- Computer, Electronics, Electrical Engineering and their applications (IC2E3 2024). IEEE Conference
- Rajwar, D., Kumar, D., (2024). Binary Computation Offloading in Edge Computing using Deep Reinforcement Learning, Advanced Network Technologies and Intelligent Computing (ANTIC-2023), BHU, India
 - Rajwar, D., Kumar, D., (2024). A PSO based Computation Offloading Model in Edge Computing, 2024 IEEE International Conference on Contemporary Computing and Communications.
 - Medicharla, S., Kumar, S., Devarakonda, P., Agrawalla, B., & Reddy, B. R. (2024). Software Fault Prediction Using FeatBoost Feature Selection Algorithm. *Procedia Computer Science*, 235, 316-325.
 - Agrawalla, B., & Reddy, B. R. (2024). Software Fault Prediction Using Optimal Classifier Selection: An Ensemble Approach. *Procedia Computer Science*, 235, 2965-2974
 - Bahuguna, A., Namchyo, S. B. T., Chaudhary, D. K., Bhaumik, G., & Govil, M. C. (2023, May). Local Neighborhood Average Pattern: A Handcrafted Feature Descriptor for Hand Gesture Recognition. In 2023 Third International Conference on Secure Cyber Computing and Communication (ICSCCC) (pp. 756-761). IEEE.
 - Islam, S. H., Pradhan, J., Vashistha, P., Singh, A. P., & Kishore, A. (2024, January). ResNet-CPDS: Colonoscopy Polyp Detection and Segmentation Using Modified ResNet101V2. In International Conference on Mathematics and Computing (pp. 93-105). Singapore: Springer Nature Singapore.
 - Pradhan, J., Pal, A. K., Islam, S. H., & Samanta, D. (2023, December). DNA Transcription and Translation Inspired Deep Features for Classification-Based CBIR. In International Conference on Intelligent Systems Design and Applications (pp. 273-284). Cham: Springer Nature Switzerland.
 - R.K. Nonia, M. Sarkar, D.K. Shaw, "A Comprehensive Study of Quantum Ant Colony Algorithms", accepted and presented at International Conference on Artificial Intelligence & Sustainable Computing (AISC 2024), 2024.
 - Goswami J. and Singh K. K., (2023) "Pulmonary Lung Cancer Classification Using Deep Neural Networks," in Machine Vision and Augmented Intelligence, K. Kumar Singh, M. K. Bajpai, and A. Sheikh Akbari, Eds., Singapore: Springer Nature Singapore, pp. 395-407.
 - Hansdah M. and Singh K. K., (2023) "Classification of lung Nodule from CT and PET/CT Images Using Artificial Neural Network," in Machine Vision and Augmented Intelligence, K. Kumar Singh, M. K. Bajpai, and A. Sheikh Akbari, Eds., Singapore: Springer Nature Singapore, pp. 641-650.
 - Mehta R., Sheikh-Akbari A., and Singh K. K., (2023) "A noble approach to 2d ear recognition system using hybrid transfer learning," in 202/ 12th Mediterranean Conference on Embedded Computing (MECO), Best Paper Award, pp. 1-5.
 - Mehta R. and Singh K. K., (2023) "2D Ear Recognition Using Data Augmentation and Deep CNN," in Machine Vision and Augmented Intelligence, K. Kumar Singh, M. K. Bajpai, and A. Sheikh Akbari, Eds., Singapore: Springer Nature Singapore, pp. 467-474.
 - Mehta R. and Singh K. K., (2023) "A comparative Analysis of 2D Ear Recognition for Constrained and Unconstrained Dataset Using Deep Learning Approach," in Machine Vision and Augmented Intelligence.
 - Singh K. K, Bajpai M. K, and Akbari A. Sheikh, Eds., Singapore: Springer Nature Singapore, (2023), pp. 337-343.
 - Mehta R, Ujjwal G., Shilpa S. J, Vityazev S, and Singh K. K, (2023) "Rotation invariant 2d ear recognition using gabor filters and ensemble of pre-trained deep convolutional neural network model," in 202/ 25th International Conference on Digital Signal Processing and its Applications (DSPA), Best Paper Award, pp. 1-6.
 - Nwokeji C. E, Akbari A. Sheikh, Gorbenko A, and Singh K. K, (2023) "Evaluation of wavelets in image camera source identification," in 202/ IEEE International Conference on Imaging Systems and Techniques (IST), IEEE, pp. 1-6.
 - Ohm A. K, Panday A. K, and Singh K. K, (2023) "Tokenization's potential for santhali language processing," in /rd International Conference on Machine Vision & Augmented Intelligence (MAI).
 - Saikia T, Hansdah M, and Singh K. K, (2023) Computer-Aided Leaf Disease Classification Based on Logistic Regression and Transfer Learning Approach, in Machine Vision and Augmented Intelligence.
 - Singh K. K, Bajpai M. K, and Akbari A. Sheikh, Eds., (2023) Singapore: Springer Nature Singapore, pp. 435-445.
 - Samie M, Akbari A. Sheikh, Singh K. K, and Ofoegbu E, (2023) "Experimental results of an intermittency fault detection and isolation test rig for low power no-fault-found applications," in 202/ 12th Mediterranean Conference on Embedded Computing (MECO), pp. 1-5.
 - Shilpa S. J, Mehta R, Vityazev S, and Singh K. K, (2023) "Epileptic seizure prediction using 1d-mobilenet," in 202/ 25th International Conference on Digital Signal Processing and its Applications (DSPA), pp. 1-5.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

- Mahanty, S., Kumar, A., Sharma, U., Kumari, S., Adhikary, S., & Pritam, K. A. (2023, May). Design and Implementation of Full Adder using 4 to 1 line Multiplexer Based on Nonlinear Switching Micro Ring Resonator Structure. In 2023 3rd International Conference on Advances in Computing, Communication, Embedded and Secure Systems (ACCESS) (pp. 280-285). IEEE.
- Mahanty, S., Kumar, S., Kumar, A., Kumari, P., Raza, T., & Kumar, S. (2024, April). Design and Implementation of All-Optical Logic Gates Based On XPM Effect In A Phase-Shifted Fiber Bragg Grating. In 2024 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST) (pp. 573-578). IEEE.
- Sharma, U., Adhikary, S., Sinha, P., Pritam, K. A., Mahanty, S., & Kumar, A. (2024, April). Non-linear switching of GaAs-AlGaAs MRR based Half subtractor using 2-to-4 line Decoder. In 2024 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST) (pp. 630-635). IEEE.
- Mahanty, S., Kumar, A., Kumari, Y., Durgay, T., Yadav, A. K., & Singh, G. (2024, April). Resonant Control: Managing Optical Routes With Non-Linear Switching Technique using Micro-ring Resonator. In 2024 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST) (pp. 521-526). IEEE.
- Mahanty, S., Kumar, S., Kumar, A., Kumari, P., Raza, T., & Kumar, S. (2024, April). Design and Implementation of All-Optical Decoder Using Phase-Shifted Fiber Bragg Grating. In 2024 5th International Conference on Recent Trends in

Computer Science and Technology (ICRTCST) (pp. 579-584). IEEE.

- Kumar, K. S. K., Mahanty, S., Kumar, A., Kumari, N., Shekhar, S., & Wagisha, O. (2024, April). Implementation of Optimized All-Optical TR Logic Gate using the Micro-Ring Resonator Structure. In 2024 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST) (pp. 659-663). IEEE.
- Singh, R. R., Mahanty, S., Kumar, A., Sharma, U., Adhikary, S., & Yadav, A. (2024, April). Realization of Half Adder using 1x4 Demultiplexer based on Non-linear switching of GaAs-AlGaAs MRR. In 2024 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST) (pp. 548-552). IEEE.
- Prasad, P., Pushkar, R., & Kumar, A. (2024, February). A Thin Quad Band FSS Based on Enclosed Cross Slots to Foster Gain in Multiband Applications. In 2024 IEEE Wireless Antenna and Microwave Symposium (WAMS) (pp. 1-5). IEEE.
- Kumar, S., Kumar, R., Kumar, A., Pushkar, R. (2023). Effect of CeMgO₂ ETL parameter on CZTS photovoltaic cell efficiency enhancement. 6th IEEE International workshop on recent advances in photonics, IIT Allahabad, Dec-2023.
- Ch N.K, Prakash A., Decentralized Application model for secured Internet of Thing Networks using Blockchain Technology in 2nd International Conference on Emerging Trends: Innovation & Challenges In Information Technology And Management organized by BVIMIT, Navi Mumbai 29th And 30th June 2024 (Accepted).
- Kumari N., Behera C., Behera B., IoT-Based Health Monitoring and Medication System for Elderly People, Second International Conference on Advances in Smart Sensor, Signal Processing and Communication Technology (ICASSCT 2024) organized by School of Physical and Applied Sciences, Goa University, Goa, India during 22 - 23, March 2024, pp.- 1-10.
- Agrawal, A. K., Bharti, M., & Kumar, J. (2024). Comparison of NOMA and OFDM for 6G communication systems. IETE International Conference on Cyber Threats and Security. IETE.
- Subramanyam, V., Kumar, J., Singh, S. N., Kumar, R., & Yadav, A. R. (2024). Low-textural image registration: Comparative analysis of feature descriptors. International Conference on Computer Vision and Image Processing. Springer.
- Agrawal, A. K., Bharti, M., Anumeha, Kumar, J., & Kumar, P. (2024). Automatic solar panel cleaning system for dust and dirt removal. 5th Electric Power and Renewable Energy Conference (EPREC-2024). Springer.
- Jha, S., Sarang, Bhardwaj, M., Arvind, P., & Kumar, J. (2024). Power-efficient pruned DFT-FBMC for 6G communication systems. 5th Electric Power and Renewable Energy Conference (EPREC-2024). Springer.
- Rahman, A., Kumar, J., Ponugupati, V., Agrawal, A. K., Kumar, A., & Arvind, P. (2024). Integrating control and computing in vehicle systems through CAPL and CANoe user interface design. 5th Electric Power and Renewable Energy Conference (EPREC-2024). Springer.
- Agrawal, A. K., Kumar, J., Kumar, A., & Arvind, P. (2024). Enhancing human-robot interaction through PID control and sensor integration. Power Electronics & IoT Applications in Renewable Energy and its Control (PARC), 2024. IEEE.
- A. Chaterjee, N. Kumar, A. Kumar, "Feature Map Guided Strategy for Robust Multi-Resolution Image Dehazing," International Conference on Electrical, Electronics and Computing Technologies (ICEECT-2024)
- R. K. Singh, S. Das, D. Dixit and N. Kumar, "Outage Probability Analysis of Energy Harvesting-Enabled Three-Phase Two-Way Relaying System Over Mixed Fading Channels," International Conference on IoT, Communication and Automation Technology (ICICAT), Gorakhpur, India, 2023.
- Rao, A. S., Patel, A., Rout, M. & Kumar, P. (2023). Reconfigurable underwater acoustic modem based on chirp modulation, IEEE SYMPOL 2023, pp. 1-6.
- Rashmi Sinha, Shalini Dwivedi & S.K.Mahto (2024, April), T-Shaped Millimeter Wave Patch Antenna with Enhanced Performance for 5G Era, 2024 IEEE 9th International Conference for Convergence in Technology (I2CT), Pune, India.
- Krishna, D. V., Mahto, S. K., Singh, A. K., & Sinha, R. (2023, June). Reconfigurable Wideband Monopole Radiator using Paper Substrate for Bluetooth/ISM Band Applications. In 2023 IEEE Wireless Antenna and Microwave Symposium (WAMS) (pp. 1-5). IEEE.
- Singh, A. K., Mahto, S. K., Sinha, R. (2023) "Inkjet Printed Wideband Frequency Reconfigurable Antenna for Wireless Applications", 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), pp.1-5
- Singh, A. K., Mahto, S. K., Sinha, R. (2023) "High-Sensitivity Dual Notch Microwave Sensor Inspired by Metamaterial for Characterization of Dielectric Materials," 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Ahmedabad, India, pp. 1-6
- Khan, A. S., Gorai, K., & Kundu, S. (2023, December). A Compact Planar Microstrip Patch Antenna in Commercial Ultra-Wideband Spectrum. In 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON) (pp. 1-4). IEEE.
- Khan, A. S., Gorai, K., & Kundu, S. (2023, December). A Compact Planar Microstrip Patch Antenna in Commercial Ultra-Wideband Spectrum. In 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON) (pp. 1-4). IEEE.
- Pandey, D., Sharma, V., & Kundu, S. (2023, February). CPW fed Heart shaped Antenna for Ultra-Wide Band Applications. In 2023 3rd International Conference on Range Technology (ICORT) (pp. 1-4). IEEE.
- Pandey A. & Sahoo S., Study of Dielectric Characteristics of Forsterite based Medical Implant, International Conference on Emerging Electronics and Automation, Springer
- Kalra D., Goyal V., Kumar M. & Srivastava M., LNA parameter optimization using Firefly algorithm, 3rd IEEE International Conference on Advancement in Electronics & Communication Engineering AECE - 2023 (ICAECE-2023), 23-24 November 2023, Ghaziabad (India)

DEPARTMENT OF ELECTRICAL ENGINEERING

- Banerjee, A., Praween, G., Gupta, O. H., Kumar, S., & Bhushan, R. (2023, December). Design, Simulation & Operation of Buck-Boost Converter for Renewable Energy Application. In 2023 10th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON) (Vol. 10, pp. 996-1000). IEEE.
- Banerjee, A., Bhushan, R., Chattopadhyay, S., & Sharma, V. K. (2024, February). Component Traceability, Drive Control of different machines in cylinder block line. In 2024 IEEE International Students'

- Conference on Electrical, Electronics and Computer Science (SCEECS) (pp. 1-7). IEEE.
- Kumari N., Singh S. P., Bhushan R. & Tyagi R. (2024). Impact on operating constraints of DFIG-based wind-driven system under symmetrical and unsymmetrical fault conditions. 2024 5th Electric Power and Renewable Energy Conference (EPREC), NIT Jamshedpur, India, 2024. (Accepted and presented at EPREC-2024, NIT Jamshedpur and will be published in Lecture notes on Electrical Engineering-Springer.)
 - Nirala P., Bhushan R., & Ghosh A. (2024). Impact of Increased Power Demand on Power Grids Due to Charging Stations of Electric Vehicles: A Literature Survey. 2024 5th Electric Power and Renewable Energy Conference (EPREC), NIT Jamshedpur, India, 2024. (Accepted and presented at EPREC-2024, NIT Jamshedpur and will be published in Lecture notes on Electrical Engineering-Springer.)
 - Sahoo, S. K., Kar, M. K., Kumar, S., & Mahanty, R. N. (2024, March). Genetic Algorithm based Optimal Placement of TCSC for Improving Voltage Profile. In 2024 11th International Conference on Signal Processing and Integrated Networks (SPIN) (pp. 403-408). IEEE.
 - Das A., Bhattacharya A. (2024) Class-E type inverter-based Wireless Power Transfer System for different numbers of coils - A Comparative analysis and validation using Typhoon HIL, 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST-2024).
 - Kumar A., Das A., Bhattacharya A. (2023) Wireless Power Transfer for EV Charging using Half-Bridge LLC Resonant Converter, 6th International Conference on Energy Systems, Drives and Automations (ESDA 2023).
 - Garg V., Kumar R., Bhattacharya A. (2023) Design and simulation of active PFC using boost converter used in Marx's generator, 2023 IEEE North Karnataka Subsection Flagship International Conference (NKCon).
 - Adhikary, S., & Gupta, S. K. (2024, February). Compensator design for DC-DC converters to improve the performance of the system. In 2024 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS) (pp. 1-6). IEEE.
 - Kumar P., Prajapati A.K & Mohan H, (2024). Experimentally Validated PI λ Controller and Modelling of DC Servo Motor for Industry Applications ,5th Electric Power and Renewable Energy Conference (EPREC), NIT Jamshedpur, India, 2024. (Accepted and presented at EPREC-2024, NIT Jamshedpur and will be published in Lecture notes on Electrical Engineering-Springer.)
 - Kumar, S., & Prajapati, A. K. (2024, February). Analysis and Simulation of Lithium-ion Battery Cell Balancing by using the Matlab for Electric Vehicle. In 2024 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS) (pp. 1-5). IEEE.
 - Mamidala, S., & Prajapati, A. K. (2023, May). Grid-Integrated EV Charging Infrastructure. In International Conference on Electric Power and Renewable Energy (pp. 297-323). Singapore: Springer Nature Singapore.
 - Kumar, M., Sen, S., Prajapati, A. K., & Diwania, S. (2023, March). A comprehensive power management approach for hydrogen fuel-cell-based hybrid EVs using PID controller. In 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT) (pp. 1-6). IEEE.
 - Sen, S., Kumar, M., Vedik, B., Shiva, C. K., & Prajapati, A. K. (2023, March). Predictive Controller Based EMS and Techno-Economics of an Electrical-Thermal Community MG. In 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT) (pp. 1-6). IEEE.
 - Bhartil.P., Verma D., Gupta O.H., Singh N.K., & Singh A.K., Detection of Islanding in Distributed Network in the Presence of DG Using Superimposed Positive Sequence Angle, 10th IEEE UP Section International Conference on Electrical, Electronics and Computer Engineering (UPCON-2023), Greater Noida, India, pp. 1-6, 1-3 Dec 2023. (e-ISBN: 979-8-3503-8247-1)
 - Bhartil.P., Singh N.K., Gupta O.H., & Singh A.K., Sequence Angle-Based Passive Algorithm for Islanding Detection of the Distribution System, 3rd International Symposium on Sustainable Energy and Technological Advancements (ISSETA 2024), Meghalaya, India, pp. 1-8, 23-24 Feb 2024.
 - Kumar D. & Gupta O. H., Stability Analysis of Four Switch Buck-Boost Converter Operating in Buck Mode by Lead Compensator, 3rd International Conference on Electrical Power and Energy Systems (ICEPES-2024), Bhopal, India, pp. 1-6, 21-22 Jun 2024.
 - Chandral., Singh N.K., Samuel P., Gupta O.H., & Singh A.K., Hybrid PSO-based Optimal Location of Electric Vehicle Charging Station in Distribution Networks, 8th Students' Conference on Engineering & Systems (SCES-2024), Prayagraj, India, pp. 1-5, 21-23 Jun 2024.
 - Sahoo S. K., S.Kumar, Mahanty R. N. (2024), Fault Analysis of Power System Under Varying Load Conditions. 2024 5th Electric Power and Renewable Energy Conference (EPREC), NIT Jamshedpur, India, 2024. (Accepted and presented at EPREC-2024, NIT Jamshedpur and will be published in Lecture notes on Electrical Engineering-Springer.)
 - Kumar S., Kumari N. (2023), Evaluating the performance of a Grid-Tied Hybrid Photovoltaic Wind Energy System, an Analysis Using Matlab Simulation, International Conference on Mechanical and Electrical Engineering (IEEE Forum), Oct. 2023.
 - Samal, S. K., Keshari, R. K., Singh, R. K., & Mahanty, R. (2024, February). Non Isolated Multi Port Inverter with Reduced Common Mode Leakage Current and Minimum Phase Property. In 2024 IEEE Applied Power Electronics Conference and Exposition (APEC) (pp. 354-359). IEEE.
 - Keshari, R. K., Nema, P., Samal, S. K., & Singh, R. K. (2024, February). AL n C 2n-2 Network-Based Paralleled Dual Buck-Boost Non-Isolated Multi-Output Hybrid Converter with Reduced Leakage Current. In 2024 IEEE Applied Power Electronics Conference and Exposition (APEC) (pp. 1242-1247). IEEE.
 - Samal, S. K., Verma, A., Singh, R. K., & Mahanty, R. (2023, October). Grid Integrated Transformerless Interleaved Hybrid Converter with Reduced Common-Mode Leakage Current. In IECON 2023-49th Annual Conference of the IEEE Industrial Electronics Society (pp. 1-6). IEEE.
 - Sahay S, Kumar, N (2024). "A Hybrid Strategy for the Solution of Economic Load Dispatch Problem" ICPEICES-2024 DTU New Delhi.

- Choudhary D, Mahanty N R, Kumar N (2024), Demand Management of PEV Charging Station and Charging Coordination for Grid Integration ICPEICES-2024 DTU New Delhi.
 - Sahay, S., & Kumar, N. (2024, January). Environment-Friendly Economic Load Dispatch Using a Novel GSA-BBO Hybridization Algorithm. In 2024 Third International Conference on Power, Control and Computing Technologies (ICPC2T) (pp. 229-234). IEEE.
 - Kumari, P., Sahay, S., & Kumar, N. (2023, September). Extended Kalman Filter Approach for State of Charge Estimation of Lithium-Ion Battery. In 2023 IEEE 2nd International Conference on Industrial Electronics: Developments & Applications (ICIDEA) (pp. 483-486). IEEE.
 - Pattanayak, B., Nanda, S., & Kumar, N. (2023, August). Advancement in Techniques towards Optimal Operation of UPQC for Power Quality Improvement. In 2023 Second International Conference on Augmented Intelligence and Sustainable Systems (ICAISS) (pp. 325-331). IEEE.
 - Sahay, S., Upputuri, R., Kumari, P., Kumar, N. (2024). Cost-Effective Solution of Grid Dispatch Problems Using a Novel Rao-4 Algorithm. In: Swain, B.P., Dixit, U.S. (eds) Recent Advances in Electrical and Electronic Engineering. ICSTE 2023. Lecture Notes in Electrical Engineering, vol 1071. Springer, Singapore.
 - Kumari, P., Choudhary, D., Sahay, S., Kumar, N. (2024). Different Strategies for Estimation of State of Charge for Battery Packs of Electric Vehicle. In: Swain, B.P., Dixit, U.S. (eds) Recent Advances in Electrical and Electronic Engineering. ICSTE 2023. Lecture Notes in Electrical Engineering, vol 1071. Springer, Singapore.
 - Kumar, P., Tadikonda, N., Kumari, P., Kumar, D., Kumar, N. (2024). Estimation of State of Charge for Lithium-Ion EV Battery Packs Using Passive Cell Balancing. In: Sikander, A., Zurek-Morka, M., Chanda, C.K., Mondal, P.K. (eds) Advances in Energy and Control Systems. ESDA 2022. Lecture Notes in Electrical Engineering, vol 1148. Springer, Singapore.
 - Kumar, M., & Kumar, J., (2024). A Passive Islanding Detection Technique Based on Slip Frequency in Microgrid Environment. Accepted and presented in International conference EPREC-2024 and will be published in Lecture notes on Electrical Engineering-Springer.
 - Basu, A., & Singh, M., (2024) Energy Management for Photovoltaic Battery Integrated System Using Bi-directional DC-DC Converter," 3rd International Symposium on Sustainable Energy and Technological Advancements (ISSETA).
 - Arpita Basu, Madhu Singh, "Performance Analysis of PV Based Battery Integrated E-rickshaw With Regenerative Braking," 5th International Conference on Energy System, Drive and Automation (ESDA 2022), 2023.
 - Basu, A., & Singh, M. (2023). Performance analysis of PV based battery integrated e-rickshaw with regenerative braking. *Microsystem Technologies*, 1-11.
 - Jena P.K& Das S., "Empowering Communities: A study on Residential Electricity Demand Control for Sustainable Living", Accepted and presented in International conference EPREC-2024, NIT Jamshedpur and will be published in Lecture notes on Electrical Engineering-Springer.
 - Jena P.K& Das S., Demand Side Management with Electric Vehicle Scheduling, ICSPER 2024, NIT Warangal
 - NaikK. R., Kolhe M. & PrasadM. K S, Predictive Control Strategy for DC Microgrid Integrated EV Charging Stations in Oslo,in IEEE 4th International Conference on Sustainable Energy and Future Electric transportation 2024, , pp.1-6, 2024,(Accepted).
 - Pal, K., Akella, A. K., Namrata, K., & Bhuyan, A. (2023, May). Approach for Islanding Detection in a PV Grid-Connected System Using Negative Sequence Impedance. In International Conference on Electric Power and Renewable Energy (pp. 173-185). Singapore: Springer Nature Singapore.
 - Ranjan, R. R., Namrata, K., & Kumar, A. (2024, February). Optimal Energy Management in Coordination With Virtual Power Plant. In 2024 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS) (pp. 1-6). IEEE.
 - Kumar, A., Namrata, K., Singh, A. K., & Ranjan, R. R. (2024, January). Half Bridge Compensator Design for THD Reduction and DC Link Voltage Stabilisation of Electric Traction. In 2024 Third International Conference on Power, Control and Computing Technologies (ICPC2T) (pp. 7-12). IEEE.
 - Sahu, D., Namrata, K., Kumar, M., & Kumar, N. (2023, March). Buck converter for low power delivery using Digital control method. In 2023 9th International Conference on Electrical Energy Systems (ICEES) (pp. 552-555). IEEE.
 - Kumar, A., Kumar, S., Sinha, U. K., Saw, B. K., &Bohre, A. K. (2023, December). Integration of Green Renewable DG based EV Charging Stations Planning in Unbalanced Distribution Network. In 2023 IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE) (pp. 1-6). IEEE.
 - Kumar, A., Kumar, S., Sinha, U. K., &Bohre, A. K. (2023). Planning of DG and EV charging station in distribution system using SCA. In 2023 IEEE Renewable Energy and Sustainable E-Mobility Conference (RESEM), pp. 1-6. IEEE, 2023.
 - Kumar, A., Kumar, S., Sinha, U. K., &Bohre, A. K. (2023, December). Renewable DG Integration in the Unbalanced Distribution System with Impact of EV Penetration for Sustainable Operation. In 2023 IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC) (pp. 1-6). IEEE.
- DEPARTMENT OF METALLURGICAL & MATERIAL ENGINEERING**
- Ranjan R., Dutta A., The role of thermomechanical treatment and vanadium content on the microstructural evolution in Microalloyed Steels, National symposium of research scholars on metallurgy and materials (NSRS-2024) IIT Kanpur
 - Arun K., Roshan K., Sunil K., Ashok K., (2024). Atomistic Investigation of Mechanical Properties of Fe-Cr-Ni Alloy Using Molecular Dynamics Simulation, In Indian Conference On Applied Mechanics, pp. 303-309. Singapore: Springer Nature Singapore.
 - Krishna, R., Mummery, P. M., & Sharma, S. K. (2023). New perspectives on structural parameters of graphite materials revealed by micromechanics based on microstructural analysis. *Materials Today Proceedings*, 1-6.

- Krishna, R., Akram, S., Madhuri, P., & Rao, T. V. V. L. N. (2023). Machine learning application in evaluation of graphite plates. AIP Conference Proceedings, 2715, 020018
- Sreenivasan, M., Babu, G. E., Krishna, R., Lyutyk, M., & Barosh, M. (2023, May). Correlation between X-ray diffraction line profile and microstructure of spheroidized Alumina micropowder for 3D printing application. In AIP Conference Proceedings (Vol. 2715, No. 1). AIP Publishing.
- Vardhan, P. V., Reddy, C., Krishna, R., Reddy, N. Y., Kumar, K. S., Kumar, B. S., & Rao, T. V. V. L. N. (2023, May). Machine learning applications for early-stage diagnosis of diabetic patients. In AIP Conference Proceedings (Vol. 2715, No. 1). AIP Publishing.
- Phadatare, H., Krishna, R., & Balaji, P. (2023, May). Design and analysis of tuned vibrational absorber for a vibrating system with unbalance excitation. In AIP Conference Proceedings (Vol. 2715, No. 1). AIP Publishing.
- Kiran, S. B., Krishna, R., Bhanuprakashreddy, D., Divya, M., Yadav, A., Suresh, P., ... & Colak, I. (2023, May). Structural analysis of grey iron nose leg component produced by lost foam casting. In AIP Conference Proceedings (Vol. 2715, No. 1). AIP Publishing.
- Pandey, A., Hansdah, D., & Kumar, S. (2024). Impact of anthracite blending and SDS addition on slurryability and stability of Indian high ash coal water slurry. International Journal of Coal Preparation and Utilization, 1-22.
- Pandey, S. Free Vibration Analysis of Porous Functionally Graded Material Sandwich Folded Plates. Lecture Notes in Mechanical Engineering-Springer, 177, 355-357.
- Kumar, A, Pandey, S. Effect of shear correction factor on free vibration analysis of symmetric and antisymmetric sandwich plates. Lecture Notes in Mechanical Engineering-Springer, 177, 159-164.
- Chaurasia, B. K., & Kumar, D. (2024). Investigation of the Failure Load in Riveted Lap Joints Made of Aluminum Alloys. In Indian Conference On Applied Mechanics (pp. 381-388). Singapore: Springer Nature Singapore.
- Gautham, M. T., & Kumar, D. (2024). Material Properties Predictions Using Data-Driven Technology. In Indian Conference On Applied Mechanics (pp. 317-322). Singapore: Springer Nature Singapore.
- Mandal, S. K., Kumar, D., & Kumar, R. (2024). Design and Development of Flexible Elastomer for Energy Storage. In Indian Conference On Applied Mechanics (pp. 53-57). Singapore: Springer Nature Singapore.
- Rizwee, M., Kumar, D., Singh, Y., & Kumar, R. (2024). A Numerical Analysis of Mechanical Behavior of Additive Manufactured Polylactic Acid (PLA) Specimen Through Finite Element Method. In Indian Conference On Applied Mechanics (pp. 59-69). Singapore: Springer Nature Singapore.
- Sharma, A.K., Yadav, Y.K., Kundu, P.K. (2023). Innovations and Challenges in Grinding Titanium Grade 5: A Review. In: 9th International & 30th All India Manufacturing Technology, Design and Research (AIMTDR) Conference, 8th to 10th December 2023, IIT BHU, India.
- Yadav, Y.K., Shaw, D., Mukhopadhyay, M., Kundu, P.K. (2023). An Experimental Analysis on Vertical Milling of Ti-6Al-4V under SQL based DBD Technique. In: 9th International & 30th All India Manufacturing Technology, Design and Research (AIMTDR) Conference, 8th to 10th December 2023, IIT BHU, India.
- Sahoo V, Srikant B, Rath A. (2023). Gear Pair Analysis: Double Circular Arc with Involute Profile, Recent Advances in Mechanical Engineering, Proceedings of ICRAMERD 2022, Chapter 55, 1-7.
- Ram, S., Prasad, A K., & Hansda, D. (2023), Phase Change Material for Energy Storage. Proceedings of the 3rd International conference on Advancement in Materials Processing Technology (AMPT) 2023, Department of Metallurgical and Materials Engineering, NIT Jamshedpur, (India) 17-18 July 2023.
- Priya, R.P., Mishra, S., Priyadarshi, A., Sanjay (2023). State-of-Charge Estimation in Lithium-Ion Battery for Electric Vehicle Applications: A Comparative Review. In: Kumar, S., Singh, B., Sood, V.K. (eds) Recent Advances in Power Electronics and Drives. Lecture Notes in Electrical Engineering, vol 973. Springer, Singapore.
- Kumar, R., Kumar, P., & Rajan, A. (2023). Thermal performance of automobile radiator under the

DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING

- Kumar S., Banerjee T., Patel D., (2023). Synthesis and Characterization of Electroless Ni-P-Al₂O₃ Composite Coating on Aerospace-grade Mg Alloy for Improving Wear Resistance. 9th International & 30th All India Manufacturing Technology, Design and Research Conference, 8th to 10th December 2023, Department of Mechanical Engineering, IIT BHU, India.
- Kumar, A., Prasad, K., Kumar, N. and Mohan, A. (2023) 'Development of inherent flame-retardant textiles for protection against molten metal' In proceedings of the International Conference on Technical textiles and Non-wovens (ICTN-2023), December 9 – 11, IIT Delhi, India.
- Sharma, M. K, Kumar, D. and Prasad, K. (2024) 'Analysis of Barriers in Waste Collection and Segregation for Circular Economy using IF-TOPSIS approach', In proceedings of the International Conference on Data Analytics and Management (ICDAM-2024), March 15 - 16, XISS Ranchi, Jharkhand, India.
- Patel, A., Dwivedi, R. and Prasad, K. (2024) 'Selection of solar panel using multi-criteria decision making approach', In proceedings of the Electric Power and Renewable Energy Conference (EPREC-2024), May 24-26, NIT Jamshedpur, Jharkhand, India.

DEPARTMENT OF MECHANICAL ENGINEERING

- R. K. Gouda, M. A. Shahdhaar, A. Srivastava, Experimental Investigation of Evaporation Rates from a TiO₂ Nanocoated Surface, In Proceedings of the 27th National and 5th International ISHMT-ASTFE Heat and Mass Transfer Conference December 14-17, 2023, IIT Patna, Patna-801106, Bihar, India. Begel House Inc., 2024.

influence of hybrid nanofluid. *Materials Today: Proceedings*, 76, 251-255.

- Aswarthananarayana, S., Rajan, A., Raj, R., Ranjan, G., & Prasad, L. (2023). Investigation of thermal properties of graphene-silicone oil nanofluid. *Materials Today: Proceedings*, 76, 376-382.
- Barik, A. K. & Swain P. K. (2023). Design evolution of coolant passage for cooling a substrate by a single stream, 10th International and 50th National Conference on FLUID MECHANICS and FLUID POWER (FMFP-2023), Organized by Department of Mechanical Engineering, IIT Jodhpur 20th-22nd December.
- Aryasomayajula, Harshini P., Pranathi A.K., & Jha S.K., Investigation of flow past a tandem flat plate's airfoil with modified trailing edges, *Fluid Mechanics and Fluid Power (FMFP) 2023 10th International conference IIT Jodhpur*.
- Das, S. K., Sinha, M. K., & Prasad, A. K. (2023). Designing and simulation of double stage grid-linked PV system using MATLAB/Simulink. In *Recent advances in Power Systems: Select Proceedings of*

EPREC 2022 (pp. 169-195). Singapore: Springer Nature Singapore.

DEPARTMENT OF PHYSICS

- Khan S., Jain S.S, Sharma S., Srivastava A., Ranjan R., Structural and electrochemical study about the electrode material of carbon-based biomass for energy storage, *Proceedings of 5th International Conference on Advances in Steel, Power and Construction Technology AIP Conf. Proc.* 2888, 020032-1–020032-7; Published by AIP Publishing. 978-0-7354-4649-6/\$30.00 2.
- Tripathy N., Divya K., Tripathy D., Khan S., & Ranjan R., Study of Vibrational, Structural, and External Morphology of Biomass Waste, *National Conference on Recent Advances in Quantum Science & Technology (NCRAQST2024) 16 -17th Feb, 2024*.
- Dandapat, S., Sahu, N., Azad, C., & Kumar, U. (2024, June). Lattice thermal conductivity of material and its correlation with Debye temperature using regression models. In *2024 International Conference on Advancements in Power, Communication and Intelligent Systems (APCI)* (pp. 1-6). IEEE.

4.7.3 Book(s)/Chapter(s) authored/edited by the faculty members

DEPARTMENT OF CIVIL ENGINEERING

- Maji S, Swargiary D, Senapati A and Sikdar U (2023). ML and AI-Based Prediction of Precipitation Trends. 2nd International Conference on Machine Learning and Data Engineering (ICMLDE) 2023, November 23-24th, 2023, UPES, Dehradun, India.
- Deb, K. and Pal, S. (2024) Equal Strain Liquefaction Analysis for Stone Column-Reinforced Soil Considering Clogging Effect, 18th World Conference on Earthquake Engineering, Milan, Italy, June 30th to July 5th, 2024
- Das, K., Singh, A.K., Prasad, B.K., (2023). Geotechnical Investigation and Design of Elephant Pass: A Case Study, *Indian Geotechnical Conference Roorkee, INDIA, Paper ID- Case Studies 303*
- Das, K., Kumar, S, Pandey, S., Singh, A.K., and Prasad, B.K. (2024.) Exploring the relationship between laminate orientation and bending behavior of delaminated composite conoidal shell roofs. In *Third International Conference on Advances in Concrete, Structural & Geotechnical Engineering (ACSGE) 2024*
- Virendra K., Rajnikant U., & Sharma K. K. (2024). Effect of elevated temperature on the residual strength of chemically activated binder concrete. *Proceedings of the 9th International Conference on Building Materials and Construction (ICBMC-2024)*, Feb 26-29, 2024, Tokyo University of Japan.
- Kumar, V., Upadhaya R., Sharma, K. K., and Choubey, B. (2023). Strength Assessment of Chemically Activated Binder Concrete. *Proceedings of the 13th Structural Engineering Convention (SEC-2023)*, 07-09 Dec., 2023, Dept. of Applied Mechanics VNIT Nagpur, India.
- Kumar, V., Ranjan, V., and Choubey, B. (2023). Response of lateral resisting support system on high-rise building. *Proceedings of the 13th Structural Engineering Convention (SEC-2023)*, 07-09 Dec., 2023, Deptt. of Applied Mechanics VNIT Nagpur, India.

DEPARTMENT OF CHEMISTRY

- Hussain, A. J., Sankar, T. K., Ambade, B., Kumar, A., & Sethi, S. S. (2024). Emission of black carbon in heavy traffic areas of Jamsheedpur and Ranchi: Risk exposure to humans. *Brazilian Journal of Development*, 10(2), e67541-e67541
- Moulick D., Khan F.R, Siddiqui N., Pradhan J, Khamari P.& Mahanta S. (2024) Applications of nanotechnology in abiotic stress management and biofortification, *The Nanotechnology Driven Agriculture*, Page: 50-66, CRC Press. (Scopus index)
- Mahanta S., Mubarak KP, Sen P., Kundu R., Shaw S. & Hossain A., Dhar A., Sarkar S., Shubhas Chandra Santra, Debojyoti Moulick (2024) Heavy metal accumulation in vegetable crops: A threat to sustainable agro-ecosystem. (Accepted)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

- Tripathy, A. K., Mishra, A. K., & Panda, R. (2024, February). Performance Comparison and Analysis of Machine Learning and Deep Learning Models for Network Intrusion Detection In IoT-Edge Frameworks. In *2024 Second International Conference on Emerging Trends in Information Technology and Engineering (ICETITE)* (pp. 1-6). IEEE
- Kumar, D., Sinha, N., Mishra, A. K., & Tripathy, A. K. (2024, January). An Experimental Comparison and Impact Analysis of Various RPL-Based IoT Security Threats Using Contiki Simulator. In *2024 16th International Conference on Communication Systems & NETWORKS (COMSNETS)* (pp. 111-116). IEEE.
- Mishra, A. K., Khatik, S., & Puthal, D. (2023, October). A 2-Colorable DODAG Structured Hybrid Mode of Operations Architecture for RPL Protocol to Reduce

- Communication Overhead. In IFIP International Internet of Things Conference (pp. 212-224). Cham: Springer Nature Switzerland.
- Dey, A. K., Behera, G. G., & Mishra, A. K. (2023, August). An English Sentence Dictionary Based Secure Text Steganographic Technique for Message-Data Confidentiality. In International Conference on Computing, Communication and Learning (pp. 297-307). Cham: Springer Nature Switzerland.
 - Mishra, A. K., & Puthal, D. (2023). Data Sampling in Federated Learning: Principles, Features and Taxonomy. IEEE Communications Standards Magazine, 7(4), 28-33.
 - Majumder, A., Bi-directional LSTM with character and dependency embedding based approach for bio-molecular event trigger extraction. AIP Conf. Proc. 28 May 2024; 3164 (1): 050003.
 - Majumder, A., Bio-molecular event trigger extraction using differential evolution based parameter optimization, IET Conference Proceedings, 2023, p. 92-98, IET Digital Library
 - Ayus, I., & Azad, C. (2023, November). Recent Advances in Multimodal Machine Learning for Parkinson's Disease Diagnosis: A Comprehensive Review. In 2023 2nd International Conference on Ambient Intelligence in Health Care (ICAHC) (pp. 1-7). IEEE.
 - Das, S. G. K., Mahato, K. D., Azad, C., & Kumar, U. (2023, June). Heart Disease Prediction Using Different Boosting Models. In 2023 International Conference on Advanced & Global Engineering Challenges (AGEC) (pp. 131-136). IEEE.
 - Kumar, A., Mahato, K. D., Azad, C., & Kumar, U. (2023, June). Liver Disease Prediction Using Different Machine Learning Algorithms. In 2023 International Conference on Advanced & Global Engineering Challenges (AGEC) (pp. 1-6). IEEE.
 - Gorai J., Shaw D. K., Multi-modal sentiment analysis of product reviews. 2nd International Conference on Computer, Electronics, Electrical Engineering and their applications (IC2E3 2024). IEEE Conference
 - Rajwar, D., Kumar, D., (2024). Binary Computation Offloading in Edge Computing using Deep Reinforcement Learning, Advanced Network Technologies and Intelligent Computing (ANTIC-2023), BHU, India
 - Rajwar, D., Kumar, D., (2024). A PSO based Computation Offloading Model in Edge Computing, 2024 IEEE International Conference on Contemporary Computing and Communications.
 - Medicharla, S., Kumar, S., Devarakonda, P., Agrawalla, B., & Reddy, B. R. (2024). Software Fault Prediction Using FeatBoost Feature Selection Algorithm. Procedia Computer Science, 235, 316-325.
 - Agrawalla, B., & Reddy, B. R. (2024). Software Fault Prediction Using Optimal Classifier Selection: An Ensemble Approach. Procedia Computer Science, 235, 2965-2974
 - Bahuguna, A., Namchy, S. B. T., Chaudhary, D. K., Bhaumik, G., & Govil, M. C. (2023, May). Local Neighborhood Average Pattern: A Handcrafted Feature Descriptor for Hand Gesture Recognition. In 2023 Third International Conference on Secure Cyber Computing and Communication (ICSCCC) (pp. 756-761). IEEE.
 - Islam, S. H., Pradhan, J., Vashistha, P., Singh, A. P., & Kishore, A. (2024, January). ResNet-CPDS: Colonoscopy Polyp Detection and Segmentation Using Modified ResNet101V2. In International Conference on Mathematics and Computing (pp. 93-105). Singapore: Springer Nature Singapore.
 - Pradhan, J., Pal, A. K., Islam, S. H., & Samanta, D. (2023, December). DNA Transcription and Translation Inspired Deep Features for Classification-Based CBIR. In International Conference on Intelligent Systems Design and Applications (pp. 273-284). Cham: Springer Nature Switzerland.
 - R.K. Nonia, M. Sarkar, D.K. Shaw, "A Comprehensive Study of Quantum Ant Colony Algorithms", accepted and presented at International Conference on Artificial Intelligence & Sustainable Computing (AISC 2024), 2024.
 - Goswami J. and Singh K. K., (2023) "Pulmonary Lung Cancer Classification Using Deep Neural Networks," in Machine Vision and Augmented Intelligence, K. Kumar Singh, M. K. Bajpai, and A. Sheikh Akbari, Eds., Singapore: Springer Nature Singapore, , pp. 395-407.
 - Hansdah M. and Singh K. K., (2023) "Classification of lung Nodule from CT and PET/CT Images Using Artificial Neural Network," in Machine Vision and Augmented Intelligence, K. Kumar Singh, M. K. Bajpai, and A. Sheikh Akbari, Eds., Singapore: Springer Nature Singapore, , pp. 641-650.
 - Mehta R., Sheikh-Akbari A., and Singh K. K., (2023) "A noble approach to 2d ear recognition system using hybrid transfer learning," in 202/ 12th Mediterranean Conference on Embedded Computing (MECO), Best Paper Award, pp. 1-5.
 - Mehta R. and Singh K. K., (2023) "2D Ear Recognition Using Data Augmentation and Deep CNN," in Machine Vision and Augmented Intelligence, K. Kumar Singh, M. K. Bajpai, and A. Sheikh Akbari, Eds., Singapore: Springer Nature Singapore, pp. 467-474.
 - Mehta R. and Singh K. K., (2023) "A comparative Analysis of 2D Ear Recognition for Constrained and Unconstrained Dataset Using Deep Learning Approach," in Machine Vision and Augmented Intelligence.
 - Singh K. K, Bajpai M. K, and Akbari A. Sheikh, Eds., Singapore: Springer Nature Singapore, (2023), pp. 337-343.
 - Mehta R, Ujjwal G., Shilpa S. J, Vityazev S, and Singh K. K, (2023) "Rotation invariant 2d ear recognition using gabor filters and ensemble of pre-trained deep convolutional neural network model," in 202/ 25th International Conference on Digital Signal Processing and its Applications (DSPA), Best Paper Award, pp. 1-6.
 - Nwokeji C. E, Akbari A. Sheikh, Gorbenko A, and Singh K. K, (2023) "Evaluation of wavelets in image camera source identification," in 202/ IEEE International Conference on Imaging Systems and Techniques (IST), IEEE, pp. 1-6.
 - Ohm A. K, Panday A. K, and Singh K. K, (2023) "Tokenization's potential for santhali language processing," in /rd International Conference on Machine Vision & Augmented Intelligence (MAI).
 - Saikia T, Hansdah M, and Singh K. K, (2023) Computer-Aided Leaf Disease Classification Based on Logistic Regression and Transfer Learning Approach, in Machine Vision and Augmented Intelligence.
 - Singh K. K, Bajpai M. K, and Akbari A. Sheikh, Eds., (2023) Singapore: Springer Nature Singapore, pp. 435-445.

- Samie M, Akbari A. Sheikh, Singh K. K, and Ofoegbu E, (2023) "Experimental results of an intermittency fault detection and isolation test rig for low power no-fault-found applications," in 202/ 12th Mediterranean Conference on Embedded Computing (MECO), pp. 1–5
- Shilpa S. J, Mehta R, Vityazev S, and Singh K. K, (2023) "Epileptic seizure prediction using 1d-mobilenet," in 202/ 25th International Conference on Digital Signal Processing and its Applications (DSPA), pp. 1–5

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

- Mahanty, S., Kumar, A., Sharma, U., Kumari, S., Adhikary, S., & Pritam, K. A. (2023, May). Design and Implementation of Full Adder using 4 to 1 line Multiplexer Based on Nonlinear Switching Micro Ring Resonator Structure. In 2023 3rd International Conference on Advances in Computing, Communication, Embedded and Secure Systems (ACCESS) (pp. 280-285). IEEE.
- Mahanty, S., Kumar, S., Kumar, A., Kumari, P., Raza, T., & Kumar, S. (2024, April). Design and Implementation of All-Optical Logic Gates Based On XPM Effect In A Phase-Shifted Fiber Bragg Grating. In 2024 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST) (pp. 573-578). IEEE.
- Sharma, U., Adhikary, S., Sinha, P., Pritam, K. A., Mahanty, S., & Kumar, A. (2024, April). Non-linear switching of GaAs-AlGaAs MRR based Half subtractor using 2-to-4-line Decoder. In 2024 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST) (pp. 630-635). IEEE.
- Mahanty, S., Kumar, A., Kumari, Y., Durgey, T., Yadav, A. K., & Singh, G. (2024, April). Resonant Control: Managing Optical Routes With Non-Linear Switching Technique using Micro-ring Resonator. In 2024 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST) (pp. 521-526). IEEE.
- Mahanty, S., Kumar, S., Kumar, A., Kumari, P., Raza, T., & Kumar, S. (2024, April). Design and Implementation of All-Optical Decoder Using Phase-Shifted Fiber Bragg Grating. In 2024 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST) (pp. 579-584). IEEE.
- Kumar, K. S. K., Mahanty, S., Kumar, A., Kumari, N., Shekhar, S., & Wagisha, O. (2024, April). Implementation of Optimized All-Optical TR Logic Gate using the Micro-Ring Resonator Structure. In 2024 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST) (pp. 659-663). IEEE.
- Singh, R. R., Mahanty, S., Kumar, A., Sharma, U., Adhikary, S., & Yadav, A. (2024, April). Realization of Half Adder using 1x4 Demultiplexer based on Non-linear switching of GaAs-AlGaAs MRR. In 2024 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST) (pp. 548-552). IEEE.
- Prasad, P., Pushkar, R., & Kumar, A. (2024, February). A Thin Quad Band FSS Based on Enclosed Cross Slots to Foster Gain in Multiband Applications. In 2024 IEEE Wireless Antenna and Microwave Symposium (WAMS) (pp. 1-5). IEEE.
- Kumar, S., Kumar, R., Kumar, A., Pushkar, R. (2023). Effect of CeMgO₂ ETL parameter on CZTS photovoltaic cell efficiency enhancement. 6th IEEE International workshop on recent advances in photonics, IIT Allahabad, Dec-2023.
- Ch N.K, Prakash A., Decentralized Application model for secured Internet of Thing Networks using Blockchain Technology in 2nd International Conference on Emerging Trends: Innovation & Challenges In Information Technology And Management organized by BVIMIT, Navi Mumbai 29th And 30th June 2024 (Accepted).
- KumariN., BeheraC., BeheraB., IoMT-Based Health Monitoring and Medication System for Elderly People, Second International Conference on Advances in Smart Sensor, Signal Processing and Communication Technology (ICASSCT 2024) organized by School of Physical and Applied Sciences, Goa University, Goa, India during 22 - 23, March 2024, pp.- 1-10.
- Agrawal, A. K., Bharti, M., & Kumar, J. (2024). Comparison of NOMA and OFDM for 6G communication systems. IETE International Conference on Cyber Threats and Security. IETE.
- Subramanyam, V., Kumar, J., Singh, S. N., Kumar, R., & Yadav, A. R. (2024). Low-textural image registration: Comparative analysis of feature descriptors. International Conference on Computer Vision and Image Processing. Springer.
- Agrawal, A. K., Bharti, M., Anumeha, Kumar, J., & Kumar, P. (2024). Automatic solar panel cleaning system for dust and dirt removal. 5th Electric Power and Renewable Energy Conference (EPREC-2024). Springer.
- Jha, S., Sarang, Bhardwaj, M., Arvind, P., & Kumar, J. (2024). Power-efficient pruned DFT-FBMC for 6G communication systems. 5th Electric Power and Renewable Energy Conference (EPREC-2024). Springer.
- Rahman, A., Kumar, J., Ponugupati, V., Agrawal, A. K., Kumar, A., & Arvind, P. (2024). Integrating control and computing in vehicle systems through CAPL and CANoe user interface design. 5th Electric Power and Renewable Energy Conference (EPREC-2024). Springer.
- Agrawal, A. K., Kumar, J., Kumar, A., & Arvind, P. (2024). Enhancing human-robot interaction through PID control and sensor integration. Power Electronics & IoT Applications in Renewable Energy and its Control (PARC), 2024. IEEE.
- A. Chaterjee, N. Kumar, A. Kumar, "Feature Map Guided Strategy for Robust Multi-Resolution Image Dehazing," International Conference on Electrical, Electronics and Computing Technologies (ICEECT-2024)
- R. K. Singh, S. Das, D. Dixit and N. Kumar, "Outage Probability Analysis of Energy Harvesting-Enabled Three-Phase Two-Way Relaying System Over Mixed Fading Channels," International Conference on IoT, Communication and Automation Technology (ICICAT), Gorakhpur, India, 2023.
- Rao, A. S., Patel, A., Rout, M. & Kumar, P. (2023). Reconfigurable underwater acoustic modem based on chirp modulation, IEEE SYMPOL 2023, pp. 1-6.
- Rashmi Sinha, Shalini Dwivedi & S.K. Mahto (2024, April), T-Shaped Millimeter Wave Patch Antenna with Enhanced Performance for 5G Era, 2024 IEEE 9th

- International Conference for Convergence in Technology (I2CT), Pune, India.
- Krishna, D. V., Mahto, S. K., Singh, A. K., & Sinha, R. (2023, June). Reconfigurable Wideband Monopole Radiator using Paper Substrate for Bluetooth/ISM Band Applications. In 2023 IEEE Wireless Antenna and Microwave Symposium (WAMS) (pp. 1-5). IEEE.
 - Singh, A. K., Mahto, S. K., Sinha, R. (2023) " Inkjet Printed Wideband Frequency Reconfigurable Antenna for Wireless Applications", 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), pp.1-5
 - Singh, A. K., Mahto, S. K., Sinha, R. (2023)"High-Sensitivity Dual Notch Microwave Sensor Inspired by Metamaterial for Characterization of Dielectric Materials," 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Ahmedabad, India, pp. 1-6
 - Khan, A. S., Gorai, K., & Kundu, S. (2023, December). A Compact Planar Microstrip Patch Antenna in Commercial Ultra-Wideband Spectrum. In 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON) (pp. 1-4). IEEE.
 - Khan, A. S., Gorai, K., & Kundu, S. (2023, December). A Compact Planar Microstrip Patch Antenna in Commercial Ultra-Wideband Spectrum. In 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON) (pp. 1-4). IEEE.
 - Pandey, D., Sharma, V., & Kundu, S. (2023, February). CPW fed Heart shaped Antenna for Ultra-Wide Band Applications. In 2023 3rd International Conference on Range Technology (ICORT) (pp. 1-4). IEEE.
 - Pandey A. & Sahoo S., Study of Dielectric Characteristics of Forsterite based Medical Implant, International Conference on Emerging Electronics and Automation, Springer
 - Kalra D., Goyal V., Kumar M. & Srivastava M., LNA parameter optimization using Firefly algorithm, 3rd IEEE International Conference on Advancement in Electronics & Communication Engineering AECE - 2023 (ICAECE-2023), 23-24 November 2023, Ghaziabad (India)
- DEPARTMENT OF ELECTRICAL ENGINEERING**
- Banerjee, A., Praween, G., Gupta, O. H., Kumar, S., & Bhushan, R. (2023, December). Design, Simulation & Operation of Buck-Boost Converter for Renewable Energy Application. In 2023 10th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON) (Vol. 10, pp. 996-1000). IEEE.
 - Banerjee, A., Bhushan, R., Chattopadhyay, S., & Sharma, V. K. (2024, February). Component Traceability, Drive Control of different machines in cylinder block line. In 2024 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS) (pp. 1-7). IEEE.
 - Kumari N., Singh S. P., Bhushan R. & Tyagi R. (2024). Impact on operating constraints of DFIG-based wind-driven system under symmetrical and unsymmetrical fault conditions. 2024 5th Electric Power and Renewable Energy Conference (EPREC), NIT Jamshedpur, India, 2024. (Accepted and presented at EPREC-2024, NIT Jamshedpur and will be published in Lecture notes on Electrical Engineering-Springer.)
 - Nirala P., Bhushan R., & Ghosh A. (2024). Impact of Increased Power Demand on Power Grids Due to Charging Stations of Electric Vehicles: A Literature Survey. 2024 5th Electric Power and Renewable Energy Conference (EPREC), NIT Jamshedpur, India, 2024. (Accepted and presented at EPREC-2024, NIT Jamshedpur and will be published in Lecture notes on Electrical Engineering-Springer.)
 - Sahoo, S. K., Kar, M. K., Kumar, S., & Mahanty, R. N. (2024, March). Genetic Algorithm based Optimal Placement of TCSC for Improving Voltage Profile. In 2024 11th International Conference on Signal Processing and Integrated Networks (SPIN) (pp. 403-408). IEEE.
 - Das A., Bhattacharya A. (2024) Class-E type inverter-based Wireless Power Transfer System for different numbers of coils - A Comparative analysis and validation using Typhoon HIL, 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST-2024).
 - Kumar A., Das A., Bhattacharya A. (2023) Wireless Power Transfer for EV Charging using Half-Bridge LLC Resonant Converter, 6th International Conference on Energy Systems, Drives and Automations (ESDA 2023).
 - Garg V., Kumar R., Bhattacharya A. (2023) Design and simulation of active PFC using boost converter used in Marx's generator, 2023 IEEE North Karnataka Subsection Flagship International Conference (NKCon).
 - Adhikary, S., & Gupta, S. K. (2024, February). Compensator design for DC-DC converters to improve the performance of the system. In 2024 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS) (pp. 1-6). IEEE.
 - Kumar P., Prajapati A.K & Mohan H (2024). Experimentally Validated PI λ Controller and Modelling of DC Servo Motor for Industry Applications ,5th Electric Power and Renewable Energy Conference (EPREC), NIT Jamshedpur, India, 2024. (Accepted and presented at EPREC-2024, NIT Jamshedpur and will be published in Lecture notes on Electrical Engineering-Springer.)
 - Kumar, S., & Prajapati, A. K. (2024, February). Analysis and Simulation of Lithium-ion Battery Cell Balancing by using the Matlab for Electric Vehicle. In 2024 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS) (pp. 1-5). IEEE.
 - Mamidala, S., & Prajapati, A. K. (2023, May). Grid-Integrated EV Charging Infrastructure. In International Conference on Electric Power and Renewable Energy (pp. 297-323). Singapore: Springer Nature Singapore.
 - Kumar, M., Sen, S., Prajapati, A. K., & Diwania, S. (2023, March). A comprehensive power management approach for hydrogen fuel-cell-based hybrid EVs using PID controller. In 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT) (pp. 1-6). IEEE.
 - Sen, S., Kumar, M., Vedik, B., Shiva, C. K., & Prajapati, A. K. (2023, March). Predictive Controller Based EMS and Techno-Economics of an Electrical-Thermal Community MG. In 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT) (pp. 1-6). IEEE.
 - Bhartil.P., Verma D., Gupta O.H., Singh N.K., & Singh A.K. (2023). Detection of Islanding in Distributed Network in

- the Presence of DG Using Superimposed Positive Sequence Angle, 10th IEEE UP Section International Conference on Electrical, Electronics and Computer Engineering (UPCON-2023), Greater Noida, India, pp. 1-6, 1-3.
- BhartiI.P., SinghN.K., GuptaO.H., & SinghA.K. (2024). Sequence Angle-Based Passive Algorithm for Islanding Detection of the Distribution System, 3rd International Symposium on Sustainable Energy and Technological Advancements (ISSETA 2024), Meghalaya, India, pp. 1-8, 23-24.
 - KumarD. & GuptaO.H. (2024), Stability Analysis of Four Switch Buck-Boost Converter Operating in Buck Mode by Lead Compensator, 3rd International Conference on Electrical Power and Energy Systems (ICEPES-2024), Bhopal, India, pp. 1-6, 21-22.
 - Chandral., SinghN.K., Samuel. P., GuptaO.H., & SinghA.K., Hybrid PSO-based Optimal Location of Electric Vehicle Charging Station in Distribution Networks, 8th Students' Conference on Engineering & Systems (SCES-2024), Prayagraj, India, pp. 1-5, 21-23 Jun 2024.
 - SahooS. K., S.Kumar, MahantyR. N. (2024), Fault Analysis of Power System Under Varying Load Conditions. 2024 5th Electric Power and Renewable Energy Conference (EPREC), NIT Jamshedpur, India, 2024. (Accepted and presented at EPREC-2024, NIT Jamshedpur and will be published in Lecture notes on Electrical Engineering-Springer.)
 - Kumar S., Kumari N. (2023), Evaluating the performance of a Grid-Tied Hybrid Photovoltaic Wind Energy System, an Analysis Using Matlab Simulation, International Conference on Mechanical and Electrical Engineering (IEEE Forum), Oct. 2023.
 - Samal, S. K., Keshari, R. K., Singh, R. K., &Mahanty, R. (2024, February). Non Isolated Multi Port Inverter with Reduced Common Mode Leakage Current and Minimum Phase Property. In 2024 IEEE Applied Power Electronics Conference and Exposition (APEC) (pp. 354-359). IEEE.
 - Keshari, R. K., Nema, P., Samal, S. K., & Singh, R. K. (2024, February). AL n C 2n-2 Network-Based Paralleled Dual Buck-Boost Non-Isolated Multi-Output Hybrid Converter with Reduced Leakage Current. In 2024 IEEE Applied Power Electronics Conference and Exposition (APEC) (pp. 1242-1247). IEEE.
 - Samal, S. K., Verma, A., Singh, R. K., &Mahanty, R. (2023, October). Grid Integrated Transformerless Interleaved Hybrid Converter with Reduced Common-Mode Leakage Current. In IECON 2023-49th Annual Conference of the IEEE Industrial Electronics Society (pp. 1-6). IEEE.
 - Sahay S, Kumar, N (2024). "A Hybrid Strategy for the Solution of Economic Load Dispatch Problem" ICPEICES-2024 DTU New Delhi.
 - Choudhary D, Mahanty N R, Kumar N (2024), Demand Management of PEV Charging Station and Charging Coordination for Grid Integration ICPEICES-2024 DTU New Delhi.
 - Sahay, S., & Kumar, N. (2024, January). Environment-Friendly Economic Load Dispatch Using a Novel GSA-BBO Hybridization Algorithm. In 2024 Third International Conference on Power, Control and Computing Technologies (ICPC2T) (pp. 229-234). IEEE.
 - Kumari, P., Sahay, S., & Kumar, N. (2023, September). Extended Kalman Filter Approach for State of Charge Estimation of Lithium-Ion Battery. In 2023 IEEE 2nd International Conference on Industrial Electronics: Developments & Applications (ICIDeA) (pp. 483-486). IEEE.
 - Pattanayak, B., Nanda, S., & Kumar, N. (2023, August). Advancement in Techniques towards Optimal Operation of UPQC for Power Quality Improvement. In 2023 Second International Conference on Augmented Intelligence and Sustainable Systems (ICAISS) (pp. 325-331). IEEE.
 - Sahay, S., Upputuri, R., Kumari, P., Kumar, N. (2024). Cost-Effective Solution of Grid Dispatch Problems Using a Novel Rao-4 Algorithm. In: Swain, B.P., Dixit, U.S. (eds) Recent Advances in Electrical and Electronic Engineering. ICSTE 2023. Lecture Notes in Electrical Engineering, vol 1071. Springer, Singapore.
 - Kumari, P., Choudhary, D., Sahay, S., Kumar, N. (2024). Different Strategies for Estimation of State of Charge for Battery Packs of Electric Vehicle. In: Swain, B.P., Dixit, U.S. (eds) Recent Advances in Electrical and Electronic Engineering. ICSTE 2023. Lecture Notes in Electrical Engineering, vol 1071. Springer, Singapore.
 - Kumar, P., Tadikonda, N., Kumari, P., Kumar, D., Kumar, N. (2024). Estimation of State of Charge for Lithium-Ion EV Battery Packs Using Passive Cell Balancing. In: Sikander, A., Zurek-Mortka, M., Chanda, C.K., Mondal, P.K. (eds) Advances in Energy and Control Systems. ESDA 2022. Lecture Notes in Electrical Engineering, vol 1148. Springer, Singapore.
 - Kumar, M., & Kumar, J., (2024). A Passive Islanding Detection Technique Based on Slip Frequency in Microgrid Environment. Accepted and presented in International conference EPREC-2024 and will be published in Lecture notes on Electrical Engineering-Springer.
 - Basu, A., & Singh, M., (2024) Energy Management for Photovoltaic Battery Integrated System Using Bi-directional DC-DC Converter," 3rd International Symposium on Sustainable Energy and Technological Advancements (ISSETA).
 - Arpita Basu, Madhu Singh, "Performance Analysis of PV Based Battery Integrated E-rickshaw With Regenerative Braking," 5th International Conference on Energy System, Drive and Automation (ESDA 2022), 2023.
 - Basu, A., & Singh, M. (2023). Performance analysis of PV based battery integrated e-rickshaw with regenerative braking. *Microsystem Technologies*, 1-11.
 - Jena P.K& Das S., "Empowering Communities: A study on Residential Electricity Demand Control for Sustainable Living", Accepted and presented in International conference EPREC-2024, NIT Jamshedpur and will be published in Lecture notes on Electrical Engineering-Springer.
 - Jena P.K& Das S., Demand Side Management with Electric Vehicle Scheduling, ICSPER 2024, NIT Warangal
 - NaikK. R., Kolhe M. & PrasadM. K S, Predictive Control Strategy for DC Microgrid Integrated EV Charging Stations in Oslo,in IEEE 4th International Conference on Sustainable Energy and Future Electric transportation 2024, , pp.1-6, 2024,(Accepted).
 - Pal, K., Akella, A. K., Namrata, K., & Bhuyan, A. (2023, May). Approach for Islanding Detection in a PV Grid-Connected System Using Negative Sequence Impedance. In International Conference on Electric Power and Renewable Energy (pp. 173-185). Singapore: Springer Nature Singapore.

- Ranjan, R. R., Namrata, K., & Kumar, A. (2024, February). Optimal Energy Management in Coordination With Virtual Power Plant. In 2024 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS) (pp. 1-6). IEEE.
- Kumar, A., Namrata, K., Singh, A. K., & Ranjan, R. R. (2024, January). Half Bridge Compensator Design for THD Reduction and DC Link Voltage Stabilisation of Electric Traction. In 2024 Third International Conference on Power, Control and Computing Technologies (ICPC2T) (pp. 7-12). IEEE.
- Sahu, D., Namrata, K., Kumar, M., & Kumar, N. (2023, March). Buck converter for low power delivery using Digital control method. In 2023 9th International Conference on Electrical Energy Systems (ICEES) (pp. 552-555). IEEE.
- Kumar, A., Kumar, S., Sinha, U. K., Saw, B. K., & Bohre, A. K. (2023, December). Integration of Green Renewable DG based EV Charging Stations Planning in Unbalanced Distribution Network. In 2023 IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE) (pp. 1-6). IEEE.
- Kumar, A., Kumar, S., Sinha, U. K., & Bohre, A. K. (2023). Planning of DG and EV charging station in distribution system using SCA. In 2023 IEEE Renewable Energy and Sustainable E-Mobility Conference (RESEM), pp. 1-6. IEEE, 2023.
- Kumar, A., Kumar, S., Sinha, U. K., & Bohre, A. K. (2023, December). Renewable DG Integration in the Unbalanced Distribution System with Impact of EV Penetration for Sustainable Operation. In 2023 IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC) (pp. 1-6). IEEE.
- Phadatare, H., Krishna, R., & Balaji, P. (2023, May). Design and analysis of tuned vibrational absorber for a vibrating system with unbalance excitation. In AIP Conference Proceedings (Vol. 2715, No. 1). AIP Publishing.
- Kiran, S. B., Krishna, R., Bhanuprakashreddy, D., Divya, M., Yadav, A., Suresh, P., ... & Colak, I. (2023, May). Structural analysis of grey iron nose leg component produced by lost foam casting. In AIP Conference Proceedings (Vol. 2715, No. 1). AIP Publishing.

DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING

- Kumar S., Banerjee T., Patel D., (2023). Synthesis and Characterization of Electroless Ni-P-Al₂O₃ Composite Coating on Aerospace-grade Mg Alloy for Improving Wear Resistance. 9th International & 30th All India Manufacturing Technology, Design and Research Conference, 8th to 10th December 2023, Department of Mechanical Engineering, IIT BHU, India.

DEPARTMENT OF MECHANICAL ENGINEERING

- R. K. Gouda, M. A. Shahdhaar, A. Srivastava, Experimental Investigation of Evaporation Rates from a TiO₂ Nanocoated Surface, In Proceedings of the 27th National and 5th International ISHMT-ASTFE Heat and Mass Transfer Conference December 14-17, 2023, IIT Patna, Patna-801106, Bihar, India. Begel House Inc., 2024.
- Pandey, A., Hansdah, D., & Kumar, S. (2024). Impact of anthracite blending and SDS addition on slurryability and stability of Indian high ash coal water slurry. International Journal of Coal Preparation and Utilization, 1-22.
- Pandey, S. Free Vibration Analysis of Porous Functionally Graded Material Sandwich Folded Plates. Lecture Notes in Mechanical Engineering-Springer, 177, 355-357.
- Kumar, A, Pandey, S. Effect of shear correction factor on free vibration analysis of symmetric and antisymmetric sandwich plates. Lecture Notes in Mechanical Engineering-Springer, 177, 159-164.
- Chaurasia, B. K., & Kumar, D. (2024). Investigation of the Failure Load in Riveted Lap Joints Made of Aluminum Alloys. In Indian Conference On Applied Mechanics (pp. 381-388). Singapore: Springer Nature Singapore.
- Gautham, M. T., & Kumar, D. (2024). Material Properties Predictions Using Data-Driven Technology. In Indian Conference On Applied Mechanics (pp. 317-322). Singapore: Springer Nature Singapore.
- Mandal, S. K., Kumar, D., & Kumar, R. (2024). Design and Development of Flexible Elastomer for Energy Storage. In Indian Conference On Applied Mechanics (pp. 53-57). Singapore: Springer Nature Singapore.
- Rizwee, M., Kumar, D., Singh, Y., & Kumar, R. (2024). A Numerical Analysis of Mechanical Behavior of Additive Manufactured Polylactic Acid (PLA) Specimen Through Finite Element Method. In Indian Conference On Applied Mechanics (pp. 59-69). Singapore: Springer Nature Singapore.
- Sharma, A.K., Yadav, Y.K., Kundu, P.K. (2023). Innovations and Challenges in Grinding Titanium Grade 5: A Review. In: 9th International & 30th All India Manufacturing Technology, Design and Research
- Ranjan R., Dutta A., The role of thermomechanical treatment and vanadium content on the microstructural evolution in Microalloyed Steels, National symposium of research scholars on metallurgy and materials (NSRS-2024) IIT Kanpur
- Arun K., Roshan K., Sunil K., Ashok K., (2024). Atomistic Investigation of Mechanical Properties of Fe-Cr-Ni Alloy Using Molecular Dynamics Simulation, In Indian Conference On Applied Mechanics, pp. 303-309. Singapore: Springer Nature Singapore.
- Krishna, R., Mummery, P. M., & Sharma, S. K. (2023). New perspectives on structural parameters of graphite materials revealed by micromechanics based on microstructural analysis. Materials Today Proceedings, 1-6.
- Krishna, R., Akram, S., Madhuri, P., & Rao, T. V. V. L. N. (2023). Machine learning application in evaluation of graphite plates. AIP Conference Proceedings, 2715, 020018
- Sreenivasan, M., Babu, G. E., Krishna, R., Lyutyk, M., & Barosh, M. (2023, May). Correlation between X-ray diffraction line profile and microstructure of spheroidized Alumina micropowder for 3D printing application. In AIP Conference Proceedings (Vol. 2715, No. 1). AIP Publishing.
- Vardhan, P. V., Reddy, C., Krishna, R., Reddy, N. Y., Kumar, K. S., Kumar, B. S., & Rao, T. V. V. L. N. (2023, May). Machine learning applications for early-stage diagnosis of diabetic patients. In AIP Conference Proceedings (Vol. 2715, No. 1). AIP Publishing.

(AIMTDR) Conference, 8th to 10th December 2023, IIT BHU, India.

- Yadav, Y.K., Shaw, D., Mukhopadhyay, M., Kundu, P.K. (2023). An Experimental Analysis on Vertical Milling of Ti-6Al-4V under SQL based DBD Technique. In: 9th International & 30th All India Manufacturing Technology, Design and Research (AIMTDR) Conference, 8th to 10th December 2023, IIT BHU, India.
- Sahoo V, Srikant B, Rath A. (2023). Gear Pair Analysis: Double Circular Arc with Involute Profile, Recent Advances in Mechanical Engineering, Proceedings of ICRAMERD 2022, Chapter 55, 1-7.
- Ram, S., Prasad, A K., & Hansda, D. (2023), Phase Change Material for Energy Storage. Proceedings of the 3rd International conference on Advancement in Materials Processing Technology (AMPT) 2023, Department of Metallurgical and Materials Engineering, NIT Jamshedpur, (India) 17-18 July 2023.
- Priya, R.P., Mishra, S., Priyadarshi, A., Sanjay (2023). State-of-Charge Estimation in Lithium-Ion Battery for Electric Vehicle Applications: A Comparative Review. In: Kumar, S., Singh, B., Sood, V.K. (eds) Recent Advances in Power Electronics and Drives. Lecture Notes in Electrical Engineering, vol 973. Springer, Singapore.
- Kumar, R., Kumar, P., & Rajan, A. (2023). Thermal performance of automobile radiator under the influence of hybrid nanofluid. Materials Today: Proceedings, 76, 251-255.
- Aswarthanarayana, S., Rajan, A., Raj, R., Ranjan, G., & Prasad, L. (2023). Investigation of thermal properties of graphene-silicone oil nanofluid. Materials Today: Proceedings, 76, 376-382.
- Barik, A. K. & Swain P. K. (2023). Design evolution of coolant passage for cooling a substrate by a single stream, 10th International and 50th National Conference on FLUID MECHANICS and FLUID POWER (FMFP-2023), Organized by Department of Mechanical Engineering, IIT Jodhpur 20th-22nd December.
- Aryasomayajula, Harshini P, Pranathi A.K, & Jha S.K, (2023). Investigation of flow past a tandem flat plate's airfoil with modified trailing edges, Fluid Mechanics and Fluid Power (FMFP) 2023 10th International conference IIT Jodhpur.

DEPARTMENT OF PHYSICS

- Khan S., Jain S.S, Sharma S., Srivastava A., Ranjan R., (2023). Structural and electrochemical study about the electrode material of carbon-based biomass for energy storage, Proceedings of 5th International Conference on Advances in Steel, Power and Construction Technology AIP Conf. Proc. 2888, 020032-1–020032-7. AIP Publishing.
- Tripathy N., Divya K., Tripathy D., Khan S., & Ranjan R., Study of Vibrational, Structural, and External Morphology of Biomass Waste, National Conference on Recent Advances in Quantum Science & Technology (NCRAQST2024) 16 -17th Feb, 2024.
- Dandapat, S., Sahu, N., Azad, C., & Kumar, U. (2024, June). Lattice thermal conductivity of material and its correlation with Debye temperature using regression models. In 2024 International Conference on Advancements in Power, Communication and Intelligent Systems (APCI) (pp. 1-6). IEEE.

4.8 OUTREACH ACTIVITIES (EXPERT LECTURES)

S. N.	Faculty name	Topic of lecture	Date and place of delivering the lecture
DEPARTMENT OF CIVIL ENGINEERING			
1.	Dr. B.K Prasad	Advancement in Green Construction Materials	R.V.S engineering college Jamshedpur Oct 2023
2.	Dr. B. K. Prasad	Recent Advancement in Construction	R.V.S engineering college Jamshedpur May 2024
3.	Prof. Virendra Kumar	"Stress-Strain Behaviour of Pre-damaged Confined Concrete on Elevated Temperature"	25-27th July, 2024, NIT Kurukshetra, India,
4.	Dr. J. Jayapal	An Overview of Some Essential Concepts of Soil Mechanics and Present Field Practices	28th May 2024 (Online Webinar)
DEPARTMENT OF CHEMISTRY			
1.	Dr. Ananta Kumar Atta	Modification of carbohydrates: practical uses as sensing materials	8th August 2024, Haldia Institute of Technology, Haldia, West Bengal
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING			
1.	Dr. Alekha Kumar Mishra	Taskoffloading in Edge Computing	6th February 2024, Gandhi Institute of Excellent Technocrats (GIET), Ghangapatna, Bhubaneswar
2.	Dr. Alekha Kumar Mishra	Elliptic Curve Cryptography	5th March 2024, UEM Kolkata
3.	Dr. Amit Majumder	Feature Engineering for Machine Learning in Natural Language Processing	15th July, 2023, Narula Institute of Technology, West Bengal

4.	Dr. Amit Majumder	Feature Engineering for Information Extraction in BioNLP	11th May 2024, in CMAES-2024, Silli Polytechnic, Ranchi, Jharkhand, India
5.	Dr. Chandra Sekhar Azad	Introduction to Python Programming	MICC 2024 at NIT Jamshedpur 10/07/2024
6.	Dr. Jitesh Pradhan	Hands on – Application of Transfer Learning in Agriculture	MICC – 2023 at MIT Jamshedpur
7.	Dr. Jitesh Pradhan	Hands on – Application of Transfer Learning in Agriculture	MICC – 2024 at MIT Jamshedpur
8.	Dr. Jitesh Pradhan	Research Methodology and Types of Research	B. A. Collage of Engineering and Technology Jamshedpur Date: 01.06.2024
9.	Dr. Jitesh Pradhan	Deep Transfer Learning for Brain Tumor Classification: Hands-On	MCKV Institute of Engineering (MCKVIE) Date: 12.03.2024
10.	Dr. Jitesh Pradhan	Application of Deep Transfer Learning for Medical Image Analysis - Hands-on	Recent advancements and future Trends in AI and Machine Learning (RAFTAML-2024) Date: 05.03.2024
11.	Dr. Jitesh Pradhan	Deep Transfer Learning for Medical Image Classification – Hands On	MCKV Institute of Engineering Date: 23.02.2024
12.	Dr. Koushlendra Kumar Singh	Unveiling the Mysteries of the Human Brain: Exploring EEG Signals, Applications, and Seizure Prediction	27-29 March 2024 Moscow, Russia
13.	Dr. Koushlendra Kumar Singh	Different Applications of High-Performance Computing in Image Processing	28 Feb-03 March, 2024 NIT Warangal,
14.	Dr. Koushlendra Kumar Singh	Deep Learning based EEG Signal Processing	8-14 March 2024, IIT Patna,
15.	Dr. Koushlendra Kumar Singh	3rd International Conference on Machine Vision and Augmented Intelligence- MAI-2023	24-25 Nov 2023 NIT Patna

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

1.	Dr. Ajay Kumar	Design and Analysis of Optical Digital Circuits	Emerging Trends and Challenges in RF and Communication Ssystem" held from January 9-13, 2024 organized by Department of Electronics and Communication Engineering, Dr. B R Ambedkar National Institute of Technology Jamshedpur, Jalandhar, Punjab.
2.	Dr. Arjun Kumar	Different Vacuum Electronics Devices and its modern application	09/11/2023 Galgotias University
3.	Dr. Arjun Kumar	Electromagnetic Wave Propagation using MATLAB	05/05/2024 Supaul College of Engineering, Supaul, Bihar
4.	Dr. Prashant Kumar	Link Budget Analysis for 5G	FDP on 5G Technology organized by UPW LSA, Department of Telecom, 27 March - 24 April 2024.
5.	Dr Rashmi Sinha	Soft Computing and its application in antenna design	8th October, 2023 Bhagalpur College of Engineering, Bhagalpur, Bihar
6.	Dr. Surajit Kundu	Frequency Selective Surfaces and Metasurfaces for Modern and Futuristic Wireless Technologies	06th November, 2023 VIT, Chennai (Online Mode)
7.	Dr. Mayank Srivastava	Modern Active Building Blocks and Their applications in non-conventional analog designs	IIIT Una (H.P.)

DEPARTMENT OF ELECTRICAL ENGINEERING			
1.	Dr. Ravi Bhushan	Concepts of DFIG-based Wind Energy Systems	07-06-2024, SR University, Warangal, Telangana, India (online mode)
2.	Dr. Ravi Bhushan	Advances in Grid Integration on Renewable Energy Sources	10-10-2023 at RVS College of Engineering & Technology (offline mode)
3.	Dr. Ravi Bhushan	Renewable Energy Integration	01-08-2023 at Govt. Engg. College, Raipur (online mode)
4.	Dr. Ananyo Bhattacharya	Synchronous Machines	09.05.2024, RVS college RVS College Of Engineering And Technology, Jamshedpur
5.	Dr. Arvind Kumar Prajapati	Advancing Power Grid Operations: Integrating Renewable Sources and EVs at Scale	20 to 24 May 2024, Centre for Emerging Energy Technologies, at S R University, Warangal, Telangana
6.	Dr. Omhari Gupta	Electric Vehicle	Government Women's Polytechnic, Jamshedpur, Jharkhand, India, during Innovation fair, Industry-Academia Interaction and Symposium on the occasion of Engineers Day, 15th Sep 2023
7.	Dr. Simanta Kumar Samal	Recent Trends in Modelling and Control of Grid interfaced Photovoltaic and Electric Vehicle Systems	3rd November 2023 Place: NIT Manipur (Online-mode)
8.	Dr. Simanta Kumar Samal	Integration of solar PV with the EV Charging station using SMPS	16th March 2024 NIT Jamshedpur
9.	Prof. Niranjana Kumar	Historical Development of Indian Power Sector in Deregulated Power System	9-13 April 2024 KITS Bhuvneshwar
10.	Dr. Kumari Namrata	Sustainability and Innovation in Energy Engineering and Sensors Technology'	January 17, 2024, Electrical Engineering Department, BCREC, Durgapur, WB
11.	Dr. Kumari Namrata	Strategies to Nurture Talents of Women to Promote Research and Technical Competences	May 4, 2024, IEEE Women in System Engineering (WISE)
12.	Dr. Kumari Namrata	Estimation of Solar Radiation and its Impact on Transition to Green Energy	May 10,2024, IEEE PES, Kerla Section (WoW - PES Talk)
13.	Dr. Kumari Namrata	Techno-Economic Analysis and Energy Management of Renewable Energy Based System	May 16,2024, IEEE Systems Council (WISE Webinar)
DEPARTMENT OF MATHEMATICS			
1.	Dr. Rajat Tripathi	Mathematics: A Key to understand our World and Universe	March 06, 2024 at RVSCET, Jamshedpur
2.	DR. SOURAV DAS	Effective Articles Writing and Presentation Using LaTeX	Maulana Azad National Institute of Technology Bhopal Madhya Pradesh, India, during June 03, 2024 to June 07, 2024.
3.	Dr. Raj Nandkeolyar	Hydromagnetic Hybrid Nanofluid Flow over a Rotating Stretching Disk	August 22, 2023, Waseda University, Tokyo, Japan
DEPARTMENT OF MECHANICAL ENGINEERING			
1.	Dr. Satish Kumar	Experimental Investigation and CFD modeling of Centrifugal Slurry Pump for handling non-Newtonian solid –liquid flow	7th – 8th March 2024, International Conference on Thermofluids and Manufacturing Science (KIIT ICTMS 2024)" Kalinga Institute of Industrial Technology, Bhubaneswar, India.
2.	Dr. Satish Kumar	Hydraulic design of ash disposal using CFD,	4th January, 2024, Jindal Institute of Power Technology (JIPT),Raigarh

3.	Dr. Satish Kumar	Influence of Chemical Leaching on Rheology and Ash Reduction of Indian Coal Emission	31st October 2023, TPP" organized by O P Jindal University Raigarh along with JIPT and Jindal Power Ltd Raigarh in association with IEEE MP Section.
4.	Dr. D. Hansdah	Waste to Energy (WTE) Conversion Technology	In Two Day, International Conference-Sybiosphere 2024, held in RKDF University, Ranchi from 22nd June to 23rd June 2024
5.	Dr. D. Hansdah	Scientific Writing of Experimental Research Paper	In Six days, National Level Advanced Faculty Development Programme (Hybrid Mode) on "Academic Ethics and Scientific Writing" Organised by Arka Jain University, Jamshedpur, from 18th- 23rd March 2024.
6.	Dr. D. Hansdah	Government Schemes in Agre-preneurship	In 5 days course titled 'Advanced Management Development Programme for Agripreneurs' from 24-28th February, 2024.
7.	Dr. Vishesh Ranjan Kar	Hetrogenous Material: Applications and Challenges	28 June 2024, National Conference on "Recent Trends in Machine, Manufacturing, Modelling and Technology (RTMMMT'24), ARKA Jain University, Jamshedpur, India.
8.	Dr. Vishesh Ranjan Kar	Micromechanical Modelling of Graded Composite Materials	11 Jan 2024, Advancement in Material Processing and Additive Manufacturing (AMPAM 2024), SLIET, Longowal, Panjab, India
9.	Dr. Vishesh Ranjan Kar	Research Methodology-An Innovative Perspective	15th Oct 2023 , National Innovation Day 2023 (Ministry of Education's Innovation Cell, GOI), Cambridge Institute of Technology Ranchi, Jharkhand, India
10.	Dr. Vishesh Ranjan Kar	Advanced Composite Materials for Nano-Robots: Modelling and Simulation	20 March, 2024 Serb Sponsored High-End Workshop (Karyashala) On Development of Nano-Robots and Their Potential Applications, NIT Jamshedpur, India
11.	Dr. Vijay Kumar Dalla	Need of Robotics & AI Lab	August 2023, Bharat Mata English Medium School Bilaspur Chhattisgarh
12.	Dr. Vijay Kumar Dalla	Motivational Talk	August 2023, Govt. Engg. College Bilaspur Chhattisgarh
13.	Dr. Pranab Kumar Kundu	IoT at Home: Enhancing Lifestyle with Smart Technologies	During 24-29th June, 2024 organized by SSJCET Asangaon, Maharashtra 421601
14.	Dr. Satish Kumar	Recent Advancement in Heat Exchanger Technologies: Experimentation & Simulations	Organised by O.P. Jindal University, Raigarh, 13 march, 2023
15.	Dr. Rinku Kumar Gouda	Contact angle and its importance in boiling heat transfer	24th June 2023, STUTI Workshop, organised by NIT Trichy.
16.	Dr. Vishesh Ranjan Kar	"Micromechanics based Finite Element Analysis of Advanced Composite Materials" Online STTP on Computational Techniques in Design and Thermal Applications	Department of Mechanical Engineering, NIT Jamshedpur on 31 May 2023.
17.	Dr. Vishesh Ranjan Kar	"Finite Element Analysis and its Application"	Department of Mechanical Engineering, Gandhi Institute of Excellent Technocrats

			(GIET), Bhubaneswar, India on May 27, 2023.
18.	Dr. Vishesh Ranjan Kar	"Selection of a Research Topic" in Innovative Technique for Effective Scientific/Research Writing & Communication	Organized by Institutions of Engineers, Local Centre Jamshedpur, Jharkhand, at the National Institute of Jamshedpur on April 1, 2023.
19.	Prof. Sanjay	Accreditation- Role of Design of PO and CO in Outcome Based Education	Delivered at Guru Govind Singh Education Society Technical Campus, Bokaro in capacity of Margdarshak of AICTE
20.	Dr. Vijay Kumar Dalla	Robotic Motion Visualisation	June 5-11, 2023 by ECE Dept. at NIT Jamshedpur.
21.	Dr. Vijay Kumar Dalla	Robot Kinematics & Dynamics	June 05-16, 2023 at Dept. of Industrial and Prod. Engg, Guru Ghasidas Central Vishwavidyalaya, Bilaspur, C.G.
22.	Dr. Vijay Kumar Dalla	Innovative talk on Design Ideation	Jharkhand Academic Council Ranchi, Jharkhand on 5th May 2023.
23.	Dr. A. K. Barik	Invited talk has been delivered on "Numerical Techniques in Engineering and Science" on	14th October 2023 at GITA Autonomous College, Bhubaneswar
DEPARTMENT OF PHYSICS			
1.	Dr. Neha Agnihotri	Molecular Engineering of Highly Efficient Organic Dyes for Dye-Sensitized Solar Cells	International Conference–Advances in Spectroscopic Techniques and Materials (ASTM-2024) Organized by Indian Institute of Technology (IIT-ISM) Dhanbad, India. January 18-20, 2024
DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING			
1.	Dr. Renu Kumari	Development of bioactive coating on Ti alloy using plasma spraying	19-07-2024, International Conference on Advancements in Thermal-Spray (ICOAT), IIT Patna
2.	Dr. Renu Kumari	Laser-based Surface modification of Ti-6Al-4V alloy for bio-implant application	20th December 2023, International Conclave on Materials, Energy & Climate, Indra Gandhi Delhi Technical University for Women, Delhi, India
3.	Dr Ram Krishna	Design Thinking	Importance of Design Thinking in Product Development," MSME Incubation Centre, GH Raison University, Saikheda (17 October 2023).
4.	Dr Ram Krishna	RF Plasma Spheroidization	FDP on Advancement in Renewable Energy, Design, and Manufacturing (AREDM-2023), 30th Oct.-3rd Nov. 23, Department of Mechanical Engineering, NIT Manipur.
DEPARTMENT OF HUMANITIES, SOCIAL SCIENCE & MANAGEMENT			
1.	Dr Manish Kr Jha	Recent Trend in Academic Writing	National Institute of Technology Patna During 17 – 21 July 2023
2.	Dr Manish Kr Jha	Research Ethics	Central University of Jharkhand 01-12-2023

CHAPTER – 05 | GENERAL FACILITIES AND SERVICES

5.1 COMPUTER CENTRE

The Computer Centre at NIT Jamshedpur is a key highlight of the campus, elegantly housed in an impressive oval structure. It boasts state-of-the-art computing facilities, including IBM Blade H Series Servers and IBM Rack Server X3620M2, complemented by 270 ACER, DELL, HP desktop PCs. The centre is equipped with essential application software, featuring Windows Server versions 2008, 2012, and 2019 as well as Windows 8.1, 10, and 11 for desktop systems.

Designed with comfort and security in mind, the centre offers a fully air-conditioned environment and a comprehensive surveillance system. Additionally, it is entirely Wi-Fi enabled, ensuring seamless connectivity throughout the facility.

Students benefit from three PC laboratories—one on the ground floor and two on the first floor—totalling approximately 270 desktop systems primarily running on Windows 10 and 11. These labs support both undergraduate and postgraduate classes. Furthermore, the facility includes four Smart LED screens, with all labs equipped with a centralized air conditioning system. Connectivity is robust, featuring a 1GB internet link provided by BSNL under the NKN project and 2Gbps from RailTel which facilitates a smooth online learning experience.

Laboratories and Research Facilities at NIT Jamshedpur

- **Computational Labs:** 8 Nos
- **Desktop Computers:** 270 (ACER, DELL, HP)
- **Server Room**
- **MIS Room**
- **Master in Design Facility**

Internet Facility

- **Connection:** Full Duplex 2 Gbps (1:1) from RailTel + 1 Gbps from NKN
- **Total Bandwidth:** 3 Gbps leased line internet connection
- **Connectivity:** The campus is fully Wi-Fi enabled, with a planned upgrade to 10 Gbps connectivity for NIT Jamshedpur.

National Knowledge Network (NKN)

- NIT Jamshedpur is proud to be a member of the National Knowledge Network (NKN).

Building Details

- **Structure:** Two floors (G+1)

Hardware/Software Infrastructure

- A detailed list of hardware and software infrastructure is available upon request, covering a range of servers, desktop systems, and essential application software.

This comprehensive setup ensures that students and faculty have access to modern computing resources and reliable internet connectivity, effectively supporting research and learning. This diverse range of servers at NIT Jamshedpur supports a variety of applications, ensuring efficient operations for academic and administrative needs.

Server Model & Specifications at NIT Jamshedpur

Server Model & Make	Specifications	Operating System & Purpose	Usage
H Blade Center Servers	8 cores, 16 GB RAM, SAS 300GB x 2 HDD	Windows Server 2012 Standard (Student Portal)	4 Nos. H Blade Centre Servers
H Blade Center Servers	8 cores, 16 GB RAM, SAS 300GB x 2 HDD	Windows Server 2012 Standard (Ansys Software)	
H Blade Center Servers	8 cores, 16 GB RAM, SAS 300GB x 2 HDD	Ubuntu OS (NIT Website)	

5.2 CENTRAL LIBRARY

The Central Library of NIT Jamshedpur established in 1966 is a hub of knowledge, reading and reference resources. The Central Library is one of the units of the Institute. The primary goal of the Library is to support the educational, research, and innovation programs of the Institute by providing physical and digital access to intellectual information and reading resources. It comprises of physical as well as electronic reading room, technical processing section, 03 stack rooms, Book Bank Collection, SC/ST book section and circulation section spread over 33000 sq. ft. area. The library is well equipped with internet and Wi-fi signals which operates from 08:00 am to 10:00 pm. The library has a good collection of Books (print and electronic), e-Journals, thesis, audio visuals, annual report etc. Engineering, Science, Management, literature and humanities, general subject related books. The library is automated with Koha, an Open-Source Library Management System. Library website is built using Word Press, open-source software. Digital repository using Dspace (open source) is created and it is a part of the National Digital Library (NDL) India programme. The Institute Library has three spacious floors. The library building is integrated with CCTV cameras and a fire alarm system for better security. A plan for RFID for books is underway.



Resources

Print Books	Reference and Text Books- 85000 (Approx.) TEQIP Book Bank – 7000 (Approx.) SC/ST Book Bank – 46000 (Approx.) Donated Books Section – 3200 (Approx.) Hindi Literature Books – 1300 (Approx.) Total 129469 (Approx.) PhD Thesis (of all passing out students) Newsletters Newspapers and Magazines
E-Books Collection	24000 (Approx) from different renowned publishers Springer Nature McGraw Hill Pearson Taylor & Francis
Access E-Journals	IEEE Xplore Digital Library Elsevier Science Direct (08 Subject Collection Bundle) IOP

	ASCE
	ASME
	ACM Digital Library
	Economic & Political Weekly
	Institute for Studies in Industrial Development (ISID) Database
	JGate Plus (JCCC)
	JSTOR
Research Database	SCOPUS for citation references and abstract
NDL Resources	South Asian Archive: activated
Shodh Shuddhi Resources	URKUND

Services

The Central Library provides the following services to its users,

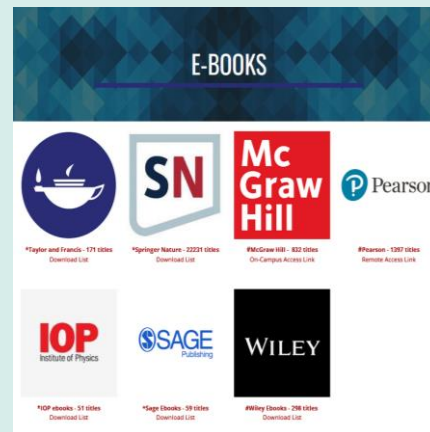
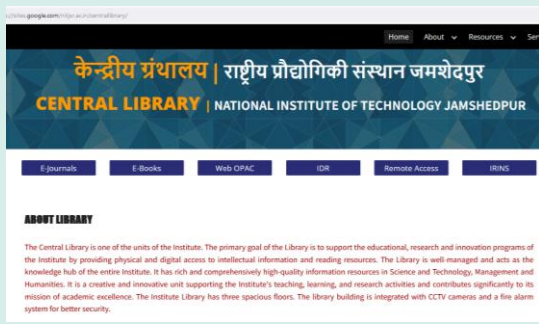
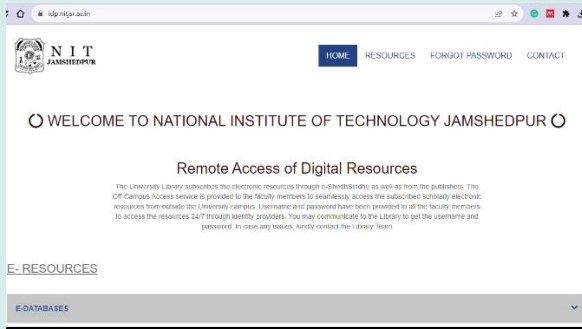
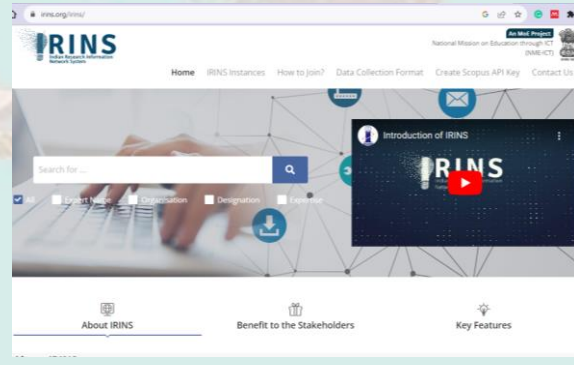
1. 24x7 access to electronic resources
2. Institutional Repository Facility
3. Online Catalogue Search Services
4. Issue-return with a LAN-based Open Source Software System, Koha
5. Electronic Library, a reading section with a Desktop computer
6. Fully Wi-Fi Connection and Internet points for laptop users
7. Book Eye Open Book Scanner Facility for the readers
8. Library Membership
9. Book Lending Services
10. AC reading rooms
11. Scan and Lamination
12. Remote Access
13. Email alert services
14. Ask a Librarian

Library Space/Sections

Ground Floor	First Floor	Second Floor
Circulation Area Meeting Room Hindi Books Donated Books Area Magazine & Newspaper Reading Acquisition Section Reading Room Reference Section Library Officials Cabins Users Belonging Room	Applied Science Book Section Humanities and Social Science Section Electrical, Electronics, Production Engineering Books Section Civil, Mechanical, Mechanics Book Area Computer Science Books Section Electronic Reading Section and Library Server Section	Library Seminar Hall SC / ST Book Bank Section - 1 Bound Volume Section PhD Thesis Section Storeroom SC / ST Book Bank Section – 2

Digital Services and related web page link

Institutional Digital Repository (IDR)	http://14.139.205.163:8080/xmlui/
IRINS Faculty Database	https://nitjsr.irins.org
Library E-Resource Remote Access	https://idp.nitjsr.ac.in
Library Catalogue (intranet)	http://10.51.0.10
Library Webpage (intranet)	http://10.51.0.20/wordpress
NIT JSR Shodhganga PhD Thesis Repository	
https://shodhganga.inflibnet.ac.in:8080/jspui/handle/10603/436288	



IT Infrastructure and Services

- Electronic Library, a reading section with a Desktop computer
- Fully Wi-Fi Connection and Internet points for laptop users
- Book Eye Open Book Scanner facility for the readers.
- LAN Cable – LAN cables are provided to connect users' laptops.
- Extension Cord – Provided on each reading table for charging electronic devices.
- Scientific Calculator – Students can borrow Scientific Calculators for a day.
- Webcam and Headphones are provided for job interviews
- Keyboard / Mouse for the students while they are in the library.

LIBRARY COMMITTEE

Member Name		Role
Prof. Prabha Chand		Chairperson
Dr S R Pandey		Member
Dr Raj Nandkeolyar		Member
Dr Jitendra Kumar		Member
Assistant Registrar,	Finance and Account	Member
Assistant Registrar,	Store and Purchase	Member
Shri Munesh Kumar		Member & Convener
Staff / Team		

Name	Designation	Contact Number	Contact Email
Mr. Munesh Kumar	Deputy Librarian	9307812117	librarian@nitjsr.ac.in
Dr. Neeta Bharti	Assistant Librarian	8986711008	neetabharti.lib@nitjsr.ac.in
Mr. Ravi Mahato	Caretaker	7294169042	ravimahato.mts@nitjsr.ac.in
Mr. Ramesh Ram	Security Guard	9534003587	rameshram.mts@nitjsr.ac.in
Mr. Nilesh Kumar	Data Entry Operator		

5.3 PLANNING AND DEVELOPMENT DIVISION

Planning and Development Division is one of the administrative units of NIT Jamshedpur that is responsible for planning, design, construction, renovation, maintenance, and development of all infrastructural facilities in the institute campus. The buildings, roads, walkways, sports grounds, water supply, and distribution networks, power supply and transmission systems, internet and Wi-Fi services, sewerage systems, cleaning and waste disposal systems, transport systems, engineering services, horticulture, and green campus, are to be maintained within the institute premises.

5.3.1 Major Construction/ Renovation projects completed during 2023-24

- Construction of toilet for Security Guards for hostels ABCD & Ramps in North & South Annexe Building at NIT Jamshedpur
- Repair & Renovation of Boundary wall of C Type quarters
- Drainage work for Waste water of AHR & RLB Hostels outside NIT Boundary wall.
- Providing and laying Paver block from Gate to Quarter in 16 nos. C type quarters and B type renovated quarters at NIT Jamshedpur.
- Minor Repair & Painting of A8 & A10 quarters.

5.3.2 Major Construction/ Renovation projects ongoing in 2023-24

- Construction of 1000 bed G+5 boy's hostel.
- Construction of 300 bed G+5 Girls hostel.
- Renovation of Academic Blocks 6 and 7.
- Renovation of Balance Institute quarters (9 Nos).
- Construction of waste water drain on back side of B type (Old 01 to 20) and D Type (09 to 18) quarters.
- Construction of Waste water Drain on the back side of C Type Quarters at NIT Jamshedpur
- Construction of waste water peripheral drain back side of B type (Old 01 to 20) and D type (09 to 18) quarters at NIT Jamshedpur.
- Const. of Ramp and laying of paver block at Academic Blocks 1,2,3,4 and Central Library
- Construction of Footpath by Providing and Laying Paver Block from I Hostel to Central Library along the Road.
- Construction of Passage Road of Paver block from Mega Mess to Lecture Hall Complex with Shed and Cross Drainage works.
- Construction of Plinth protection and additional widening of plinth protection by laying of paver blocks at Hostels-A,B,C,D,E,F,G,H,I,AHR,RLB.
- Minor repair and surface coating of Main internal of Institute campus.

5.3.3 Major Proposed Construction/Renovation/Infrastructure Development works in near future

- Construction of 100 Nos. married research scholars' accommodation at NIT Jamshedpur.
- Construction of Student's activity center by vertical extension of Annapurna Mess (Mega Mess).
- Construction of 1000 capacity auditorium.
- Construction of Faculty quarters (56 Nos).
- Construction of Research Park Building (Phase-I)
- Development of Sports field (Downs Ground) at NIT Jamshedpur
- Installation of 02 (Two) no's deep bore wells with pumping arrangement for Hostel & Academic block.
- Solar lighting along pathway of Children's Park.
- Civil and Electrical renovation of Central Library building.
- Minor Repair & painting and Misc Development works at Institute Guest House and Annapurna Canteen
- Anti-termite treatment of Renovated quarters (CF Type-28 Nos, A Type-8 Nos, B Type-21 Nos, C Type-13 Nos, D Type-18 Nos, E Type-22 Nos) and I Hostel at NIT Jamshedpur.

Photographs of 1000 Bed Boys Hostel (Under construction)



Photographs of 300 Bed Girls Hostel



5.4 INSTITUTE HEALTH CENTRE & HOSPITAL FACILITY

NIT Jamshedpur has an institute dispensary for primary medical treatment. In recent notification vide office order no. NITJSR/REG/CD/2019-20/687, dated 30/08/2019 the name of the Institute dispensary has been changed to Institute Health Centre (IHC). At IHC, first aid will be given for immediate relief, and also some medicine will be given in OPD for common diseases. Institute employees or their dependents suffering from serious illness/ requiring emergency treatment are referred to the institute empanelled CGHS recognized hospitals and pathological centre for medical treatment.

5.4.1 Institute Empanelled Hospitals:

1. Brahmananda Narayana Multispecialty Hospital, Jamshedpur
2. Meditrina Hospitals, Adityapur, Jamshedpur
3. ASG Eye Hospital, Sakchi, Jamshedpur
4. Purnima Netralaya, Jamshedpur
5. TMH, Jamshedpur
6. MTMH, Jamshedpur

5.4.2 Institute Empanelled Pathological Centres:

1. Aarogyamm, Adityapur, Jamshedpur
2. Chawla Pathology, Jamshedpur

5.4.3 List of medical shops empanelled for supply of medicines to Institute employees and their dependents on cashless basis:

1. Hari Om Medicals, Adityapur
2. Mani Medicals, Adityapur
3. Chawla Medical, Bistupur
4. Shree Balajee Medicals, Gamharia

5.4.4 Ambulance Facility:

Ambulance facility is available 24x7 for emergency needs of students, employees and their dependents.

5.4.5 Timing of Institute Health Centre:

All working days: 08:00 AM to 08:00 PM

Saturday and Sunday: 09:00 AM to 05:00 PM

5.4.6 Medical Officers of Institute Health Centre:

1. Dr Abhay Kumar
2. Dr Keshav Raj Shukla (on contract)
3. Dr Ranjita Bhue (on contract)

5.4.7 Paramedical Staffs:

1. Aparna Mahato (Nurse - on contract)
2. Anitha Jalla (Nurse – on contract)
3. Ujjwal Kumar (Nurse – on contract)

5.4.8 Supporting Staffs:

1. Anil Kumar (Assistant SG - II)
2. Kanchan Devi (Care taker)
3. Sunil Gour (Care taker)



[Left to Right: Dr Ranjita Bhue, Dr Keshav Raj Shukla & Dr Abhay Kumar]

5.5. ANNUAL ALUMNI MEET

5.5.1 ALUMNI MEET 2024

The National Institute of Technology (NIT), Jamshedpur, organized its Annual Alumni Meet at the Technology Students Gymkhana Building on January 27, 2024. The event, coordinated by the NIT Jamshedpur Alumni Association (NITJAA), took place at the institute's Gymkhana Building.

This year, the alumni from the 1974 batch celebrated the 'Golden Jubilee,' while the 1995 batch commemorated the 'Silver Jubilee.' The program commenced with the lighting of the lamp by the Director of NIT Jamshedpur, Prof. Goutam Sutradhar at 10 AM at the Gymkhana Building. The Director appreciated the alumni for their contribution to the institute and felicitated six of the alumni with the Lifetime Achievement Award, Distinguished Alumnus Award and Young Achievers Award whose names are: Dr. Indu Shekhar Jha, Prof. Rajendra Kumar Bandi, Shri Debi Prasad Dash, Prof. Sujit Kumar Sinha, Dr. Manoj K. Patel and Dr. Piyush Kumar Verma. The National Institute of Technology Jamshedpur Alumni Association (NITJAA) awarded the students of the institute with various scholarships for their achievements in academics, sports and many other categories. The scholarships are funded by the Alumni of the institute. Evenings were reserved for cultural programs and informal networking dinners. Alumni performances showcased a diverse range of talents, rekindling college memories. Networking dinners facilitated professional and personal reconections among alumni. A tour of the campus was organized, allowing alumni to revisit and witness the infrastructural advancements of their alma matter. The NIT Jamshedpur Alumni Meet was a resounding success, reinforcing the bonds between the institute and its alumni. It also ensured that the alumni keep on contributing towards the Institute's welfare.



5.5.2 MONTY QUIZ 5.0

The Alumni Relations Team in collaboration with QuNITE, the official quizzing club of NIT Jamshedpur, unfolded the Monty Quiz to honour Late Flight Lieutenant Sunit Mohanty sir, who was martyred on 3rd June, 2019. This was the 5th edition of the Monty Quiz, which was even more magnificent and upscaled than before.

Prelims 1 and Prelims 2

The quiz unfolded in two preliminary rounds, encompassing Prelims 1 and Prelims 2 which took place on the 30th of October and 2nd of November respectively. The Prelims were conducted seamlessly online through Unstop, drawing an impressive 1534 registrations. Rear Admiral Anil Kumar Verma, VSM(Retd.) served as the Guest of Honour for Monty Quiz 5.0.

Finals:

The finals was conducted on a Zoom meeting with Major Chandrakant Nair as Quiz Master on 7th of November. The Alumni Relations team also interacted with Mr. Surendra Mohanty, father of Sunit Mohanty sir. A total of 9 exceptional teams, distinguished by their prowess in the preliminary rounds, were selected to compete in the Finals.

Prizes and awards:

The culmination of the event was marked by the announcement of the winners and the distribution of a substantial prize pool totaling 75,000. The quiz not only served as a platform for intellectual prowess but also fostered connections and interactions with esteemed personalities, making it a memorable and enriching experience for all participants.



5.5.3. Ramalingam Cup 2023

Ramalingam Memorial Cup is a volleyball tournament which was held as an initiative by the class of 1991–1995 in honour of the late M Ramalingam (LM no NITJAA/LM/964, 91–batch Mechanical Engineering), who sadly passed away on 9th May, 2022. Ramalingam was an avid volleyball player in college from 1991 to 1995. In 1994 and 1995, he served as captain of the team. As a tribute to this incredible man, who serves as an inspiration to so many, his batchmates and the entire Alumni Association have organized this tournament to keep his memory in our hearts and cherish the RIT bond that he had shared with his peers.



5.5.4. Alumni Centre Inauguration

National Institute of Technology Jamshedpur inaugurated its much-awaited Alumni Centre under the leadership of Director, Prof. Goutam Sutradhar. Mr. R. K. Behera, distinguished alumnus from 1967 batch and Chairman of RSB Group was the Chief Guest for the programme. Prof. R. V. Sharma, Deputy Director, Prof. R. N. Mahanty, Dean (Industry & Alumni Relations), Dr. C. M. Rao, Dean (Academic), Prof. M. K. Sinha, Dean (Research and Consultancy), Dr. Prahlad Prasad, Dean (Student Welfare), Prof. Shalendra Kumar from Department of Mechanical Engineering, Prof. Niranjan Kumar, Department of Electrical Engineering, Dr. Rajiv Bhushan from Department of Humanities, Social Sciences and Management, Dr. A. K. Jha, Head, Department of Production & Industrial Engineering, Dr. Amit Prakash, Head, Department of Electronics and Communication Engineering, Col. (Dr.) N. K. Rai, Registrar of the Institute also graced the occasion with their esteemed presence.

The welcome address was delivered by Prof. R. N. Mahanty, Dean (Industry & Alumni Relations). Many eminent alumni from different batches joined via offline and online mode. Mr. Jitender Kumar, alumnus of 1973 batch and President of NIT Jamshedpur Alumni Association (NITJAA), Shri I. B. Mishra, alumnus of 1976 batch and President of the Jamshedpur Chapter of NITJAA also shared their views. The Alumni Centre shall act as a platform for Institute alumni interaction and Industry-academia collaboration and shall strive to help the Institute reach further heights.



5.6. INSTITUTE VEHICLE FACILITY

Vehicle section has following vehicles to facilitate the students, staff and faculty members of the Institute.

Item	Manufacturer	Quantity	Remarks
Bus	TATA	02	Used for student's transport.
Car	Maruti Ciaz Sigma	01	Used for Director
	SX4 Maruti	01	Used for Office works
	Bolero Mahindra	01	Used for Office works
Bike	Hero Honda	02	Used for security patrolling
Gypsy	Maruti	01	Used for security patrolling
Ambulance	TATA	01	Used for medical emergency
Tractor with tanker and trolley	New Holland	01	Used for water supply, carrying goods & waste material

5.6.1 Facilities Provided

1. Bus facility is available to students for going from Institute to Bistupur market on all days. These are also provided for educational tours.
2. Vehicles are provided for any official visit provided approval is accorded by the competent authority.
3. The vehicle is also provided to staff and faculty members for picking and dropping from/to Railway Station, Bus Stand and Airport on payment basis when they are not for official work. The guidelines for availing this facility and requisition slip are provided on the website of the Institute.
4. The ambulance facility is free of cost to students.

5.7. 13th Convocation, 2023

The 13th Convocation of NIT Jamshedpur was held on 5th November 2023, conferring degrees to all the graduating and post-graduating students. The distinguished presence of Chief Guest honorable C.P. Radha Krishnan, the Governor of Jharkhand, added an extra layer of honor to the occasion by attending the ceremony online. The esteemed honorees, including Prof. Kshiti Bhusan Das, Vice Chancellor of the Central University of Jharkhand, and Shri Anil Kumar Singh, President of JSW Bhusan Power and Steel Limited, as well as the Chairman of the Board of Governors of NIT Jamshedpur, Shri T. Krishna Prasad, lent their gravity to the ceremony, marveling at the accomplishments of the graduating class.





It was followed by the awarded of degrees to a total of 1040 degrees to 2023 passed out students. Out of these degrees 663 are for UG students, 335 are for PG students, and 42 are for Ph.D. students. A sum of 22 medals including 02 Gold and 20 Sliver medals were presented to the meritorious students.

5.7.1 GOLD MEDAL RECIPIENTS



SAYERI CHATTERJEE
(2019UGMM014)
B.Tech., MME



MAINAK BHATTACHARYYA
(2021PGPH09)
M.Sc. (PHYSICS)

5.7.2 GRADUATED STUDENTS

1. B.TECH. (HONS.) PROGRAMME

S.N.	Programme	Number of Students
1	Civil Engineering	101
2	Computer Science and Engineering	112
3	Electronics and Communication Engineering	101
4	Electrical Engineering	106
5	Mechanical Engineering	103
6	Metallurgical and Materials Engineering	94
7	Production and Industrial Engineering	46
	Total	663

2. MCA PROGRAMME

S.N.	MCA Programme	Department	Number of Students
1	Master of Computer Application	Computer Sc. & Engg.	93

3. M.Sc. PROGRAMME

S.N.	M.Sc. Programme	Number of Students
1	Chemistry	30
2.	Mathematics	30
3.	Physics	24
	Total	84

4. M. Tech. PROGRAMMES

S.N.	M.Tech. Programme	Department	Number of Students
1	Structural Engineering	Civil Engg.	15
2	Water Resource Engineering		11
3	Geotechnical Engineering		17
4	Computer Science and Engineering	Computer Sc. & Engg.	20
5	Information System Security Engg		18
6	Power Electronics and Drive	Electrical Engineering	15
7	Power Systems Engineering		17
8	Communication System Engg	Electronics and Communication Engineering	1
9	Embedded Systems Engineering		17
10	Energy System Engineering	Mechanical Engg.	7
11	Thermal Engineering		10
12	Computer integrated Design and Manufacturing		5
13	Materials Technology	Metallurgical and Materials Engg.	0
14	Manufacturing System Engineering	Production & Industrial Engg.	2
15	Surface Science and Engineering	Chemistry	3
	Total		158

5.7.3 NEW INTAKE IN ACADEMIC YEAR 2023-24

1. B.TECH. (HONS.) PROGRAMME

S.N.	Programme	Intake Strength	Admitted Strength
1	Civil Engineering	99	98
2	Computer Science and Engineering	116	116 + 9 (DASA)
3	Electronics and Communication Engineering	116	112 + 4 (DASA)
4	Electrical Engineering	114	114
5	Mechanical Engineering	115	114 + 1 (DASA)
6	Metallurgical and Materials Engineering	99	98
7	Production and Industrial Engineering	62	60
8	Engineering & computational mechanics	30	29
	Total	751	741 + 14 (DASA)

2. MCA PROGRAMME

S.N.	MCA Programme	Department	Intake Strength	Admitted Strength
1	Master of Computer Application	Computer Sc. & Engg.	115	112

3. M.Sc. PROGRAMME

S.N.	M.Sc. Programme	Intake Strength	Admitted Strength
1	Chemistry	37	34
2.	Mathematics	37	32
3.	Physics	38	33
	Total	112	99

4. M. Tech. PROGRAMME

S.N.	M.Tech. Programme	Department	Intake Strength	Admitted Strength
1	Structural Engineering	Civil Engg.	20	17
2	Water Resource Engineering		20	2
3	Geotechnical Engineering		20	6
4	Computer Science and Engineering	Computer Sc. & Engg.	20	16
5	Information System Security Engg.		20	17
6	Power Electronics and Drive	Electrical Engineering	20	13
7	Power Systems Engineering		20	7
8	Communication System Engg.	Electronics and Communication Engineering	20	5
9	Embedded Systems Engineering		20	15
10	Energy System Engineering	Mechanical Engg.	20	2
11	Thermal Engineering		20	7
12	Computer integrated Design and Manufacturing		20	5
13	Industrial Metallurgy	Metallurgical and Materials Engg.	20	0
14	Materials Technology		20	1
15	Manufacturing System Engineering	Production & Industrial Engg.	20	0
16	Surface Science and Engineering	Chemistry	20	0
Total			320	113

5. Ph.D. PROGRAMME

S.N.	Ph.D. programme	Intake Strength	Admitted Strength
1	Ph.D. (Institute Research Scholar – Stipendiary)	87	79
2	Ph.D. [Self-Finance Research Scholars (Full Time/Part Time/ Executive/ Sponsored and Faculty/Staff Sponsored) - Without Stipendiary	NA	127
Total		NA	206

5.8. STUDENTS WELFARE AND NATIONAL SERVICE SCHEME (NSS)

5.8.1 CULTURAL EVENTS

GANDHI JAYANTI AND LAL BHADUR SHASTRI JAYANTI CELEBRATION

DATE: 2nd OCTOBER, 2023

ORGANIZED BY: STUDENT WELFARE SECTION

On October 2nd, NIT Jamshedpur celebrated Gandhi Jayanti and Lal Bahadur Shastri jayanti with a series of events that showcased the spirit of Mahatma Gandhi's teachings and Lal Bahadur Shastri's preachings. The event concluded with a vote of thanks delivered by the General Secretary of the Students' Council, expressing gratitude to all participants and attendees for coming together to honour the legacy of Mahatma Gandhi and Lal Bahadur Shastri.





DR. A.P.J ABDUL KALAM BIRTH ANNIVERSARY CELEBRATION

DATE: 15th OCTOBER 2023

NATIONAL UNITY DAY

DATE: 31st OCTOBER, 2023

RASHTRIYA EKTA DIWAS pledge ceremony was organized on 31st October 2023. Most of the students and faculties took part in the event.

BLOOD DONATION CAMP

On 7th January 2024, NSS NIT Jamshedpur, organized a blood donation camp in collaboration with Shri Shanidev Bhakt Mandali, MGM, and Narayana Hospitals, collecting over 250 units of blood. Supported by HDFC Bank and graced by Director Dr. Goutam Sutradhar, the event emphasized the importance of blood donation. Donors received certificates and tokens of appreciation, promoting community health awareness.



5.8.2 CONSTITUTION DAY CELEBRATION

Constitution Day (IAST: Samvidhāna Divasa), also known as "National Law Day", is celebrated in India on 26 November every year to commemorate the adoption of the Constitution of India. The event started with the motivating words of our director Prof. Gautam Sutradhar and deputy director Ram Vinay Sharma. On account of Constitutional Day a poetry slam competition was organized on the 26th of November '23 at the diamond Jubilee complex. Beautiful poems were presented by the students on different topics from the beauty of nature to the valour of our immortal soldiers.



5.8.3 URJA'24:

The annual sports and athletics meet was conducted from November 3rd to November 5th, 2023. The major events were inaugurated in the presence of the honorable Director, Prof. Goutam Sutradhar, and the Chief Guest, Saurabh Tiwari, Anand Louis Menezes, and SP Prabhat Kumar. URJA '24 has been made possible by the sincere efforts of the college administration. From the adrenaline-pumping rallies on the volleyball court to the precision of chess moves, URJA encompasses a diverse range of sports, including football, athletics, table tennis, lawn tennis, basketball, cricket, yoga, badminton, and hockey. Every student at the institute participated in a variety of sports, including basketball, football, badminton, volleyball, chess, table tennis, cricket, hockey, and athletics events such as the 100m, 200m, 400m, 800m, and 1500m races, shot put, discus, 4x100 relay, long jump, and high jump, all approached with enthusiasm. The league matches were held with two branches, and the points were divided equally, while the athletic events were conducted individually. The winners were congratulated and felicitated by our professors, and the champion branch was finally announced. As a result, the sports meet reached its successful.





INTER NIT SPORTS

From October 14 to 16, 2023, MNIT Jaipur hosted the Inter NIT Basketball match, drawing enthusiastic participation from teams across the NIT circuit. The event showcased a remarkable display of talent and sportsmanship. The impeccable arrangements made for the tournament contributed to its overall success. Players and spectators alike experienced a thrilling atmosphere, highlighting the spirit of unity and competition within the NIT community. The event not only celebrated the prowess of the participating teams but also fostered a sense of camaraderie among the NIT campuses.

From November 3 to 5, 2023, NIT Durgapur played host to an electrifying Football match as teams from various NITs showcased their prowess on the field. The event was marked by intense competition and skillful gameplay, captivating both players and spectators. The seamless organization and excellent facilities provided a conducive environment for the teams, contributing to the overall success of the tournament. The football extravaganza not only celebrated the love for the sport but also strengthened the bonds among NIT campuses, fostering a sense of unity and sportsmanship.

From January 5 to 8, 2024, NIT Trichy hosted an exhilarating Hockey tournament that brought together teams from various NITs. The event showcased thrilling matches, displaying the skill and determination of the participating teams. The success of the tournament not only highlighted the competitive spirit within the NIT community but also underscored the significance of sports in fostering camaraderie and mutual respect. The Hockey event at NIT Trichy served as a testament to the passion and dedication of NIT students towards both academics and sports. Ankit Bajirao from the ECE department received best goalkeeper award.



5.8.4 INTERNATIONAL YEAR OF MILLETS

The International Year of Millet celebration at NIT Jamshedpur from October 16th to October 30th, 2023, was a significant endeavour focused on boosting millet consumption and presenting healthier dietary options. The purpose of the event was to increase awareness about the nutritional benefits of millets and their importance in a well-balanced diet.



5.8.5 NATIONAL EDUCATION DAY

NIT Jamshedpur, with meticulous planning and unwavering enthusiasm, orchestrated a grand celebration for National Education Day on 11 November, 2023 creating a vibrant and intellectually charged atmosphere on campus. The successfully organized event unfolded with a perfect blend of academic passion, cultural richness, and innovative engagement. The meticulously planned activities were insightful, fostering a deep appreciation for education and its transformative power. The collaborative effort of the organizing team ensured a seamless execution, leaving a lasting impression on all participants.



5.8.6 CULFEST'24

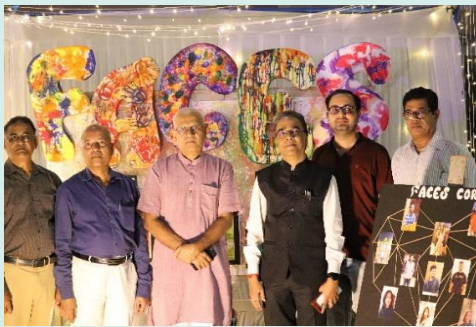
NIT Jamshedpur's annual cultural fest, held from February 9th to February 11th, 2024, brought an explosion of vibrant colours and boundless creativity to the campus. The three-day extravaganza showcased a diverse range of activities, encompassing everything from dance and drama to fine arts and photography. Among the myriad events were notable competitions like Footloose, Panch Parmeshwar, Poshak, and Moving Pexels, each offering a platform for students to showcase their talents and skills. In addition to the formal events, informal competitions allowed participants to express themselves freely. However, the true highlight of the fest was undoubtedly the three-day cultural night extravaganza. The fest kicked off with a mesmerizing fusion of Sufi melodies and energetic EDM rhythms, setting the stage for an unforgettable experience.

The second day of the cultural night featured an electrifying concert by the renowned duo Sachin-Jigar, whose captivating performance left the audience spellbound. Their infectious energy and musical virtuosity kept the crowd on their feet, dancing and singing along to every beat. Wrapping up the festival on a high note, Asheem Sharma and DJ Rhea took to the stage, delivering a pulsating performance that had the entire campus buzzing with excitement. Their infectious enthusiasm and eclectic mix of music kept the party going late into the night, ensuring that the festival ended on a memorable and exhilarating note.



CULTURAL PROGRAM

Halla Bol, Rangmanch, Panchparameshwar, Instant Khichdi, Shake On Beats, Dancing Duo, Choreo Night, Footloose, Indian Quiz, Spent Quiz, Theme Quiz, Culfest Idol, Dulcet Duo, Unplugged, Battle Of Bands, Mukhariti, Rangotsav, Triathalon, Shilpkari, Poshak, Best Designer, Panache, Style Rendezvous, English Potpurri, Journalism, Peoples Parley, Chayachitran, Campus Roadies, Warriors Of Kolham, Dandiya Night, Choreo Night, Bolly Night, Band Night, Edm Night.



5.8.8 NSS ACTIVITES

National Service Scheme, under the Ministry of Youth Affairs & Sports, Govt. of India, popularly known as NSS was launched during Gandhi's birth Centenary Year 1969, in 37 Universities involving 40,000 students with primary focus on the development of personality of students through community service. The NSS Chapter of NIT Jamshedpur comprises several groups divided according to UG and PG branches and led by their group leaders.

**5.8.9 AZAADI KA AMRIT MAHOTSAVA
CLEANLISS DRIVE**

The NSS unit at NIT Jamshedpur organized a Cleanliness Drive from 1st to 15th September 2024 as part of the Swachhta Pakhwada under the Swachhata Hi Seva campaign. Led by Dr. Naveen Kumar Veldurthi, Dr. Jayendra Kumar, and Prof. Nigam Prakash, NSS volunteers actively cleaned areas such as UPS Ground, TSG area, and Sudha store, emphasizing waste segregation. The drive successfully promoted environmental cleanliness and hygiene on campus.



In conclusion, the NSS Unit of NIT Jamshedpur has consistently demonstrated its commitment to societal betterment through various impactful initiatives. The World Bicycle Day Rally promoted physical well-being and eco-friendly transport, while Udgam inspired the younger generation by offering them a glimpse into the academic and cultural life at NIT. The Blood Donation Camp fostered a sense of community and highlighted the importance of health awareness, and the Cloth Donation Drive exemplified our dedication to supporting those in need. The Cleanliness Drive during Swachhta Pakhwada further reinforced our commitment to environmental sustainability and cleanliness.

These events, along with many others like them, reflect the true spirit of NSS, where the focus remains on service and selflessness. Moving forward, the NSS Unit will continue to work diligently to foster a sense of responsibility, unity, and positive change in society, staying true to its motto: 'Not Me, But You.'

5.8.9 Hindi Pakhwada

The National Institute of Technology (NIT) Jamshedpur organized Hindi Pakhwada in September 2023 with the objective of promoting the use and appreciation of the Hindi language. This event was held in observance of Hindi Diwas, celebrated annually on 14th September, marking the adoption of Hindi as an official language of India. The Hindi Pakhwada spanned from 14th September 2023 to 29th September 2023, featuring a series of competitions and activities aimed at both students and faculty members.

The primary purpose of this event was to foster a greater engagement with the Hindi language among participants. A variety of competitions and discussions were organized to highlight the cultural and literary significance of Hindi.



5.8.10 RIYASAT-E SHAAM:-

Well, it was the time to pick up the traditions and get on the dance floor to swirl to the Dandiya Raas. A cultural evening - Riyasat-e-Shaam was organized by The Students' Council and Team Culfest that included Dandiya Raas and Garba along with delicious cuisine stalls that generated immense fun and frolic.



5.8.13 WORLD BICYCLE DAY

In the presence of our esteemed Director Prof. Goutam Sutradhar, and Professor in charge Jayendra Kumar, the NSS unit of Jamshedpur celebrated World Bicycle Day on 3rd June 2023, joined by enthusiastic students. Together, we embraced the power of cycling, promoting sustainability and healthier lifestyles. Let's continue to choose two wheels over four, reducing our carbon footprint and embracing the joy of pedalling towards a brighter, cleaner world



5.8.14 WORLD ENVIRONMENT DAY

NSS TEAM NIT JAMSHEDPUR organized an Oath Ceremony on 5th June 2024 at 10 AM under the guidance of the program coordinator Dr. Jayendra Kumar who put forward the idea of this awareness programme. Students as well as faculties took part in the event with great enthusiasm.



5.9 OBSERVATION OF SPECIAL EVENTS

5.9.1 INDEPENDENCE DAY

The day was celebrated at the National Institute of Technology with great pride and enthusiasm.



5.9.2 REPUBLIC DAY:

The day was celebrated at the National Institute of Technology with great pride and enthusiasm. The Institute building was tastefully decorated with flowerpots, lighting, and national flags. We were beside ourselves with joy. Loudspeakers were fitted. Everyone was feeling very patriotic and happy because it was a matter of great pride for all of us.



5.9.3 INTERNATIONAL WOMEN DAY

8th March, 2024 - Gender Studies Cell (GSC) of National Institute of Technology, Jamshedpur organized International Women's Day on 8th March 2024. The theme of the event was 'Invest in Women, Accelerate Progress'. Present on this special occasion were the First Lady of the Institute Mrs. Indrani Sutradhar, Hon'ble Director, Chief Guest Dr. Anurima Verma, (Chief Medical Superintendent ;Department of Surgery) Tata Motors Hospital, Jamshedpur; Guest of Honour Mrs. Moni Sinha is leading the TSL-TSUK Coordination Programme at Tata Steel, Jamshedpur.



5.9.4 Industry_Academia Conclave 2023

NIT Jamshedpur organised Industrial Academia Conclave from 23rd – 25th November 2023. To fulfill the goal of Atmanirbhar Bharat, this institute of National Importance, aims to provide state-of-the-art technological solutions for Industrial problems and challenges, leading to the development of niche start-ups, led by young entrepreneurs. NIT Jamshedpur also strive to develop well-balanced academic programs to cater to the contemporary needs of various domains of the industry. Industry Academia Conclave 2023 was organized by Research and Consultancy, NIT Jamshedpur during 23rd – 25th November 2023 to bring professionals from industry, academia, and research institutions under one umbrella, to discuss topics at the intersection of respective domains, in line with contemporary societal needs. Another key objective of the event was to guide students to establish startups, catering to various industry needs, in a synergistic approach, thus making India globally competitive.

Inaugural Ceremony

The conclave was inaugurated by Mr. Uttam Singh, Vice-President, Iron Making, Tata Steel as Chief Guest and Shri Rajive Kumar, Chairman EAC Industry 1 Committee. Ministry of Environment, Forest and Climate Change, Government of India, Prof. Arvind Choubey, Director NIT Durgapur, Dr. Shubhrokamal Dutta, Economic and Foreign Policy expert was present as guest of honour. After the inaugural session, the institute also signed MoUs with several organizations; among them is IIT (ISM) Dhanbad and National Institute of Advanced Technology Ranchi.



To revitalize ancient iron making technique, a set up for Ancient Iron Making Process is made at Department of Metallurgical and Materials Engineering. This has been set by Unnat Bharat Abhiyan (UBA) cell of NIT Jamshedpur in association with MME Department. The Research scholars can pursue their research on ancient iron making technique to improve its efficiency.





5.10 DEPARTMENTAL SOCIETIES/ASSOCIATIONS ACTIVITIES:

5.10.1 METALLURGICAL AND MATERIALS ENGINEERING SOCIETIES

TECHNICA'24 (Annual Fest of MME Dept.)

TECHNICA, the annual national symposium fest of the Department of Metallurgical and Materials Engineering at NIT Jamshedpur, is a unique forum where students from different institutes of national repute come together on one platform to showcase their technical expertise in the field of Metallurgy and Materials Engineering. Like every year, this year's event took place from January 25th to 27th, 2024, with the same enthusiasm as in previous years.



It was held in the prestigious presence of organizations like RSB Global, Tata Steel, IIM Jamshedpur, National Metallurgical Lab, RS Rungta Groups, and many more. Every year, we introduce something new and captivating. This year's attractions include: **Rhetorics:** Language Arts Competition; **Metal Quiz:** Metallurgy and Materials Science; **Quizzica:** Science and Technology General Knowledge Competition; **Pictured:** Photo Contest; and **Magnum Opus:** Technical Presentations Competition to enhance the fest's appeal.

This year, we had over 100 participants from other colleges and over 200 registrations. On the inauguration day, the distinguished chief guest was Dr. Sandeep Ghosh Chaudhary, Chief Scientist at NML Jamshedpur. A special attraction was the visit to NML Jamshedpur and Ramakrishna Forging Ltd. We also organized a mental wellness program by ISKCON where Sri Prabhu Prem Swaroop Ji conducted a session for the students. The felicitation ceremony took place on January 27, 2024, with Mr. Biswajit Jena, RSB Jamshedpur Plant Head, as the chief guest. The program concluded with a vote of thanks by Prof. (Dr.) Ashok Kumar, Head of the Department.



DISTINCTIONS/AWARDS by the Faculty:

A. Kumar, R. Krishna, M. Sreenivasan (2024). Synthesis and Characterization of Spheroidized Powders of Tungsten Carbide (WC) and Aegirine for 3D Printing Applications. Conference Presentation, in the International Conference on Advanced Manufacturing and Materials Processing, 10-12th June 2024, Lisbon, Portugal.

5.10.2 MECHANICAL ENGINEERING SOCIETY

Mechanical Engineering Society, NIT Jamshedpur was founded to encourage skill-building activities among the institute's future technologists. The society dedicates itself to organizing workshops, guest lecturers, corporate crunch, placement express, group discussion and other events for the students. Along with this, a number of additional activities to assist students in developing both their technical and soft skills are also organized from time to time. MES also organizes its branch fest "Cognitio" every year. This mega fest comprises more than 10 sub events which not only give the opportunity to test technical skills of students but also to enhance the problem-solving skills, creativity and give a competitive environment. Cognitio isn't just limited to technical and managerial events. It also promotes the cultural aspect of a student's life.

COGNITIO 24: INDUSTRY 5.0 [Jan 19-21, 2024]

To the students of Mechanical Engineering Department, Cognitio is not just a branch fest but a celebration. Students gain the knowledge, experimental aspect of theoretical concepts, competitive environment, learn teamwork, express themselves and explore a wide range of domains and many more.



One-day workshop on the National Education Policy 2020

A one-day workshop on the National Education Policy 2020 was organized at the National Institute of Technology Jamshedpur on 03-02-2024 in the institute premises. The main objective of the workshop was to create awareness about the changes made under the new education policy and their importance among the teachers and researchers of technical institutes in and around Jamshedpur. A major aspect of this workshop is how we can incorporate the changes in the National Education Policy in the current era of industrialization.

The chief guest of the inaugural session was Vice Chancellor of Uttarakhand University, Prof. Omkar Singh. He highlighted the experimental aspect and its industrial utility and underlined its coherence with the new education policy. This is a new education policy that frees the children from the dimensions and restrictions of various subjects, which will develop the children according to the industrial changes. The next session was addressed by Prof. Rathore, Academic Dean of Haryana Skill University. He laid special emphasis on interdisciplinary education and flexibility in allocation of subjects, which is provided by the new education policy. This workshop is sponsored by Department of Science and Technology, Government of India. At the inauguration of the workshop, Mr. Munish Johri, Head, Jindal Power Institute, Raigarh was present as a special guest. The workshop was organized under the coordination of Prof. Satish Kumar, Mechanical Engineering Department. A total of 78 participants participated in this workshop.

Workshop cum Seminar on New direction in teaching and learning [March 19, 2024]

National Institute of Technology Jamshedpur organised one-day workshop on New direction in teaching and sponsored by the Department of Science and Technology, Government of India. This workshop was originally based on the new methodologies bringing excellence in the teaching work for teachers. Its purpose is to make classroom teaching better and effective using new innovative methods. Professor Satish Kumar, mechanical engineering department coordinator has given detail about the programme and in more than 46 faculties are participated from nearby engineering institutions. A major aspect of this workshop is how we can incorporate the changes in the National Education Policy in the current era of industrialization. The program was inaugurated by Prof. Gautam Sutradhar, Director of National Institute of Technology Jamshedpur. He highlighted the importance of research that can be applied in industry. He encouraged the participants to approach their projects with industrial potential. Professor Agus Saptoro, Professor, Curtin University Malaysia highlighted that research student mobility plays the very good role to learn the new generation technology. Dr. Jono Suhartono, Institute Teknologi Nasional (Itenas) Bandung, Indonesia discussed his experimental aspects in teaching work with his industrial experience. Guest of Honour Prof. Deepak Garg, Vice Chancellor, S.R. University highlighted the new technologies available in teaching work and discussed on its balanced use.

DISTINCTIONS/AWARDS

(a) By the Students: 3rd Prize Aerodynamic Analysis (CFD) Micro in SAE Aero DESIGN

Challenge, 2023. Vishal Raj, Amar Kumar, Selected in Level I (Ideation) to Level II (Proof of Concept) of India's biggest Robotics competition: "ROBOFEST-GUJARAT 3.0" with 50,000 Cash Prize under mentorship of **Dr. Vijay Kumar Dalla**. Prototype developed on "The MATSYA (Underwater Robot)", July 23.

Team Daksh, the Institute's official All-Terrain Vehicle team, participated in SAE-INDIA BAJA 2022-23 and designed, manufactured and tested the petrol engine power All-Terrain Vehicle at a cost of Rs.5.45lac. The vehicle grabbed 1st position among NIT's, and 29th position Overall among 110+ participating teams.

5.10.3 CIVIL ENGINEERING SOCIETY

In the halls of the National Institute of Technology, Jamshedpur, a vibrant hub of innovation and knowledge stands tall the Civil Engineering Society. Established in 2008, Civil Engineering Society is a dynamic student-led organisation which has etched its mark as a cornerstone of academic and professional development within the esteemed realm of civil engineering. The Civil Engineering Society serves as the veritable crucible of inspiration and innovation. With the core essence of "Keep Creating, Keep Inspiring", it is here, within these enthusiastic ranks, that ideas are transformed into architectural wonders and infrastructure marvels. Our society is more than just a name; it's a living, breathing testament to the power of collective intellect. From cutting-edge seminars that bring distinguished experts into our midst, to hands-on workshops that hone practical skills, we provide a fertile ground for the seeds of knowledge to grow.

We believe that true learning doesn't stop at textbooks but extends into the application of wisdom. At the heart of the Civil Engineering Society, there's an undeniable spirit of camaraderie. It's a place where like-minded students come together, forging bonds that go beyond the academic. As we work towards common goals, we become part of something greater than ourselves—pioneers in the construction of a brighter, more sustainable future. The Civil Engineering Society at NIT Jamshedpur is not just an organisation; it's a legacy. In a world where the very fabric of civilization is shaped by civil engineering, our society stands as a lighthouse, guiding the next generation of engineers to navigate the challenges and opportunities of this field. We're not just shaping buildings; we're moulding careers and aspirations.



VIDHAAN

VIDHAAN emerges as the gleaming jewel of NIT Jamshedpur which is hosted by the Civil Engineering Society. This three-day extravaganza serves as a vibrant oasis of creativity amidst the academic routine. It provides a remarkable platform for participants to showcase their talents and expertise. It emphasises the crucial link between academia and practical expertise in the field of civil engineering. Bridge between Academia and Practical Expertise: Vidhaan plays a pivotal role in bridging the gap between academic knowledge and practical skills, igniting the passion for civil engineering among participants. It offers a unique opportunity for young talents to engage in activities that showcase their potential.

Diverse Spectrum of Activities : Vidhaan features a diverse range of activities, including case study events, group discussions, entertaining activities, and civil engineering-oriented challenges like soil testing and the intriguing "Concube". Participants are exposed to a rich tapestry of experiences that leaves them in awe. **Impactful Memories and Lasting Lessons:** The memories and lessons from Vidhaan are poised to shape the future of participants, reinforcing the idea that the pursuit of sustainable development in civil engineering is not just an aspiration but an achievable reality. Last year the event left an indelible mark on the participants' academic and professional journey.

Civil Premier League (CPL)

Civil Premier League, a cricket tournament organised by team CES to relax the students from the academic load and foster a competitiveness and team work among them. This event is designed not only to entertain but also to cultivate a sense of unity and camaraderie among teammates. In this tournament students from every year unite to form dynamic teams and battle it out on the field showcasing talent, teamwork and spirit with each match promising skill, determination and unforgettable memories. The anticipation is absolutely electric as the pride of each academic year hangs in the balance, with the tournament intensifying and the rhythmic crack of the bat meeting the ball echoing through the air. Every run scored and each wicket claimed is celebrated like a joyous festival. As the tournament draws to a close, it becomes clear that this event transcends more than just being mere competition, it is a testament to the bonds forged, friendships deepened, and unforgettable memories created



Prof. Virendra Kumar visited the Tokyo University of Japan during Feb 26-29, 2024 to attend and present research paper in 9th International Conference on Building Materials and Construction (ICBMC-2024).

5.10.4 Society Of Production & Industrial Engineering: Prodyog '24

CHAIN ZENITH: This immersive supply-chain case study competition was tailored for students aspiring to careers in logistics, supply chain, operations, and consultancy sectors. Participants tackled real-world challenges under time constraints, gaining insights into the competitive dynamics of the industry. The event enhanced their understanding of key principles, honed their critical thinking and problem-solving abilities, and improved their communication and presentation skills

METAL MASTERPIECE: Metal Masterpiece brought together students passionate about engineering, design, and precision craftsmanship. Participants showcased their skills by creating unique designs using a lathe machine. From simple shapes to intricate patterns, contestants demonstrated their creativity and technical prowess, transforming metal into stunning works of art.

PRATYUSH: Designing is a crucial aspect of Production and Industrial Engineering, focusing on optimizing quality, workspace, and the motion of manpower, materials, and money within an organization. This event provided designers with the opportunity to showcase optimal design solutions for industrial parts using CATIA V5 software. Participants demonstrated their skills in a software widely used in various fields such as automobiles and manufacturing, highlighting its importance as a necessary skill in the industrial sector.

MACHINA MYSTIQUE: Machina Mystique assessed participants’ mechanical reasoning skills through a series of challenging quiz questions. The event tested their understanding of mechanical principles, problem-solving abilities, and logical reasoning, providing a comprehensive evaluation of their skills in these areas.

MINI SHARK TANK: Mini Shark Tank provided an electrifying platform aimed at nurturing the entrepreneurial spirit among college students. The event offered a stage for budding visionaries to pitch their innovative startup ideas, receive constructive feedback from seasoned judges, and pave the way for their entrepreneurial journey. The participants showcased remarkable creativity and business acumen, making the event a significant success.

TALKATHON: Talkathon served as an engaging platform where students came together to explore the power of communication. The event highlighted effective communication as a cornerstone skill, with participants engaging in diverse formats like interactive Group Discussions and Just-a-minute sessions. These activities not only enhanced their verbal skills but also taught the art of active listening and respectful discourse. By participating in Talkathon, students built strong resumes and prepared themselves for successful interviews, presentations, and future collaborations, making the event a notable success.

CYBER RUSH: Prodyog proudly presented the BGMI Campus Championship – CyberRush, transforming the campus into an electrifying battleground. Students from across the campus showcased their gaming prowess in Battlegrounds Mobile India (BGMI), creating an unforgettable showdown. The event celebrated the skill and enthusiasm of our gamers, highlighting the excitement and competitive spirit of the campus.

DATAHACKATHON: DataHackathon brought together participants to harness the power of Excel and other analytical tools to analyze datasets, produce insightful reports, and create dynamic presentations. This event celebrated data-driven decision-making and the creativity of analytical minds. Participants showcased their skills and explored the transformative potential of data, making the event a resounding.



5.11 UNNAT BHARAT ABHIYAN

- Two day brainstorming cum interaction meeting organised by NCI, IIT Delhi at IIT Delhi, Sonipat campus, Haryana on 13-14 July 2023. Dr. Kanika Prasad, PI Coordinator, UBA and Sh. Anuruddh Kumar, Senior Project Assistant, UBA represented NIT Jamshedpur during program.
- An awareness program on Voluntary Blood Donation in Pindrabera, Rapchavillage on 13 August 2023
- An awareness program on Voluntary Blood Donation was conducted on 13 August 2023 in Pindrabera, Rapcha. The objective of this event was to create awareness about voluntary blood donation and how it can save lives of people. Prof. (Dr.) Goutam Sutradhar, Director, NIT Jamshedpur graced the event as chief guest. He said that it is always heart-warming to visit Pindrabera village, where the residents are very active and take initiative in learning new things. He also assured that NIT Jamshedpur would do everything possible to conduct this type of awareness programs for overall development of the adopted village.
- Dr. Devendra Prasad, HoD Clinical Pathology, PMCH, Patna was the resource person for this program. He informed all the attendees that anyone aged between 18-65 years having no medical complications; having weight more than 45 kg and having haemoglobin level more than 12g can voluntarily donate blood. The program was attended by more than 40 residents of the village. Their active participation made the event a successful one.
- An initiative for Green Village by Tata Long Products Limited in association with UBA Cell, NIT Jamshedpur in Pindrabera, Rapcha village on 5 October 2023. Through the combined effort of Tata Long Products Limited and UBA Cell, NIT Jamshedpur more than 450 fruit bearing trees were planted in Pindrabera, Rapcha with a vision of making it a green village. More than 125 UBA volunteers, representatives from TSPL and villagers participated in this mega plantation drive held at Pindrabera. The overall objective of the initiative is to increase the green coverage and bring environmental stability in places which are near to industries.
- A 5-days training programme conducted on 3-7 JAN 2024 in Rapcha village on topics like modern farming, animal husbandry and processing.
- A 5- days training programme is conducted at Pendrapoda village from 9 Jan 2024 for village people on modern farming, animal husbandry and similar processing topics, with the support of Tata Steel.
- TRAINING CUM WORKSHOP ON GDPD AND LSDGs FOR UBA RCIs on 8-9 JAN 2024 in NIRDPR HYDERABAD: A training programme for faculties and professors in charge, giving them insights of village life and the livelihood of their people and providing the effective ways of interaction with them.
- Induction Programme For Students on 10 Jan 2024 at COMPUTER CENTRE, NIT Jamshedpur regarding the village survey under UBA batch'24 and TATA STEEL Gamharia.



Under the program of the Ministry of Education, Unnat Bharat Abhiyan, as per the instructions to participate in the Gram Sabha organized in the service village selected by the higher institutions across the state, Unnat Bharat Abhiyan, National Institute of Technology, Jamshedpur, participated in the Gram Sabha of Panchayati Raj organized on May 1 in Pindrabeda of UBA village Rapcha. Professor Ranjit Prasad, member of the Environment Assessment Committee under the Ministry of Environment of the Central Government and Kishore Prasad, faculty member of the District Education and Training Institute, Gamharia, also participated in this meeting. NIT Jamshedpur, the regional coordinator institute of Unnat Bharat Abhiyan, has resolved to develop Rapcha village as an ideal village in the field of good governance. So that it can be presented as an example to other higher institutions of the state. Under the Panchayati Raj Act, Gram Sabha is organized on national holidays. This meeting was held under the chairmanship of Gram Pradhan Budheshwar Manjhi. Development plans were discussed in the Gram Sabha to be included in the Gram Panchayat Development Plan (GPDP) of this financial year. Villagers put forward their views on Har Ghar Jal Yojana, road, solar powered pump, development of playground, archery, water harvesting, plantation and pollution control. Dr. Shakti Prasad, convener of Unnat Bharat Abhiyan, assured to organize training on skill development. Villagers apprised Professor Ranjit Prasad, member of Environment Assessment Committee of Environment Ministry, about the benefits received from various CSR projects in the village and welcomed future CSR projects, but apprised him of the current situation of rural water, land and air due to pollution from industry and urged for improvement in it. Prof. Prasad motivated the villagers for new projects and taking pollution problems seriously, suggested them to give their problems to industry officials as well as various environment departments through written application so that they can be made aware of the ground level problems. The objective of which is to increase pollution control and green cover along with development projects and promote environmental sustainability. Villagers of Rapcha Pindrabeda including village head Budheshwar Manjhi, Uday Mardi, Gorkha Hembram, coordinator of Unnat Bharat Abhiyan NIT Jamshedpur Dr Shakti Prasad and project assistant Dheeraj Kumar as well as member of the Ministry of Environment Professor Ranjit Prasad participated in the program.

5.12. GO GREEN CLUB:

GoGreen Club has been initiated to inspire and help inculcating the habits of living and leading a greener life with the minimum carbon footprint. An inspiring inaugural talk was delivered by the Founder of Environmentalist Foundation of India (EFI), Mr. Arun Krishnamurthy, who was the Chief Guest for the Inaugural ceremony of GoGreen Club. The Club is committed to spread awareness of the adverse effects of Climate Change and the actions to resolve this problem within our own capacity in and around the campus of the Institute.

5.12.1 Year-Long Plastic Recycling Campaign: A Sustainability Milestone

GoGreen Club has come up with the idea of collecting recyclable plastic items generated in residential houses, hostel messes, and offices on campus. In this connection, a 'Plastic Recycling Campaign' has been launched on campus in association with HKGC on 4th September 2023 by distributing bags for collecting recyclable plastics to faculty & staff by Honourable Director Prof. Gautam Sutradhar and Chief Guest Mr. Manoj Singh Shekhawat, Chief Divisional Manager, TATA Steel UISL. In this campaign, GoGreen Club volunteers provided a bag to the participants who are willing to donate plastics in residential houses, offices, etc., and collect the recyclable plastics every 15 days once at their doorstep. All the collected plastic items would be submitted every month at Reduce Reuse Recycle (RRR) centers started by TATA Steel UISL and the recycled plastic will be utilized for some other useful purposes. During the event, club members demonstrated how to identify different types of recyclable plastics and which kinds of items are not useful for recycling.

Subsequently, Specially crafted steel bins made from scrap materials have been strategically placed across the campus to encourage students, staff, and faculty to dispose of their recyclable plastics responsibly. Over the past year, the GoGreen Club has proudly submitted **150 kg** of recyclable plastics till June 30, 2024 to the RRR center, Jamshedpur. The GoGreen Club encourages everyone to continue using the steel bins for recyclable plastics and to avoid disposing of non-recyclable plastics like snack packs and carry bags into these bins. Proper recycling practices are crucial in reducing plastic waste and promoting a cleaner, greener environment. Every piece of plastic we recycle brings us closer to a more sustainable future. Join the GoGreen Club in making **NIT Jamshedpur** free from plastic waste.





5.13 LIST OF MOUs BETWEEN NIT JAMSHEDPUR AND OTHER ORGANIZATIONS IN 2023-24

1. National Highways & Infrastructure Development Corporation Limited (NHIDCL)
2. National Institute of Technology (NIT Raipur)
3. Chittaranjan Locomotive Works (CLW), Chittaranjan
4. National Institute of Technology Warangal (NIT Warangal)
5. UGC-Human Resource Development Centre (UGC-HRDC), JNVU Jodhpur
6. INUP-i2i Programme with Indian Institutes of Technology Kharagpur
7. CSIR-Central Institute of Mining and Fuel Research (CSIR-CIMFR) Dhanbad
8. Central University of Jharkhand, Ranchi
9. CSIR-Central Mechanical Engineering Research Institute (CSIR-CMERI) Durgapur
10. CSIR-Central Glass & Ceramic Research Institute (CGCRI)
11. National Institute of Advanced Manufacturing Technology, Ranchi
12. National Institute of Technology Meghalaya (NIT Meghalaya)
13. Bureau of Indian Standards (BIS)
14. IIT (ISM) Dhanbad
15. Sarla Birla University
16. MDS IndoCan Inc.
17. IIT Gadhinaragar
18. IIT Patna

5.14 NEWS CLIPS

एनआईटी की ओर से रापचा पंचायत में रक्तदान शिविर का आयोजन

■ एनआईटी की ओर से गांवों में जागरूकता अभियान

जमशेदपुर: राष्ट्रीय प्रौद्योगिकी संस्थान (एनआईटी) जमशेदपुर के निदेशक प्रो गौतम सूत्रधार ने कहा कि वे रापचा पंचायत के पिंडरबेड़ा गांव में दोबारा आकर अभिभूत हैं। यहाँ के लोग बेहद जागरूक एवं नए विचारों का स्वागत करते हैं। इस गांव के सर्वांगीण विकास के लिए उन्नत भारत अभियान के तहत राष्ट्रीय प्रौद्योगिकी संस्थान जमशेदपुर समय-समय पर इसी तरह विभिन्न विषयों पर जागरूकता अभियान के आयोजन का हर संभव प्रयास करेगा। प्रो गौतम सूत्रधार ने 'पचा पंचायत के पिंडरबेड़ा' में उन्नत भारत अभियान के द्वारा आयोजित 'स्वीच्छिक रक्तदान' पर एक दिवसीय जागरूकता कार्यक्रम में ये

बातें कही। इस जागरूकता कार्यक्रम का उद्देश्य ग्रामीण जीवन में रक्तदान के प्रति भय एवं उदासीनता दूर करना है।

रक्तदान से शरीर स्वस्थ रहता है- डॉ. देवेन्द्र

समारोह के मुख्य वक्ता पटना मेडिकल कॉलेज क्लीनिकल पैथोलॉजी के विभागाध्यक्ष डॉ देवेन्द्र प्रसाद ने बताया कि कोई भी स्वस्थ स्त्री या पुरुष, जिसकी उम्र 18 से 65 वर्ष के बीच है और वजन 45 किलोग्राम से अधिक है, रक्त में हीमोग्लोबिन की मात्रा 12.5 ग्राम से अधिक है, वह रक्तदान कर सकता है। उन्होंने बताया कि 90 दिन (3 महीने) के बाद फिर से रक्तदान किया

जा सकता है। रक्तदान से कोई हानि नहीं होती बल्कि फायदा ही होता है। उन्होंने 'उन्नत जागत रक्तदानम् कुरु (उठो जागो रक्तदान करो)' का नारा दिया।

गांव के छात्रों की काउंसलिंग होगी- डॉ. रंजीत प्रसाद

डॉ रंजीत प्रसाद, संयोजक, उन्नत भारत अभियान, निदेशक ने गांव के छात्रों के लिए एक काउंसलिंग कार्यक्रम के आयोजन की बात कही। रापचा पंचायत की मुखिया श्रीमती सुकुमती माई एवं ग्रामीणों के द्वारा निकट भविष्य गांव में ब्लड डोनेशन कैंप के आयोजन की बात कही गई।

एनआईटी में शिक्षण में नई दिशा पर एक दिवसीय कार्यशाला आयोजित



जमशेदपुर। भारत सरकार के विज्ञान एवं प्रौद्योगिकी विभाग द्वारा प्रायोजित एवं राष्ट्रीय प्रौद्योगिकी संस्थान, जमशेदपुर में शिक्षण में नई दिशा विषय पर एक दिवसीय कार्यशाला का आयोजन किया गया। यह कार्यशाला मूलतः शिक्षकों के लिए शिक्षण कार्य में उत्कृष्टता लाने वाली नई पद्धतियों पर आधारित थी। मैकेनिकल इंजीनियरिंग विभाग के समन्वयक प्रोफेसर सतीश कुमार ने कार्यक्रम के बारे में विस्तार से बताया और इसमें आसपास के इंजीनियरिंग संस्थानों से 46 से अधिक संकायों ने भाग लिया। इस कार्यशाला का एक प्रमुख पहलू यह है कि औद्योगिकरण के वर्तमान युग में हम राष्ट्रीय शिक्षा नीति में बदलावों को कैसे शामिल कर सकते हैं। कार्यक्रम का उद्घाटन राष्ट्रीय प्रौद्योगिकी संस्थान, जमशेदपुर के निदेशक प्रो गौतम सूत्रधार ने किया।

उन्होंने अनुसंधान के महत्व पर प्रकाश डाला जिसे उद्योग में लागू किया जा सकता है। उन्होंने प्रतिभागियों को अपनी परियोजनाओं को औद्योगिक क्षमता के साथ अपनाने के लिए प्रोत्साहित किया। कर्टिन यूनिवर्सिटी मलेशिया के प्रोफेसर प्रोफेसर एगस सप्तोरो ने इस बात पर प्रकाश डाला कि नई पीढ़ी की तकनीक सीखने के लिए शोध छात्र गतिशीलता बहुत अच्छी भूमिका निभाती है। डॉ. जॉनो सुहातोनो, इंस्टीट्यूट टेक्नोलोजी नैशनल (इटेनास) बांडुंग, इंडोनेशिया ने अपने औद्योगिक अनुभव के साथ शिक्षण कार्य में अपने प्रयोगात्मक पहलुओं पर चर्चा की। विशिष्ट अतिथि प्रोफेसर दीपक गर्ग, कुलपति, एस.आर. विश्वविद्यालय ने शिक्षण कार्य में उपलब्ध नई तकनीकों पर प्रकाश डाला तथा उसके संतुलित उपयोग पर चर्चा की।

ALUMNI CENTRE INAUGURATED AT NIT , ALUMNI TO FOCUS ON IMPROVING RANKING

PNS : JAMSHEDPUR

The National Institute of Technology Jamshedpur campus inaugurated its much awaited Alumni Centre on Tuesday. After the establishment of the institute (1966), the Centre was inaugurated with the efforts and leadership of the new director (Dr) Goutam Sutradhar, a distinguished alumnus of the institute. 1967 batch cum R.S.B. Chairman RK Behra inaugurated the centre.

On this occasion, many eminent alumni connected through virtual media from the country and abroad and registered their presence in the ceremony.

In his address as an alumnus, R.K. Behra said that I am grateful to all the alumni



students, due to their efforts the Alumni Centre is being built in the 63-year-old institution. I am very happy. I am grateful to Jitendra Kumar and Chittaranjan Sahay, the office bearers of the Alumni Student Organization (Neeraj) who made me a life member. Today the institute is ranked 130th in the country. Alumni can play a role in improving this rank. I will cooperate

fully in this. Whether it is a matter of infrastructure or other activities. There is a need to work on research here. Will have to do better in my PhD. In this, industrial spirit is required for new technology. For this we all have to change our mind set. I agree that an incubation center should be established here.

Director in his address



said that alumni play a vital role in the development of the institute. They are our ambassadors, today many alumni are in good positions in the country and abroad, they are big entrepreneurs, they are running big organizations in the country and abroad, they can take the institute to heights by joining us. He said that he wishes that the institute develops into a corporate

design in which alumni can collaborate. Adityapur industrial area is located close to NIT Jamshedpur, this is a plus point for this institute and students studying here are getting its benefits. B.N. Dixit (1966 batch) in his address said that today is a historic day. We have gone to Patna and BHT Sindri to do practicals. Today the former students are getting halls in the

institute. I have been the president of the student union.

On this occasion of the inauguration of the Alumni Centre, many alumni of the institute prominently Sanjeev Paul (former Vice President Tata Steel, RT Singh (former Plant Head Tata Motor), Shailesh Kumar Jha, Sharvesh Upadhyay, Bindu Srivastava, Prof. Shaileendra Kumar (Professor NIT), and the first student of the first batch Mr. Kanhaiya Lal Agarwal (1966 batch) as well as many students from the country and abroad through virtual medium like Mr. R.K. V. Shahi (Former Energy Secretary, Government of India), Prof. Chittaranjan Sahay (University of Herford, USA) and many other alumni enthusiastically participated in the event.



पांच दिवसीय संकाय विकास कार्यक्रम में एनआईटी जमशेदपुर और एनआईटीटीआर कोलकाता ने परिणाम आधारित शिक्षा और एनबीए प्रत्यायन पर



Govt Official Reviews NIT Jamshedpur Facilities

March 9, 2024 By Town Post

CHAPTER-6: THE STAFF

6.1 LIST OF OFFICERS

S. N.	NAME OF THE EMPLOYEES	DESIGNATION	DEPARTMENT
1.	Coln (Dr.) N. K. Rai	Registrar	Admin
2.	Mr. Deepak Kumar	Engineer	P&D
3.	Dr. Syed Azmat Hussain	Dy. Registrar	R&C
4.	Mr. Sunil Kumar Bhagat	Assistant Registrar	ESS/F&A
5.	Dr. (Mrs.) Neeta Bharti	Asst. Librarian	LIB
6.	Mr. Ram Pravesh Prasad	Assistant Registrar	ACD
7.	Mr. Rupak Kumar	Sr. Technical Officer	DPIE
8.	Mr. Anup Chhabi Topno	Technical Officer	DPIE
9.	Mr. Munesh Kumar	Dy Librarian	LIB
10.	Dr. Abhay Kumar	Medical Officer	IHC
11.	Mr. Sukanta Pallab Roy	Sup. Engineer	P&D
12.	Mr. Nishanth Sinha	Assistant Registrar	On Lien

6.2 LIST OF GROUP – B STAFF

MINISTERIAL:

MINISTERIAL STAFF			
S. N.	NAME OF THE EMPLOYEES	DESIGNATION	DEPARTMENT
1.	Mr. Saikat Mridha	Accountant	Finance & Accounts Section
2.	Mr. Prabhanshu Kumar	Superintendent	Store & Purchase Section
3.	Mr. Kumar Shanu	Superintendent	Establishment Section
4.	Mr. Sumit Kumar Pandey	Superintendent	Establishment Section
5.	Mr. Rahul Kumar	Superintendent	Academic Section
6.	Mr. Gopaljee Ram	Superintendent	Director's Secretariat
7.	Mr. Nand Kishore Jha	Superintendent	Establishment Section
8.	Mr. Shailesh Kumar	Assistant SG-I	Chief Warden office
9.	Mr. Sanjay Chatterjee	Assistant SG-I	Deputy Director's Office
10.	Mr. Tarkeshwar Kumar	Assistant SG-I	Computer Centre
11.	Mr. Dashrath Singh	Assistant SG-I	P&D Office
TECHNICAL STAFF			
1.	Mr. Sudhir Kr. Sinha	Technical Assistant SG-II	Department of CSE
2.	Mr. Provat Kr Roy	SAS Assistant	Dean (Student Welfare)
3.	Mr. Ravi Ranjan	Technical Assistant	Computer Centre
4.	Mr. Ganga Ram Mandal	Technical Assistant	Mechanical Engineering
5.	Mr. Suraj Kushwaha	Technical Assistant	Civil Engineering
6.	Mr. Girija Nandan Arka	Technical Assistant	Production & Industrial Engineering
7.	Mr. Kunjan Kumar	Technical Assistant	Metallurgical & Material Engineering
8.	Mr. Nara Yuvakiran	Technical Assistant	Electrical Engineering
9.	Md Sazzad	Technical Assistant	Electrical Engineering
10.	Mr. Chandan Kumar Rahtey	Technical Assistant	Physics
11.	Mr. Rahul Mishra	Technical Assistant	Mechanical Engineering

12.	Mr. Lokanath Mohanty	Technical Assistant	Metallurgical & Material Engineering
13.	Mr. Biplab Koley	Technical Assistant	Chemistry
14.	Mr. Reyan Akhtar	Technical Assistant	Electronics & Communication Engineering
15.	Mr. Rahul Kumar	Junior Engineer (Civil)	Planning & Development
16.	Mr. Angshuman Santra	Junior Engineer (Electrical)	Planning & Development
17.	Mr. Ahmed Shahnawaz	Junior Engineer (Electrical)	Planning & Development
18.	Mr. Baliram Kumar	Technician SG-I	House Keeping, Sanitation & Green Campus Unit (P & D)
19.	Mr. Nawal Kishore	Technician SG-I	Deptt. of Civil Engg.

6.3 LIST OF GROUP – C STAFF

MINISTERIAL LOWER:

MINISTERIAL STAFF			
S. N.	NAME OF THE EMPLOYEES	DESIGNATION	DEPARTMENT
1.	Mr. Surya Narayan Yadav	Assistant SG-II	HKGC
2.	Mr. Arjun Kr. Singh	Assistant SG-II	Establishment Section
3.	Mr. Raj Kumar Baitha	Assistant SG-II	Finance & Accounts Section
4.	Mr. Bipin Kumar Sinha	Assistant SG-II	Dean(S/W)'s Office
5.	Mr. Sushil Kr. Gupta	Assistant SG-II	Training & Placement
6.	Mr. Anil Kumar	Assistant SG-II	Institute Health Centre
7.	Mr. Ashutosh Ranjan	Assistant SG-II	Academic Section
8.	Mr. Raj Kumar Pramanik	Assistant SG-II	Stores & Purchase Section
9.	Mrs. Bobby Banerjee	Assistant SG-II	Chief Warden Office
10.	Mr. Sudhanshu Shekhar	Assistant SG-II	Academic Section
11.	Mrs. Kanak Kumari	Senior Assistant	Department of Electrical Engineering
12.	Mr. Sanjeev Kumar Mahli	Senior Assistant	Store & Purchase
13.	Mr. Sujoy Samui	Senior Assistant	Academic
14.	Mr. Rohit Ranjan Bharti	Senior Assistant	Store & Purchase Section
15.	Mr. Abinash Swain	Senior Assistant	Student's Welfare
16.	Mr. Aakash	Senior Assistant	R & C
17.	Mr. Subhash Kumar	Junior Assistant	Dean R&C
18.	Mr. Navanit Ranjan Sahoo	Junior Assistant	Establishment Section
19.	Mr. Vishal Kumar	Junior Assistant	Establishment Section
20.	Mr. Rajarshi Bhadra	Junior Assistant	Planning & Development
21.	Mr. Gautam Kumar	Junior Assistant	Academic Section
22.	Mr. Ashutosh Singh	Junior Assistant	Finance & Accounts Section
23.	Mr. Suman Chakma	Junior Assistant	Establishment Section
24.	Mr. Anurudh Kumar	Junior Assistant	Student's Welfare
25.	Mr. Vikash Kumar Meena	Junior Assistant	Security Control Unit
TECHNICAL STAFF			
1.	Mr. Satyadeo Singh	Technician SG-II	Central Workshop
2.	Mr. Ravindra Prasad	Technician SG-II	Vehicle Section
3.	Mr. Gupteshwar Prasad	Technician SG-II	Production & Industrial Engg. Department
4.	Mr. Sanjay Kumar Sinha	Technician SG-II	Vehicle Section
5.	Mr. Kamesh Pd. Singh	Technician SG-II	Vehicle Section
6.	Mr. Sanjeev Kumar	Technician SG-II	Department of Electrical Engineering
7.	Mr. Prasant Kumar Mal	Technician SG-II	Electrical Maintenance Unit
8.	Mr. Sanjay Kumar	Technician SG-II	Department of Mechanical Engineering
9.	Mr. Ujjawal Pathak	Senior Technician	Metallurgical & Material Engineering
10.	Mr. Arnab Hati	Senior Technician	Civil Engineering
11.	Mr. Vibhas Kumar Sinha	Senior Technician	Mathematics
12.	Mr. Chandra Bhanu	Senior Technician	Electronics & Communication Engineering
13.	Mr. Sourav Garai	Senior Technician	Mechanical Engineering
14.	Mr. Manish Kant	Senior Technician	Production & Industrial Engineering
15.	Mr. Ramesh Kumar Rathour	Senior Technician	Computer Applications and Computer Science & Engineering
16.	Mr. Debajyoti Bhattacharya	Senior Technician	Chemistry
17.	Mr. Adeyswar Laya	Senior Technician	Production & Industrial Engineering
18.	Mr. Aditya Dhanraj	Technician	Mechanical Engineering

19.	Mr. Ravi Shankar Kumar	Technician	Mechanical Engineering
20.	Mr. Aniket Samanta	Technician	Electrical Engineering
21.	Mr. Ujjwal Panigrahi	Technician	Electrical Engineering
22.	Mr. Ravikar Kumar	Technician	Production & Industrial Engineering
23.	Mr. Sumit Sehgal	Technician	Physics
24.	Mr. Preety Manonit Dodray	Technician	Computer Applications And Computer Science & Engineering
25.	Mr. Debashis Dash	Technician	Computer Applications And Computer Science & Engineering
26.	Mr. Abhishek Yadav	Technician	Computer Centre
27.	Mr. Himanshu Kumar	Technician	Metallurgical & Materials Engineering
28.	Mr. Sikandar Kumar Sah	Technician	Electronics Engineering
29.	Mr. Shashikanta Behera	Technician	Metallurgical & Materials Engineering
30.	Mr. Govind Mandi	Technician	Production & Industrial Engineering
31.	Mr. Sankar Kumar	Technician	Computer Centre

6.4 LIST OF EMPLOYEE ON CONTRACT

S. N.	NAME OF THE EMPLOYEES	DESIGNATION	DEPARTMENT
1.	Mr. Rakesh Kumar Sinha	Internal Auditor	Finance & Accounts Section
2.	Dr. Ajay Kumar	Internal Auditor	Finance & Accounts Section
3.	Mr. Syed Fazle Rahman	Internal Auditor	Finance & Accounts Section
4.	Mr. Anirudh Sanyal	Ex-Sr. Stenographer	Director's Secretariat
5.	Mr. Ashok Kr Sahu	Ex- Technician SG-I	Vehicle Section

6.5 LIST OF MTS

S. N.	NAME OF THE EMPLOYEES	DESIGNATION	DEPARTMENT
1.	Mr. Raghunath Mukhi	Attendant	Academic Section
2.	Mr. Dharmendra Mardi	Care Taker	Academic Section
3.	Mr. Ruhi Manjhi	Attendant	Academic Section
4.	Mr. Sunil Gour	Attendant	Academic Section
5.	Mrs. Sachini Devi	Care Taker	Humanities, Social Science & Management (HSSM)
6.	Mr. Krishna Mukhi	Care Taker SG-II	Chief Warden
7.	Mr. Akhil Pradhan	Security Guard	Chief Warden
8.	Mr. Bideshi Mukhi-I	Care Taker	Chief Warden
9.	Mr. Kisto Manjhi	Security Guard	Chief Warden
10.	Mr. Mahesh Mukhi	Care Taker	Chief Warden
11.	Mr. Dayamay Prajapati	Security Guard	Chief Warden
12.	Mr. Bideshi Mukhi-II	Care Taker	Chief Warden
13.	Mrs. Sugga Devi	Attendant	Chief Warden
14.	Mr. Ravi Mukhi-II	Care Taker	Chief Warden
15.	Mrs. Saraswati Mukhi	Care Taker	Chief Warden
16.	Mr. Basu Gour	Attendant	Computer Centre
17.	Mr. Sandeep Kumar	Attendant	Computer Centre
18.	Mr. Santosh Sardar	Attendant	Computer Centre
19.	Mr. Aditya Mahali	Attendant	Civil Engineering.
20.	Mr. Ramesh Mukhi	Care Taker SG-II	Computer Science & Engineering
21.	Mr. Anand Pradhan	Attendant	Registrar Office
22.	Mrs. Sumitra Pradhan	Attendant	Dean (R&C), Dean (SW), Chief Warden Office, Dean (I&AR)
23.	Mr. Charan Gorai	Attendant	Director Secretariat
24.	Mr. Nitish Das	Security Guard	Director Secretariat
25.	Mr. Bhaskar Pradhan	Attendant	Director Secretariat
26.	Mr. Mangal Mukhi	Care Taker	Electrical Engineering
27.	Mr. Bankey Mishra	Attendant	Electrical Maintenance Unit
28.	Mr. Suresh Prasad	Attendant	Electrical Maintenance Unit
29.	Mr. Makhan Lal	Attendant	Electronics & Communication Engineering
30.	Mr. Anup Kumar Mahato	Senior Attendant	Establishment Section
31.	Mr. Bharat Singh	Attendant	Establishment Section
32.	Mr. Jyotilal Singh	Attendant	Establishment Section
33.	Mr. Chhote Lal Soren	Senior Attendant	Establishment Section

34.	Mr. Vijay Pratap Mahato	Attendant	Finance & Account
35.	Mr. Janmejay Sardar	Security Guard	Finance & Accounts
36.	Mr. Giri Pradhan	Attendant	Finance & Accounts
37.	Mr. Bihari Mukhi	Care Taker	House Keeping & Green Campus
38.	Mr. Hagru Mukhi	Care Taker SG-II	House Keeping & Green Campus
39.	Mr. Rabi Mukhi-I	Care Taker	House Keeping & Green Campus
40.	Mrs. Devi Mukhi	Care Taker	House Keeping & Green Campus
41.	Mrs. Shanti Mukhi	Care Taker	Chief Warden
42.	Mr. Basant Mukhi	Care Taker	House Keeping & Green Campus
43.	Mr. Kamal Kant Das	Security Guard	Institute Guest House
44.	Mr. Sarbeshwar Mukhi	Attendant	Institute Guest House
45.	Mrs. Kanchan Devi	Care Taker	Institute Health Centre
46.	Mr. Moti Lal Gour	Security Guard	Institute Health Centre
47.	Mr. Ravi Mahto	Attendant SG-II	Library
48.	Mr. Ramesh Ram	Security Guard	Library
49.	Mr. Ganesh Shrestha	Care Taker	Academic Section
50.	Mr. Bir Prasad Mukhi	Care Taker SG-II	Chemistry
51.	Mr. Arjun Mukhi	Care Taker	Mechanical Engineering
52.	Mr. Suresh Pradhan	Attendant	Mechanical Engineering
53.	Mr. Kameshwar Roy	Attendant	Metallurgical & Materials Engineering
54.	Mr. Mihir Ch. Pradhan	Security Guard	Physics
55.	Mr. Khokha Ram Mahato	Care Taker	Planning & Development
56.	Mr. Ram Awadh Ram	Attendant	Planning & Development
57.	Mr. Pulin Kr. Dutta	Attendant	Production & Industrial Engineering
58.	Mr. Dilip Mahali	Attendant	Production & Industrial Engineering
59.	Mr. Manoj Kumar Jha	Attendant	Registrar Office
60.	Mr. Bablu Sardar	Attendant	Registrar Office
61.	Mr. Chandra Mohan Mukhi	Attendant	Registrar Office
62.	Mr. Jouhari Sahani	Security Guard	Security Control unit
63.	Mr. Suraj Kumar	Security Guard	Security Control unit
64.	Mr. Mathura Sardar	Security Guard	Security Control Unit
65.	Mr. Awadhesh Rajak	Attendant	Security Control unit
66.	Mr. Tapan Mahato	Security Guard	Security Control unit
67.	Mr. Fantu	Attendant	Sport Activity Section
68.	Mr. Matbar Sardar	Security Guard	Store & Purchase
69.	Mr. Prabhat Kumar	Attendant	Student Welfare
70.	Mr. Bhola Prasad Yadav	Senior Security Guard	Training & Placement
71.	Mr. Bahadur Mahato	Attendant	Transport Section
72.	Mr. Lakshman Kr. Singh	Care Taker	Transport Section
73.	Mr. Guruva Mukhi	Attendant	Transport Section

6.5.1 LIST OF EMPLOYEES ADDITIONAL CHARGE

S. N.	NAME OF THE EMPLOYEES	DESIGNATION	DEPARTMENT
1.	Mr. Sunil Kumar Bhagat	Assistant Registrar (I/C)	Finance & Accounts Section
		Public Relation Officer	PRO
2.	Mr. Nand Kishore Jha	Assistant Registrar (I/C)	Stores & Purchase Section



Members of Publication Cell Committee 2023-24

(Left to Right) Dr. Ravi Bhushan, Dr. Sourav Das, Dr. Binay Kumar, Dr. Subham Tripathi, Mr. Navneet Ranjan Sahoo, Dr. Gopa Bhaumik, Mr. Shashikanta Behera, Dr. Somenath Mondal, Dr. Shailesh Kumar Jha, Dr. Ajay Kumar, Prof. Ashok Kumar (Chairman) (Bottom Left), Prof. Goutam Sutradhar (Director)(Middle) Prof. R. V. Sharma (Dy. Director) (Bottom Right) Dr. Swati Sudha & Dr. Prabhat Kumar (not in the photograph)

कार्यालय प्रधान निदेशक लेखापरीक्षा
(केंद्रीय), लखनऊ, शाखा कार्यालय: रांची
महालेखाकार कार्यालय,
मुख्य भवन,
5वीं मंजिल,
डोरंडा,
रांची-834002
BRPDACRANCHI@CAG.GOV.IN



BRANCH: DIRECTOR GENERAL OF
AUDIT (CENTRAL), LUCKNOW AT
RANCHI
AG Office Main Building,
5th floor,
Doranda,
Ranchi-834 002
BRPDACRANCHI@CAG.GOV.IN

Ltr No: Central Expenditure Audit wing/2024-2025/DIS-2063787
Date: 11 Oct 2024

To,

1 The Director
NIT, Jamshedpur.

Subject: Final SAR of NIT, Jamshedpur for the year 2023-24.

Sir/Madam,

Sir,

I enclose a copy of the Separate Audit Report (SAR) of NIT, Jamshedpur for the year 2023-24 for information and necessary action.

2. A copy of the SAR has been sent to the Secretary to the Government of India, Ministry of Human Resource Development, New Delhi for information and necessary action.
3. The audited Annual Accounts, Audit Report should be duly considered and adopted by the Governing Body (BOG) of the NIT, Jamshedpur in the Annual General meeting before these are laid in the House of parliament.
4. A copy of (i) Resolution of Governing Body adopting the Audit Report and Audit Certificate with audited Annual Accounts, (ii) Date of its presentation before the House of Parliament and (iii) Annual Report of the Institute may be furnished to this office in due course for our records and onward transmission to the Comptroller and Auditor General of India, New Delhi.
5. The Hindi version of this SAR may kindly be furnished to this office within one week.
6. The receipt of this letter with enclosures may please be acknowledged.

Yours faithfully,

Encls: As above

Sanjay Kumar I
Principal Director

Copy to:-

Ltr No : Central Expenditure Audit wing/2024-2025/DIS-2063787/C1/For Information
The Secretary.
Ministry of Education
Govt. of India

Separate Audit Report of the Comptroller & Auditor General of India on the accounts of National Institute of Technology (NIT), Jamshedpur for the year ended 31 March 2024.

We have audited the attached Balance Sheet of National Institute of Technology, (NIT) Jamshedpur as on 31 March 2024, the Income and Expenditure Account and Receipts and Payments Account for the year ended on that date under Section 19 (2) of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971. These financial statements are the responsibility of the Institute's management. Our responsibility is to express an opinion on these financial statements based on our audit.

2. This Separate Audit Report contains the comments of the Comptroller and Auditor General of India (C&AG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on financial transactions with regard to compliance with the Law, Rules and Regulations (Propriety and Regularity) and efficiency-cum-performance aspects, etc., if any, are reported through Inspection Reports/ C&AG's Audit Reports separately.

3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. Our audit includes examining, on a test basis, evidences supporting the amounts and disclosure in the financial statements. It also includes assessing the accounting principles used and significant estimates made by the management as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion.

4. Based on our audit, we report that:

(i) We have obtained all the information and explanations, which, to the best of our knowledge and belief, were necessary for the purpose of our audit.

(ii) The Balance Sheet, Income & Expenditure Account and Receipts and Payments Account dealt with by this report have been drawn up in the format approved by the Government of India, Ministry of Education.

(iii) In our opinion, proper books of accounts and other relevant records have been maintained by the Institute as required under Section 23 (1 to 4) of IIT Act, 1961 and rules and regulation in so far as it appears from our examination of such books.

(iv) We further report that;

A. Balance sheet

A.1 Liabilities

A.1.1 Corpus/Capital Fund (Schedule 1) – ₹639.17 Crore

A.1.1.1 As per MoE format of accounts advance given to CPWD/suppliers are to be treated as Unutilised Grant. The Institute had an [unutilized grant of ₹ 10.28 crore\(Advances to CPWD/suppliers\)](#) under the head Capital at the beginning of the year. [During the year the Institute received a grant of ₹ 17.55 crore](#) under the head capital. Thus, the total fund available with the institute was ₹27.83 crore. During the year the Institute incurred capital expenditure amounting to [₹ 9.57 crore \(excluding advance of ₹ 7.98crore given to CPWD\)](#). As such, the Institute was required to exhibit ₹ 18.26 crore as grant refundable to the Ministry at the end of the year. The irregular treatment of showing advances as expenditure resulted in an understatement of current liabilities under the head unutilized grant refundable to the ministry and an overstatement of the capital fund by ₹ 18.26 crore.

This comment was issued in previous year, but no corrective action has been done.

A.1.1.2 As per MoE format of accounts advance given to CPWD/suppliers are to be treated as Unutilised Grant. The opening balance of the [unutilized Revenue grant of the Institute as of 01.04.2023 was ₹ 3.81crore\(Advance to CPWD\)](#). [The Institute received a grant of ₹ 123.64 crore](#) from the Ministry of Education under the head revenue. Thus, the total fund available with the Institute was ₹ 127.45 crore. [Out of which the Institute utilized ₹ 123.64 crore during the year](#). As such the Institute was required to exhibit ₹ 3.81 crore as an unutilized grant refundable to the Ministry. This resulted in an understatement of current liabilities and overstatement of the capital fund by ₹ 03.81Crore

This comment was issued in previous year, but no corrective action has been done.

A.2.1. Loans Advances & Deposit (Schedule-8) ₹ 24.87 crore

A.2.1.1 As per guidelines of financial statements for the Central Higher Educational Institutions Autonomous Bodies Interest accrued on F.Ds are to be booked under Loan, Advance & Deposits (Schedule-8). Scrutiny revealed that the Institute booked Income accrued on F.D. during the year in Current Assets (Schedule-7) instead of Loans, Advances & Deposits. This leads to an [understatement of Loan, Advance & Deposits by Rs 27.52 lakh](#) and overstatement of Current Assets by the same extant.

B. Income and Expenditure Account

B.1 As per guidelines of financial statements for the Central Higher Educational Institutions Autonomous Bodies Interest on Term Deposit are to be booked under Interest Earned (Schedule-12). Scrutiny revealed that the Institute booked Interest on Term Deposit during the year in Income from Investments (Schedule-11) instead of Interest Earned (Schedule-12). This leads to [understatement of Interest Earned \(Schedule 12\) by ₹ 16.44 crore](#) and overstatement of Income from Investments by the same amount.

C. General

C.1 As per the common format of accounts prescribed by the Ministry of Education (MoE), the Consultancy fee should be part of Schedule-9- Academic receipts and as per format, if the major activity of the entity is to provide consultancy services, such income should be part of Schedule-13 (Other income). Here, as consultancy service is not the major activity of the institute, consultancy fee should be placed under Schedule-9. This led to an [overstatement of \(other income Schedule-13\) and an understatement of Academic receipts \(Schedule-9\) by Rs 72.61 lakh](#)

C.2 Scrutiny of Bank Reconciliation Statement revealed that ₹30.85 lakh was received through various instruments/sources during April 1995 to March 2024 which were debited in Cash/Bank Books but were not credited in Bank till audit. The same needs to be reconciled.

C.3 As per Form 26 AS (Annual Tax Statement) for the year 2023-24, it was observed that [total amount of TDS was Rs. 1.53 crore](#) by agencies for whom, the Institute has provided services, where as in the Annual Account under the head [Current Assets Rs. 1.40 crore](#) has been booked in the accounts. The same needs to be reconciled.

C.4 Scrutiny of Annual Accounts of NIT Jamshedpur of FY 2023-24 revealed that an amount of ₹70.06 Lakh was paid to the Municipal Corporation in the nature of Property Taxes. As per the format of financial statements for Central Higher Educational Institutions such expenditure was to be shown as Infrastructure Expenses under the [Schedule -17 "Infrastructure Expenses](#) " but the same had wrongly been shown under the head "Other Expenses".

C.5 As per the uniform format for Central Higher Educational Institutions, provision for liability towards gratuity payable on death/retirement of employees, leave encashment and pension needs to be accounted for on an actuarial basis, and provided up to the year-end. Actuarial valuation as of 31st March is to be conducted every year. On scrutiny of the Annual Accounts of the National Institute of Technology (NIT) for the Year 2023-24 [Schedule-15-](#)

[Staff Payment & Benefits \(Establishment Expenses\)](#), it was noticed that the Institute had made provision for pension on cash basis instead of actuarial valuation which is in contravention of AS-15 and Uniform Format of Accounts.

C.6 As per Schedule-8- Loans, Advance & Deposits, [advances amounting to ₹4.05 crores \(₹2.91 crores out of Capital Fund and ₹1.14 crore out of Revenue Fund\)](#) given to supplier agencies and Staff had been lying outstanding for periods more than one year.

The Institute did not take action to recover these advances from the employees and suppliers/Contractors. Though the audit appreciates the effort taken by the Institute to adjust the old and pending advances of ₹ 1.94 crore (Capital ₹ 1.39 crore and Revenue ₹ 0.55 crore.) it should put in efforts to realise/adjust the outstanding advances.

D. Grants-in-Aid

The National Institute of Technology, Jamshedpur received Grants-in-Aid of ₹ 141.19 crore ([Capital ₹ 17.55 crore and Revenue ₹ 123.64 crore](#)) from the Government of India during the year 2023-24. The unspent balance of the previous year was ₹ 14.09 crore {[capital ₹10.28 crore and revenue ₹ 3.81 crore](#) }. Thus, the fund available with the Institute was ₹155.28 crore (Capital 27.83 crore and Revenue ₹127.45 crore). Out of which the Institute utilized a sum of ₹ 133.21 crore {[Capital ₹ 9.57 crore and Revenue ₹ 123.64 crore](#)} during the year, leaving a balance of ₹22.07 crore (Capital ₹ 18.26 crore and Revenue ₹3.81 crore) as unutilized balance as on 31.03.2024. However, the Institute showed a balance of ₹ 0.0001 crore in Capital and ₹ 0.0003 crore in Revenue, which was returned to the Ministry through PFMS at the end of the year.

(v) Subject to our observations in the preceding paragraphs, we report that the Balance Sheet and Income & Expenditure Account and Receipts & Payments Account dealt with by this report are in agreement with the books of accounts.

(vi) In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read together with the Accounting Policies and Notes on Accounts, and subject to the significant matters stated above and other matters mentioned in the annexure to this Audit Report give a true and fair view in conformity with accounting principles generally accepted in India.

(a) In so far as it relates to the Balance Sheet, of the state of affairs of the NIT, Jamshedpur as at 31stMarch 2024, and

(b) In so far as it relates to Income and Expenditure Account of the Surplus for the year ended on that date.

For and on behalf of the C&AG of India

Place: Lucknow

Dated: .09.2024

Principal Director of Audit (Central)

Annexure

1. Adequacy of Internal Audit.

The Institute has its own Internal Audit wing and Internal Audit Manual. Pre-check of transactions are being done and Pre-transaction check and files are being scrutinised by the Internal Auditors before obtaining approval of the competent authority. The internal audit of the Institute was also carried out by a Chartered Accountant firm.

2. Adequacy of Internal Control System:-

During the course of audit of NIT, Jamshedpur, we noticed that The Internal Control System reflects following deficiencies.

- i) The Institute does not have its own Accounting Manual and Office Procedure Manual.
- ii) The Institute did not take confirmation of Debtors/Loan & Advances from the respective parties.

3. Physical verification of fixed assets and inventor

The Institute had conducted physical verification of assets and inventory through a committee during the year.

4. Irregularity in payment of statutory dues.

The Institute was regular in payment of statutory dues.

Director (CRA)

**NATIONAL INSTITUTE OF TECHNOLOGY
JAMSHEDPUR – 831014**



**ANNUAL ACCOUNT
FOR THE
FINANCIAL YEAR 2023-24**

TABLE OF CONTENT

<i>SL NO.</i>	<i>CONTENT</i>	<i>Page No.</i>
1	BALANCE SHEET	1
2	INCOME AND EXPENDITURE ACCOUNT	2
3	SCHEDULE 1 - CORPUS/CAPITAL FUND	3
4	SCHEDULE 2 - DESIGNATED / EARMARKED / ENDOWMENT FUNDS	
5	A. Staff Development Fund	
6	B. Maintenance fund	
7	C. Depreciation fund	4
8	D. Institute Dev. Fund	
9	E. Endowment Fund	
10	SCHEDULE 2 (i) - CAPITAL GRANTS & LOANS	
11	A. Research Account	
12	B. Out side Account	5
13	C. Loan from HEFA	
14	SCHEDULE 3 - CURRENT LIABILITIES & PROVISIONS	
15	1. CURRENT LIABILITIES:	
16	A. Scholarship	
17	B. Balance on CGI A/c	
18	C. Student Funds and others	6
19	D. Sundry Deposits (Debt & Deposit)	
20	E. Statutory Payable	
21	F. Others Payables	
22	G. Gratuity Payable	
23	H. Leave Encashment Payable	
24	I. Mess Advance	
25	J. Sundry Creditors	
26	B. PROVISION	7
27	C. Unutilised Grant Refundable to MoE	
28	(a) Plant Grant	
29	(b) Revenue Grant	
30	D. Short-Term Course/Workshop Fund	
31	SCHEDULE 3A - SPONSORED PROJECT (SCHEME GRANTS)	8&9
32	SCHEDULE 4 - FIXED ASSETS (up to 31.03.2014 for which assets register not maintained)	10
33	SCHEDULE 4(i) - FIXED ASSETS (Plan/ TEQIP)	11
34	SCHEDULE 4(i)A - FIXED ASSETS (Plan)	12
35	SCHEDULE 4(i)B - FIXED ASSETS OTHERS (TEQIP)	13
36	SCHEDULE 5 - INVESTMENTS	
37	SCHEDULE 6 - INVESTMENTS- OTHERS	
38	SCHEDULE –7 Current Assets	
39	A. Bank balance with schedule bank	14
40	B. Accrued Income	
41	C. T.D.S. Recoverable from I.T. Dept.	
42	E. Fixed Deposits (Current Assets)	
43	F. Other Receivables (Current Assets)	15
44	SCHEDULE 8 - LOANS, ADVANCES & DEPOSITS	
45	A. Advances	16
46	SCHEDULE 9 - ACADEMIC RECEIPTS	
47	A. Academic	
48	B. Examinations	17

SL NO.	CONTENT	Page No.
49	C. Other Fee	
50	SCHEDULE 10 - GRANTS/SUBSIDIES (IRREVOCABLE GRANTS RECEIVED)	
51	SCHEDULE 11 - INCOME FROM INVESTMENTS	18
52	SCHEDULE 12 - INTEREST EARNED	
53	SCHEDULE 13 - OTHER INCOME	
54	A. Income from Land and Building	19
55	B. Others	
56	SCHEDULE 14 - PRIOR PERIOD INCOME	20
57	SCHEDULE 15 - STAFF PAYMENTS & BENEFITS (Establishment Expenses)	
58	SCHEDULE 16 - ACADEMIC EXPENSES	21
59	SCHEDULE 17 - ADMINISTRATIVE AND GENERAL EXPENSES	22
60	A. Infrastructure	
61	B. Departmental Operating Cost	
62	C. Communication	
63	D. Advertisement and Publicity	
64	E. Legal Expenses	
65	F. Others	
66	SCHEDULE 18 - TRANSPORTATION EXPENSES	23
67	SCHEDULE 19 - REPAIRS AND MAINTENANCE	
68	SCHEDULE 20 - FINANCE COST	
69	SCHEDULE 21 - OTHER EXPENSES	
70	SCHEDULE 22 - PRIOR PERIOD EXPENDITURE	
71	SCHEDULE 23 - SIGNIFICANT ACCOUNTING POLICIES	24 & 25
72	SCHEDULE 24 - CONTINGENT LIABILITIES AND NOTES OF ACCOUNTS	26 to 29
73	Receipt & Payment Account	30
74	GPF Balance sheet	31
75	GPF Income & Expenditure A/c	32
76	GPF Receipt & Payment Account	33

NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR
BALANCE SHEET as on 31st March 2024

(Amount in Rupees)

SOURCES OF FUNDS	Schedule	Current Year 2023-24	Previous Year 2022-23
CORPUS / CAPITAL FUND	01	6,39,17,40,586.48	5,86,46,38,051.59
DESIGNATED/EARMARKED/ ENDOWMENT FUNDS	02	16,14,73,789.58	15,55,53,534.58
CAPITAL GRANTS/LOANS	02(i)	79,13,57,196.78	69,96,22,831.78
CURRENT LIABILITIES & PROVISIONS	3&3A	88,79,72,286.82	81,76,85,671.68
TOTAL		8,23,25,43,859.66	7,53,75,00,089.63

APPLICATION OF FUNDS	Schedule	Current Year 2023-24	Previous Year 2022-23
FIXED ASSETS	04		
a. Fixed Assets acquired upto 31.03.2014		11,66,08,702.30	12,39,11,026.30
b. Fixed Assets acquired after 31.03.2014			
Tangible Assets		2,82,88,95,932.69	2,59,79,39,898.46
Intangible Assets		2,39,00,633.00	1,47,19,343.40
Capital Works-In-Progress		1,91,16,86,722.00	1,76,23,62,064.00
INVESTMENTS FROM EARMARKED/ENDOWMENT FUNDS	05	-	-
INVESTMENTS - OTHERS	06	-	-
CURRENT ASSETS	07	3,10,27,34,632.92	2,69,41,81,366.72
LOANS ADVANCES & DEPOSITS	08	24,87,17,236.75	34,43,86,390.75
TOTAL		8,23,25,43,859.66	7,53,75,00,089.63

SIGNIFICANT ACCOUNTING POLICIES 23

CONTINGENT LIABILITIES AND NOTES TO ACCOUNTS 24

S. Mishra
28/05/24
Accountant

S. K. Bhatnagar
28/05/24
Asst. Registrar (F/A)

[Signature]
28/05/24
Registrar

[Signature]
28.5.2024
Director



NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR
INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st MARCH 2024

(Amount in Rupees)

PARTICULARS	Schedule	Current Year 2023-24	Previous Year 2022-23
INCOME			
Academic Receipts	09	33,81,03,477.20	29,89,26,968.42
Grants / Subsidies	10	1,23,63,77,282.00	1,09,24,99,543.00
Income from Investments	11	16,74,42,167.10	8,03,68,512.80
Interest Earned	12	81,48,165.60	1,98,73,680.90
Other Income	13	8,01,75,570.80	6,95,55,284.40
Prior Period Income	14	-	-
TOTAL (A)		1,83,02,46,662.70	1,56,12,23,989.52
EXPENDITURE			
Staff Payments & Benefits (Establishment Expenses)	15	94,13,69,793.00	71,89,21,141.00
Academic Expenses	16	13,51,75,347.00	11,90,69,229.00
Administrative and General Expenses	17	9,57,74,424.00	8,47,43,500.00
Transportation Expenses	18	22,84,850.00	12,86,973.00
Repair and Maintenance	19	5,27,30,801.00	8,93,19,992.00
Finance Cost	20	3,59,33,694.89	4,63,38,148.27
Other Expenses	21	38.38	-
Prior Period Expenses	22	1,19,98,065.00	52,891.00
Depreciation	04&04(i)	13,41,07,271.18	11,19,74,143.82
Expenses from IRG	17	1,39,35,667.36	97,40,514.00
TOTAL (B)		1,42,33,09,951.81	1,18,14,46,532.09
Balance being Surplus / (Deficit) carried to Capital Fund		40,69,36,710.89	37,97,77,457.43

S. Mohd
28/03/24
Accountant

S. K. Bhatnagar
Asst. Registrar (F/A)

[Signature]
Registrar

[Signature]
28.03.2024
Director



SCHEDULES FORMING PART OF BALANCE SHEET

SCHEDULE 1 - CORPUS / CAPITAL FUND

Amount in Rupees

Particulars		Current Year 2023-24	Previous Year 2022-23
(A)	Corpus Fund		
	Balance at the beginning of the year	11,94,42,062.69	11,93,54,278.78
Add:	Interest earned on Corpus Fund	10,08,497.00	87,783.91
		12,04,50,559.69	11,94,42,062.69
(B)	Capital Fund		
	Balance at the beginning of the year	5,74,51,95,988.90	5,35,03,67,812.44
Add:	Cap-Grant to the extent utilized for Cap. Exp.	17,47,99,273.00	6,39,26,383.50
Add:	Assets Purchased out of TEQIP-III & Others fund	16,23,315.00	46,94,162.00
Add:	Income previously booked under Current Liabilities	-	2,01,02,357.00
Add:	Share of IRG from Testing & Consultancy	23,35,963.00	-
Less:	Project payment made fro IRG	-	-2,37,916.00
Less:	Excess Income booked in Previous Year (Interest Accrued)	-	-5,03,65,882.96
Less:	Amount wrongly booked in Income now rectified	-4,01,23,645.00	-54,18,651.00
Less:	Liability Amount wrongly booked in Income now rectified	-52,54,000.00	-28,130.00
Less:	Old Advances adjusted	-1,42,23,579.00	-1,29,57,101.51
Less:	Transferred to PDF & RDF	-	-8,39,867.00
Less:	Excess TDS booked in Previous Years now rectified	-	-38,24,635.00
		5,86,43,53,315.90	
Add:	Excess of Income over Expenditure	40,69,36,710.89	37,97,77,457.43
	TOTAL B	6,27,12,90,026.79	5,74,51,95,988.90
	GRAND TOTAL (A+B)	6,39,17,40,586.48	5,86,46,38,051.59
Less:	Deficit trf from the Income & Expenditure A/c	-	-
	Balance at the year end	6,39,17,40,586.48	5,86,46,38,051.59

S. N. D.
22/07/24
Accountant

S. K. P. Singh
Asst. Registrar (F/A)



SCHEDULE 2 - DESIGNATED / EARMARKED / ENDOWMENT FUNDS

(Amount in Rupees)

Particulars	Current Year 2023-24		Previous Year 2022-23	
	A. Staff Development Fund			
(i). Balance at the beginning of the year	49,24,950.00		47,87,610.00	
(ii). Add: Addition during the year	-		-	
(iii). Add: Interest on Saving Bank/FD A/c	2,37,975.00		1,37,340.00	
(iv). Less: Expenditure during the year	-	51,62,925.00	-	49,24,950.00
B. Maintenance fund				
(i). Balance at the beginning of the year	2,36,57,788.00		2,36,06,017.00	
(ii). Add: Addition during the year	-		-	
(iii). Add: Interest on Saving Bank/FD A/c	90,640.00		51,771.00	
(iv). Less: Expenditure during the year	-	2,37,48,428.00	-	2,36,57,788.00
C. Depreciation fund				
(i). Balance at the beginning of the year	27,42,297.00		27,42,297.00	
(ii). Add: Addition during the year	-		-	
(iii). Add: Interest on Saving Bank/FD A/c	-		-	
(iv). Less: Expenditure during the year	-	27,42,297.00	-	27,42,297.00
D. Institute Dev. Fund				
(i). Balance at the beginning of the year	12,41,02,389.58		11,81,24,058.58	
(ii). Add: Addition during the year	-		29,81,774.00	
(iii). Add: Interest on Saving Bank/FD A/c	55,91,640.00		29,96,557.00	
(iv). Less: Expenditure during the year	-	12,96,94,029.58	-	12,41,02,389.58
E. Endowment Fund				
(i). Balance at the beginning of the year	1,26,110.00		1,26,110.00	
(ii). Add: Addition during the year	-		-	
(iii). Add: Interest on Saving Bank/FD A/c	-		-	
(iv). Less: Expenditure during the year	-	1,26,110.00	-	1,26,110.00
TOTAL		16,14,73,789.58		15,55,53,534.58

S. N. D.
28/12/24
Accountant

S. K. B. S.
Asst. Registrar (F/A)



SCHEDULE 2(i) - CAPITAL GRANTS & LOANS

(Amount in Rupees)

SL.NO.	PARTICULARS	OP. BAL 01.04.2023	RECEIPT	EXPENDITURE	CL. BALANCE
(A)	RESEARCH ACCOUNT	98,520.48	-	-	98,520.48
	TOTAL: A	98,520.48	-	-	98,520.48
(B)	OUT SIDE ACCOUNT				
1	CEP (Continuous Education Prog) Receipt	1,58,79,196.30	12,11,580.00	-	1,70,90,776.30
2	TSG account closed and Balance trf to SAS	5,62,663.00	-	-	5,62,663.00
3	University examination account	47,69,923.00	-	-	47,69,923.00
4	Non-formal B.Sc. Engg. Account	1,10,83,593.00	-	-	1,10,83,593.00
5	Short term course account	89,156.00	-	-	89,156.00
6	Short term course continuing computer education	1,02,292.00	-	-	1,02,292.00
7	EDC / Mushroom	1,58,646.00	-	-	1,58,646.00
8	Pravah A/c closed and Balance trf to OJASS A/c	5,57,626.00	-	-	5,57,626.00
9	N.S.S	4,16,024.00	-	-	4,16,024.00
10	Common University Entrance Test (CUET) - 2022	1,21,192.00	-	-	1,21,192.00
	TOTAL: B	3,37,40,311.30	12,11,580.00	-	3,49,51,891.30
(C)	LOAN ACCOUNT				
1	Loan From HEFA (old)	56,80,00,000.00	65,64,856.00	9,80,00,000.00	47,65,64,856.00
2	Loan From HEFA (G+5 Boys Hostel)	9,77,84,000.00	27,29,57,929.00	9,10,00,000.00	27,97,41,929.00
	TOTAL: C	66,57,84,000.00	27,95,22,785.00	18,90,00,000.00	75,63,06,785.00
	GRAND TOTAL (A+B+C)	69,96,22,831.78	28,07,34,365.00	18,90,00,000.00	79,13,57,196.78

S. N. Singh
28/07/24
Accountant

S. K. Patra
Asst. Registrar (F/A)



SCHEDULE 3 - CURRENT LIABILITIES & PROVISIONS

Particulars		Current Year 2023-24		Previous Year 2022-23
A. Current Liabilities				
(a) Scholarship	1,74,65,143.56	1,74,65,143.56	1,76,75,040.56	1,76,75,040.56
(b) Balance on CGI A/c	4,65,800.00	4,65,800.00	4,53,406.00	4,53,406.00
(c) Student Funds and others				
(i) Hall account				
Balance as per last year account	12,80,65,692.20		12,17,37,692.20	
Add: Receipt during 2022-23	2,59,25,000.00		3,89,76,667.00	
Less: Transfer to Hostel account for Exp	-3,13,11,000.00		-3,26,48,667.00	
	12,26,79,692.20		12,80,65,692.20	
(ii) Gymkhana account				
Balance as per last year account	5,97,79,125.25		4,28,45,086.25	
Add: Receipt during 2022-23	2,24,57,033.00		2,26,55,114.00	
Less: Transfer to SAS account for Exp	-2,70,73,500.00		-57,21,075.00	
	5,51,62,658.25		5,97,79,125.25	
Total (d)		17,78,42,350.45		18,78,44,817.45
(d) Sundry Deposits (Debt & Deposit)				
(i) Caution money payable	6,25,62,646.00		5,50,38,846.00	
(ii) Group saving link scheme (GSLI)	73,450.46		77,130.46	
(iii) PBG Deposit of M/s EHA SHIVAM TECHNOLOGY	79,212.00		79,212.00	
(iv) Earnest money deposits	30,88,175.55		7,64,895.55	
(v) Alumni account	1,82,45,305.37		1,59,16,805.37	
(vi) JREDA	6,46,625.00		6,46,625.00	
(vii) Security Deposits	5,16,700.00		5,07,500.00	
(viii) Dept hospitality fund	30,569.00		30,569.00	
(ix) Employees welfare fund	15,464.00		14,304.00	
(x) Professional Development Fund	29,77,967.50		25,57,804.00	
(xi) Research & Development Fund	24,76,108.50		21,45,063.00	
(xii) Retention Money	12,89,580.00		2,17,667.00	
(xiii) Mr. A. K. Shaw	10,000.00		10,000.00	
(xiv) Subarnarekha Canal Division Ghatsila	26.00		62,000.00	
(xv) M/s Buland Infra	24,780.00		-	
(xvi) M/S L.K. Builders	47,200.00		-	
(xvii) M/s Outlook Design Heed Consultants Pvt. Ltd	16,000.00		-	
(xviii) M/S Satsang Kendra Adardih	1,05,610.00		-	
(xix) M/S Surajmal Onkarmal	70,800.00		-	
(xx) Tata Steel Utilities and Infrastructure Services Lt	13,452.00		-	
(xxi) U.P. Project Corp Ltd	62,300.00		-	
(xxii) PBG Deposit of M/s Inkarp Instrument P. Ltd.	4,725.00		4,725.00	
(xxiii) Excess Fee (Liabilities)	1,35,61,827.00		72,82,681.00	
(xxiv) Night Canteen	-		32,062.00	
(xxv) Kew Construction	23,600.00		23,600.00	
(xxvi) M/s Shah Jahan Metals	-		1,85,001.00	
(xxvii) M/s Speadbye Digital P. Ltd.	240.00		-	
(xxviii) Other Deposits	1,03,80,909.91		1,23,20,062.20	
Total (e)		11,63,23,273.29		9,79,16,552.58
(e) Statutory Payable				
(i) PF subscription	14,60,431.00		11,08,500.00	
(ii) NPS subscription	19,85,304.00		17,77,951.00	
(iii) PF loan	-		-	
(iv) TDS payable	81,61,744.57		88,39,019.57	
(v) LIC claim received payable to to Emp	3,19,387.00		3,55,702.00	
(vi) LIC premium extra recovery				
(vii) Professional tax	416.00		63,455.00	
(viii) GST Payable				
CGST	1,23,207.96		91,690.01	
SGST	1,23,207.96		91,690.01	
IGST	81,590.50		1,12,589.98	
(ix) TDS Under GST Scheme (CGST)	2,82,870.50		1,07,979.00	
(x) TDS Under GST Scheme (IGST)	1,55,578.00		65,647.00	
(xi) TDS Under GST Scheme (SGST)	2,82,870.50		1,07,979.00	
Total (f)		1,29,76,607.99		1,27,22,202.57
(f) Others Payables				
(i) Medicare Scheme Receipts (Students)	3,36,310.00		3,36,310.00	
(ii) TCC Soceity	29,84,505.00		28,17,730.00	
(iii) Payable to Student (CCMT & CCMN -2021)	50,000.00		50,000.00	
(iv) Payable to Student (CSAB - 2023)	4,96,000.00		-	
(v) Payable to Student (Nimcet - 2023)	70,000.00		-	
(vi) Payable to Student (CCMN - 2023)	40,000.00		-	
(vii) Income Tax Share of NIMCET (FY 2022-23)	71,112.00		-	
(viii) Innovation Project Fee	82,88,000.00		-	
(ix) Interest on Project	20,68,948.00		16,16,234.00	
(x) Fellowship of Ms. Ayesha Alice Mundi	1,591.00		1,30,000.00	
(xi) Smt. Mini Majhi W/o Late Biram Majhi	10,000.00		10,000.00	
Total (g)		1,44,16,466.00		49,60,274.00



S. N. Agrawal
28/5/23
Accountant

S. N. Agrawal
28/5/23
Asst. Registrar (F/A)

Particulars		Current Year 2023-24		Previous Year 2022-23
Particulars		Current Year 2023-24		Previous Year 2022-23
(g) Gratuity Payable	5,68,717.00	5,68,717.00	5,68,717.00	5,68,717.00
(h) Leave Encashment Payable	10,37,661.00	10,37,661.00	14,65,831.00	14,65,831.00
(i) Mess Advance	-	-	1,28,000.00	1,28,000.00
(j) Sundry Creditors				
(i) Eureka Forbes Ltd.	16,128.00		-	
(ii) Del Star Marketing	29,840.00		29,840.00	
(iii) Jusco Limited	99,002.00		99,002.00	
(iv) Technocom	25,960.00		25,960.00	
(v) Atos IT Solution	9,998.00		-	
(vi) Jagdamba Enterprises	18,000.00		-	
(vii) Veekay Industries	600.00		-	
(viii) Bhushan Power and Steel LTD	4,50,000.00		-	
(ix) C2S Project PFMS A/c	3,22,494.00		-	
(x) F.I.C Guest House	-		34,400.00	
Total (j)		9,72,022.00		1,89,202.00
TOTAL (A)		34,20,68,041.29		32,39,24,043.16
B. Provisions:				
(i) Arrear of Pension & Family Pension	4,44,65,307.00		4,44,65,307.00	
(ii) Electricity Charges Payable	-		-	
(iii) Pension payable	1,44,68,110.00		1,32,44,055.00	
(iv) Provision for Contribution to New Pension Scheme	25,76,658.00		24,64,419.00	
(v) Salary Payable	3,60,01,739.00		3,43,66,449.00	
(vi) Security & Other Charges Payable	-		-	
(vii) Stipend to PG, Ph.D. & Other Students Payable	1,86,000.00		1,86,000.00	
(viii) Fee Waiver payable to Students	-		3,95,830.00	
(ix) Provision for Gratuity (Actuarial)	21,70,25,885.00		18,36,09,982.00	
(x) Provision for Leave Encashment (Actuarial)	18,07,61,167.00		17,36,21,912.00	
TOTAL (B)		49,54,84,866.00		45,23,53,954.00
C. Unutilised Grant Refundable to MoE:				
(a) Plant Grant				
Balance at the beginning of the year	-		34,228.50	
Add: Capital Grant Receive during the Year	17,55,00,000.00		11,54,00,000.00	
Less: Payment to NIT Transit House	-7,00,000.00		-3,50,000.00	
Less: Payment for Capital Assets	-17,47,99,273.00	727.00	-6,39,26,383.50	5,11,57,845.00
Less: Balance Grant Returned Back		-727.00		-5,11,57,845.00
Total (a)				
(b) Revenue Grant				
Balance at the beginning of the year	-		-	
Add: Revenue Grant Received during Year	1,23,63,80,028.00		1,09,27,73,583.00	
Less: Revenue Expenditure	-1,23,63,77,282.00		-1,09,24,99,543.00	
Less: Revenue Grant Returned Back	-2,746.00		-2,74,040.00	
Total (b)				
TOTAL (C)				
D. Short-Term Course/Workshop Fund				
(i) AICTE Sponsored ATAL Workshop	5,000.00		5,000.00	
(ii) FDP on CAWRM (Dr. Sangeeta Kumari)	6,247.00		6,247.00	
(iii) Technica	-		98,000.00	
(iv) AMBMS-2021	49,000.00		49,000.00	
(v) SERB Karyashala (Dr. Koushendra Kr. Singh)	684.00		684.00	
(vi) Brainstorming Session on ASR (Dr. R. Prasad)	7,050.00		7,050.00	
(vii) ICPESD-2022 (Dr. Ananyo Bhattacharya)	1,102.00		14,590.00	
(viii) Internation ISTTP (Dr. Jitndr, Rghvendr, Omhari)	25,219.00		25,219.00	
(ix) NCSGE-2022 (Dr. Awadhesh, Keshav,S.Madhuri)	1,31,535.00		2,44,000.00	
(x) STC_Emerging Applications of AI and IoT	3,100.00		27,100.00	
(xi) ICSEAPT-2021	1,22,029.00		1,22,029.00	
(xii) Indo-European Conference 2023	-		3,00,000.00	
(xiii) EPREC 2023	1,96,967.00			
(xiv) Karyashala PI Dr. Mrinal Kanti Sarkar	5,00,000.00			
(xv) Registration Fee for SMPS Workshop Under Dr. Mrinal	6,192.00			
(xvi) ROTW 2023 Workshop	29,840.00			
(xvii) Short Term Course(LATEX 2024) PI. Dr. Sourav Das	70,500.00			
(xviii) Vriika Under PI Dr. Dinesh Kumar (CSE)	1,50,000.00			
(xix) Vritika Under PI Dr. Jitesh Kumar	1,50,000.00			
(xx) Vritika Under PI Dr. Satish Kumar	1,50,000.00			
(xxi) Workshop Under Meity Sponsored PI Dr. Amit Prakash	19,400.00			
(xxii) Industry Academia Conclave 2023	9,28,798.00			
TOTAL (D)		25,52,663.00		8,98,919.00
GRAND TOTAL (A+B+C+D)		84,01,05,570.29		77,71,76,916.16



S. Meind
28/1/24
Accountant

S. K. R. Singh
Asst. Registrar (F/A)

SCHEDULE 3A - SPONSORED PROJECT (SCHEME GRANTS)

(Amount in Rupees)

SL.N O.	PARTICULARS	OP. BAL 01.04.2023	RECEIPT	EXPENDITURE	CL. BALANCE
(A)	SPONSORED PROJECT (SCHEME GRANTS)				
1	Modernization of Laboratories	26,01,229.10			26,01,229.10
2	Net Work Scheme	3,78,940.35			3,78,940.35
3	Area of Weakness	23,24,492.74			23,24,492.74
4	Emerging Technology	65,269.31			65,269.31
5	A I C T E	6,89,802.14			6,89,802.14
6	Programme for New/Improve Technology	1,65,223.43			1,65,223.43
7	Instrumentation Cell	1,75,000.00			1,75,000.00
8	Research Centre on Piezo Electro. Composite materials	2,253.20			2,253.20
9	I. I. I. Cell	69,169.86			69,169.86
10	UNESE	6,319.73			6,319.73
11	Center of Excellence Less Recurring Exp.	2,18,88,957.88			2,18,88,957.88
12	Geology Project	47,224.78			47,224.78
13	V.L.S.I.	1,84,987.00			1,84,987.00
14	TGAS Scheme	1,50,000.00			1,50,000.00
15	SERC (DST) Project Mathematics (Sunil Kumar)	13,559.00			13,559.00
16	SERB Black Carbon Project (Dr. Balram Ambade)-Tapan	1,25,473.00			1,25,473.00
17	SERB DST Project of Raj Nandkeolyar(ECR/2017/118)	2,20,000.00		41,452.00	1,78,548.00
18	IITG TIH Project of Vijay Kumar Dalla	-	5,00,000.00		5,00,000.00
19	SERB Project of Dr. Subrata Dutta	-	2,88,000.00		2,88,000.00
20	TIHAN IITH Project of Vijay Kumar Dalla	-	5,75,000.00		5,75,000.00
21	MHRD Project of Dr. Manish Kumar Jha	10,119.00			10,119.00
22	RCL_UBA Project of Dr. Ranjit Prasad	9,35,134.00		9,00,094.00	35,040.00
23	SERB-CRG Project of Dr. Sanjay & Dr. MA Hassan	43,470.00			43,470.00
24	SERB -DST Project of Dr. Dulari Hansdah (Mech)	3,03,452.00		69,500.00	2,33,952.00
25	C2S Project PFMS A/c	-	8,28,500.00	8,28,500.00	-
26	Dst Fist Project. PI Dr. Raj Nandkeolyar	-	63,00,000.00	63,00,000.00	-
27	DST INSPIRE FELLOW .PI Dr. Raj Nandkeolyar.	-	5,43,920.00	5,43,920.00	-
28	DST/NCSTC PROJECT PI Dr. Satish Kumar(6798A)	-	12,00,000.00	12,00,000.00	-
29	DST Project PI Dr. S. Madhuri (1819)	-	7,70,680.00	7,70,680.00	-
30	ESDP Programe Under Dr. Ram Krishna	-	2,40,000.00	2,40,000.00	-
31	ESDP Programe Under Dr. Tushar Banerjee	-	10,00,000.00	10,00,000.00	-
32	ESDP Program Under Dr. Surajit Kundu	-	8,00,000.00	8,00,000.00	-
33	Inspire Fellowship Ms. Shiwangini Singh PFMS A/c	-	4,58,960.00	4,58,960.00	-
34	ISRO PROJECT PI Dr. Kunal Singh.	-	2,99,473.00	2,99,473.00	-
35	MSME Champions Scheme (4116)	-	24,19,700.00	24,19,700.00	-
36	STARS PROJECT Pi DR. SUBHADEEP METYA	-	25,35,000.00	25,35,000.00	-
37	Unnat Bharat Abhiyan PI Dr. Shakti Prasad PFMS A/C	-	3,50,000.00	3,50,000.00	-

S. Madhuri
28/11/24
Accountant

S. K. Bhatnagar
Asst. Registrar (F/A)



(Amount in Rupees)

SL.N O.	PARTICULARS	OP. BAL 01.04.2023	RECEIPT	EXPENDITURE	CL. BALANCE
SL.N O.	PARTICULARS	OP. BAL 01.04.2023	RECEIPT	EXPENDITURE	CL. BALANCE
38	SERB Project of Dr. Ashok Kumar Mandal	2,032.00			2,032.00
39	SERB (DST) Project	5,76,713.00			5,76,713.00
40	DST Project of Dr. Ashok Kumar Mandal	9,75,017.00	50,673.00	4,12,952.00	6,12,738.00
41	DST-SERB Project of Dr. Satish Kumar	4,29,480.00	6,07,368.00	10,36,848.00	-
42	SERB Project of Dr. Neha Agnihotri	1,50,719.00	2,24,081.00	3,74,800.00	-
43	SERB Project of Dr. Prashant Kumar Dept of ECE	7,14,404.00		7,14,404.00	-
44	SERB Project of Dr. S N Singh	2,12,719.00		2,12,719.00	-
45	SERB Project of Dr. Somenath Mondal Dept of Civil	3,20,527.00	2,27,238.00	2,12,944.00	3,34,821.00
46	SERB Project of Dr. Tapas Das (EDCC)	1,97,094.00	3,02,862.00	4,99,956.00	-
47	SERB DST Project of Dr. Basudeba Behera	7,35,314.00		4,11,364.00	3,23,950.00
48	SERB DST Project of Dr. Moumita Mondal	16,71,810.00	3,46,301.00	3,62,422.00	16,55,689.00
49	AICTE IKS Research Project (Dr. Ashok Kr. Mandal)	6,81,081.00		2,89,368.00	3,91,713.00
50	Cars Project of Dr. Virendra Kr. Civil	2,50,000.00		1,15,584.00	1,34,416.00
51	DRDO NSTL_CARS Project - Dr. Prashant	6,13,008.00		5,45,569.00	67,439.00
52	DVC Project	8,26,000.00		1,39,637.00	6,86,363.00
53	MOE,DEP Higher Education of India (Dr. Manish Jha)	30,173.00	75,000.00	77,489.00	27,684.00
54	MSME Proeject of Dr. Deepak (DME)	2,10,000.00	25,111.00	56,177.00	1,78,934.00
55	MSME Project of Dr. B. Bhowmik (ECE)	1,37,200.00		14,004.00	1,23,196.00
56	PIGMENTS Project Swachta Pukare (Dr. Jayendra)	75,982.00		75,780.00	202.00
57	SERB Indo Asia Project_Dr. Satish Kumar (Dme)	5,52,000.00		2,23,587.00	3,28,413.00
58	Technology Customization Project UBA of Dr. Jayendr	11,466.00		4,153.00	7,313.00
59	Technology Development Project UBA of Dr. Jayendra	18,140.00		14,411.00	3,729.00
60	UBA Project (Dr. Sangita Kumari)	47,800.00		37,837.00	9,963.00
61	SERB CRG _Dr. Surajit Kundu	6,70,000.00	9,414.00	5,57,772.00	1,21,642.00
62	CPCB Nodal Officer Proj of Dr. Balram Ambde (Chem)	-	98,496.00	97,156.00	1,340.00
63	DRDO Proj of Dr. Sumit Kr Debnath (JRF-Vikash&Tapas	-	57,903.00	55,699.00	2,204.00
64	DST SERB Project PI Dr.Tapas Das	-	9,24,700.00	7,46,820.00	1,77,880.00
65	ICSSR Project 2023_Dr. Akansha Shukla	-	3,99,200.00	1,58,964.00	2,40,236.00
66	Indo-France Project_Dr. Sumit Kr Debnath _Math	-	14,23,770.00	5,00,841.00	9,22,929.00
67	Karyashala PI Dr. Rinku Kr. Gouda	-	5,00,000.00		5,00,000.00
68	Learning By Doing Project Under Mr.Ayush.	-	1,00,000.00	60,111.00	39,889.00
69	SERB CRG PROJECT 2023 PI Dr. Tapas Das.	-	21,31,600.00		21,31,600.00
70	SERB CRG PROJECT PI Dr. Tushar Banerjee	-	22,50,000.00	25,301.00	22,24,699.00
71	Serb Dst Project 2023 Under Dr. Shashank Pandey	-	6,78,088.00	3,99,847.00	2,78,241.00
72	SERB Project 2023 PI Dr. Balram Ambade	-	27,73,000.00	-	27,73,000.00
73	SERB Project PI Dr. Mrinal Kanti Sarkar	-	12,18,358.00	-	12,18,358.00
74	SERB SRG_Dr. G. Yoganjaneyulu_PIE	-	63,892.00	16,680.00	47,212.00
75	Short Term Emperical Project PI Dr . Dinesh K	-	3,75,000.00	2,58,752.00	1,16,248.00
76	SSAL PROJECT PI DR.SHWATI SUDHA	-	48,000.00		48,000.00
77	Texamin Project PI Dr. Surajit Kundu	-	14,53,356.00	6,47,456.00	8,05,900.00
TOTAL: A		4,05,08,755.52	3,54,72,644.00	2,81,14,683.00	4,78,66,716.52

S.N. Singh
Accountant

S.K. Patra
Asst. Registrar (F/A)



SCHEDULE 4 - FIXED ASSETS (Up to 31.03.2014)

Amounts in Rupees

S.No	ASSET HEADS	GROSS BLOCK					DEPRECIATION FOR THE YEAR 2023-24					NET BLOCK	
		OP. BAL 01.04.2023	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	DEPRECIATION FOR THE YEAR	DEDUCTIONS/ADJUSTMENTS	TOTAL DEPRECIATION	31.03.2024	31.03.2023	
1	Land	-	-	-	-	0.00%	-	-	-	-	-	-	-
2	Site Development	-	-	-	-	0.00%	-	-	-	-	-	-	-
3	Buildings	22,75,26,178.32	-	-	22,75,26,178.32	2.00%	11,93,54,328.00	43,13,388.00	-	-	12,36,67,726.00	10,38,58,452.32	10,81,71,850.32
4	Roads & Bridges	1,68,92,590.49	-	-	1,68,92,590.49	2.00%	1,01,00,800.00	3,37,852.00	-	-	1,04,38,652.00	64,53,938.49	67,91,790.49
5	Tubewells and Water Supply	1,88,170.75	-	-	1,88,170.75	2.00%	42,215.00	3,764.00	-	-	45,979.00	1,42,191.75	1,45,955.75
6	Sewerage & Drainage	-	-	-	-	2.00%	-	-	-	-	-	-	-
7	Electrical Installation & Equipment	2,20,23,036.76	-	-	2,20,23,036.76	5.00%	1,98,66,490.00	4,20,337.00	-	-	2,02,86,827.00	17,36,209.76	21,56,546.76
8	Plant & Machinery	1,73,24,159.67	-	-	1,73,24,159.67	5.00%	1,46,22,041.00	7,11,801.00	-	-	1,53,33,842.00	19,90,317.67	27,02,118.67
9	Scientific & Laboratory Equipment	7,78,71,212.87	-	-	7,78,71,212.87	8.00%	7,48,71,625.00	12,05,793.00	-	-	7,60,77,418.00	17,93,794.87	29,99,587.87
10	Office Equipment	45,61,320.29	-	-	45,61,320.29	7.50%	44,58,820.00	38,714.00	-	-	44,97,534.00	63,786.29	1,02,500.29
11	Audio Visual Equipment	41,11,764.67	-	-	41,11,764.67	7.50%	35,82,225.00	1,61,146.00	-	-	37,43,371.00	3,68,393.67	5,29,539.67
12	Computers & Peripherals	9,67,35,804.64	-	-	9,67,35,804.64	20.00%	9,67,35,804.64	-	-	-	9,67,35,804.64	-	-
13	Furniture Fixtures & Fittings	3,20,99,667.48	-	-	3,20,99,667.48	7.50%	3,17,88,531.00	1,09,519.00	-	-	3,18,98,050.00	2,01,617.48	3,11,136.48
14	Vehicles	40,50,745.47	-	-	40,50,745.47	10.00%	40,50,745.47	-	-	-	40,50,745.47	-	-
15	Lib. Books & Scientific Journals	2,18,22,193.96	-	-	2,18,22,193.96	10.00%	2,18,22,193.96	-	-	-	2,18,22,193.96	-	-
16	Small Value Assets	3,57,070.48	-	-	3,57,070.48	100.00%	3,57,070.48	-	-	-	3,57,070.48	-	-
17	Other Assets	1,58,620.84	-	-	1,58,620.84	100.00%	1,58,620.84	-	-	-	1,58,620.84	-	-
TOTAL (A)		52,57,22,536.69			52,57,22,536.69		40,18,11,510.39	73,02,324.00			40,91,13,834.39	11,66,08,702.30	12,39,11,026.30
18	Capital Work in Progress (B)												

S.NO	INTANGIBLE ASSETS	OP. BAL 01.04.2023	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	AMORTISATION FOR THE YEAR	DEDUCTIONS/ADJUSTMENTS	TOTAL AMORTIZATION/ADJUSTMENTS	31.03.2024	31.03.2023
19	Computer Software	1,97,09,578.00	-	-	1,97,09,578.00	40.00%	1,97,09,578.00	-	-	1,97,09,578.00	-	-
20	E-Journals	-	-	-	-	40.00%	-	-	-	-	-	-
21	Patents	-	-	-	-	9 YEARS	-	-	-	-	-	-
TOTAL (C)		1,97,09,578.00			1,97,09,578.00		1,97,09,578.00	73,02,324.00		1,97,09,578.00		
GRAND TOTAL (A+B+C)		54,54,32,114.69			54,54,32,114.69		42,15,21,088.39	73,02,324.00		42,88,23,412.39	11,66,08,702.30	12,39,11,026.30

S. N. S. P. T. M.
Accountant

S. K. S. P. T. M.
Asst. Registrar (F/A)



SCHEDULE 4(i) - FIXED ASSETS (Plan/ TEQIP)

S.No	ASSET HEADS	GROSS BLOCK					DEPRECIATION FOR THE YEAR 2023-24					NET BLOCK	
		OP. BAL 01.04.2023	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	DEPRECIATION FOR THE YEAR	DEDUCTIONS/ ADJUSTMENTS	TOTAL DEPRECIATION	31.03.2024	31.03.2023	
1	Land	21,13,47,700.00	-	-	21,13,47,700.00	0.00%	-	-	-	-	21,13,47,700.00	21,13,47,700.00	
2	Site Development	-	-	-	-	0.00%	-	-	-	-	-	-	
3	Buildings	2,03,66,32,302.00	24,69,30,917.00	-	2,28,35,63,219.00	2.00%	21,98,05,420.50	4,56,71,263.78	-	26,54,76,684.28	2,01,80,86,534.70	1,81,68,26,881.48	
4	Roads & Bridges	9,25,06,091.00	14,69,532.00	-	9,39,75,623.00	2.00%	94,03,295.22	18,79,512.82	-	1,12,82,808.04	8,26,92,814.96	8,31,02,795.78	
5	Tubewells and Water Supply	2,22,62,649.00	1,68,860.00	-	2,24,31,509.00	2.00%	24,75,816.88	4,48,630.18	-	29,24,447.06	1,95,07,061.94	1,97,86,832.12	
6	Sewerage & Drainage	2,54,23,508.00	-	-	2,54,23,508.00	2.00%	24,95,962.88	5,08,470.44	-	30,04,433.32	2,24,19,074.68	2,29,27,545.12	
7	Electrical Installation & Equipment	28,85,84,253.00	99,69,522.00	-	29,85,53,775.00	5.00%	3,57,39,067.05	1,49,27,688.75	-	5,06,66,755.80	24,78,87,019.20	25,28,45,185.95	
8	Plant & Machinery	1,54,06,985.00	-	-	1,54,06,985.00	5.00%	27,53,886.15	7,70,349.25	-	35,24,235.40	1,18,32,749.60	1,26,53,098.85	
9	Scientific & Laboratory Equipment	13,05,65,423.50	1,67,18,539.00	-	14,72,83,962.50	8.00%	4,73,74,208.92	1,17,82,716.80	-	5,91,56,925.72	8,81,27,036.78	8,31,91,214.58	
10	Office Equipment	33,52,599.00	14,89,531.00	-	48,42,130.00	7.50%	18,31,034.27	3,63,159.40	-	21,94,193.67	26,47,936.34	15,21,564.74	
11	Audio Visual Equipment	42,91,104.00	4,59,125.00	-	47,50,229.00	7.50%	12,24,923.93	3,56,267.08	-	15,81,191.01	31,59,038.00	30,66,180.07	
12	Computers & Peripherals	8,08,09,735.00	1,55,50,897.00	-	9,63,60,632.00	20.00%	6,17,35,427.40	1,13,24,988.20	-	7,30,60,415.60	2,33,30,216.40	1,90,74,307.60	
13	Furniture Fixtures & Fittings	9,93,93,957.00	74,43,222.00	-	10,68,37,179.00	7.50%	4,44,54,891.88	80,12,788.43	-	5,24,67,680.31	5,43,59,498.70	5,49,39,065.13	
14	Vehicles	35,81,553.00	-	-	35,81,553.00	10.00%	22,49,744.70	3,58,155.30	-	26,07,900.00	9,73,653.00	13,31,808.30	
15	Lib. Books & Scientific Journals	3,91,08,806.50	3,45,23,067.00	-	7,36,31,873.50	10.00%	2,37,83,087.75	73,63,187.35	-	3,11,46,275.10	4,24,85,598.40	1,53,25,718.75	
16	Small Value Assets	28,640.00	15,500.00	-	44,140.00	100.00%	28,640.00	15,500.00	-	44,140.00	-	-	
17	Other Assets	-	-	-	-	0.00%	-	-	-	-	-	-	
TOTAL (A)		3,05,32,95,306.00	33,47,38,712.00	-	3,38,80,34,018.00		45,53,55,407.52	10,37,82,677.78	-	55,91,38,085.30	2,82,88,95,932.69	2,59,79,39,898.46	
18	Capital Work In Progress (B)	1,76,23,62,064.00	40,24,79,027.00	25,31,54,369.00	1,91,16,86,722.00		-	-	-	-	1,91,16,86,722.00	1,76,23,62,064.00	

S.NO	INTANGIBLE ASSETS	OP. BAL 01.04.2023	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	AMORTISATION FOR THE YEAR	DEDUCTIONS/ ADJUSTMENTS	TOTAL AMORTIZATION/ ADJUSTMENTS	31.03.2024	31.03.2023
19	Computer Software	2,07,13,096.00	21,07,330.00	-	2,28,20,426.00	40.00%	1,83,35,108.20	27,56,207.40	-	2,10,91,315.60	17,29,110.40	23,77,987.80
20	E-Journals	2,46,57,995.00	3,00,96,229.00	-	5,47,54,224.00	40.00%	1,23,16,639.40	2,02,66,062.00	-	3,25,82,701.40	2,21,71,522.60	1,23,41,355.60
21	Patents	-	-	-	-	9 YEARS	-	-	-	-	-	-
TOTAL (C)		4,53,71,091.00	3,22,03,559.00	-	7,75,74,650.00		3,06,51,747.60	2,30,22,269.40	-	5,36,74,017.00	2,39,00,633.00	1,47,19,343.40
GRAND TOTAL (A+B+C)		4,86,10,28,481.00	76,94,21,298.00	25,31,54,369.00	5,37,72,95,390.00		48,60,07,155.12	12,68,04,947.18	-	61,28,12,102.30	4,76,44,83,287.69	4,37,50,21,305.86

S. K. B. D. S. Accountant



S. K. B. D. S. Asst. Registrar (F/A)

SCHEDULE 4(i)A - FIXED ASSETS (Plan)

Amounts in Rupees

S.NO	ASSET HEADS	GROSS BLOCK					DEPRECIATION FOR THE YEAR 2023-24					NET BLOCK	
		OP. BAL 01.04.2023	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	DEPRECIATION FOR THE YEAR	DEDUCTIONS/ADJUSTMENTS	TOTAL DEPRECIATION	31.03.2024	31.03.2023	
1	Land	21,13,47,700.00	-	-	21,13,47,700.00	0.00%	-	-	-	-	21,13,47,700.00	21,13,47,700.00	
2	Site Development	-	-	-	-	0.00%	-	-	-	-	-	-	
3	Buildings	2,03,66,32,302.00	24,69,30,917.00	-	2,28,35,63,219.00	2.00%	21,98,05,420.50	4,56,71,263.78	-	26,54,76,684.28	2,01,80,86,534.72	1,81,68,26,881.50	
4	Roads & Bridges	9,25,06,091.00	14,69,532.00	-	9,39,75,623.00	2.00%	94,03,295.22	18,79,512.82	-	1,12,82,808.04	8,26,92,814.96	8,31,02,795.78	
5	Tubewells and Water Supply	2,16,21,367.00	1,68,860.00	-	2,17,90,227.00	2.00%	24,62,991.24	4,35,804.54	-	28,98,795.78	1,88,91,431.22	1,91,58,375.76	
6	Sewerage & Drainage	2,54,23,508.00	-	-	2,54,23,508.00	2.00%	24,95,962.88	5,08,470.44	-	30,04,433.32	2,24,19,074.68	2,29,27,545.12	
7	Electrical Installation & Equipment	28,84,40,267.00	99,69,522.00	-	29,84,09,789.00	5.00%	3,57,17,469.15	1,49,20,489.45	-	5,06,37,958.60	24,77,71,830.40	25,27,22,797.85	
8	Plant & Machinery	90,39,861.00	-	-	90,39,861.00	5.00%	15,68,501.35	4,51,993.05	-	20,20,494.40	70,19,366.60	74,71,359.65	
9	Scientific & Laboratory Equipment	5,47,84,063.50	1,56,50,524.00	-	7,04,34,587.50	8.00%	89,20,324.60	56,34,767.00	-	1,45,55,091.60	5,58,79,495.90	4,58,63,738.90	
10	Office Equipment	12,45,901.00	12,31,073.00	-	24,76,974.00	7.50%	4,09,013.12	1,85,773.05	-	5,94,786.17	18,82,187.84	8,36,887.89	
11	Audio Visual Equipment	32,97,104.00	3,82,177.00	-	36,79,281.00	7.50%	10,75,823.93	2,75,946.08	-	13,51,770.01	23,27,511.00	22,21,280.07	
12	Computers & Peripherals	6,69,46,203.00	1,53,31,003.00	-	8,22,77,206.00	20.00%	5,05,60,472.20	1,00,93,800.80	-	6,06,54,273.00	2,16,22,933.00	1,63,85,730.80	
13	Furniture Fixtures & Fittings	9,54,74,298.00	74,43,222.00	-	10,29,17,520.00	7.50%	4,20,02,285.13	77,18,814.00	-	4,97,21,099.13	5,31,96,420.87	5,34,72,012.87	
14	Vehicles	35,81,553.00	-	-	35,81,553.00	10.00%	22,49,744.70	3,58,155.30	-	26,07,900.00	9,73,653.00	13,31,808.30	
15	Lib. Books & Scientific Journals	3,91,08,806.50	3,45,23,067.00	-	7,36,31,873.50	10.00%	2,37,83,087.75	73,63,187.35	-	3,11,46,275.10	4,24,85,598.40	1,53,25,718.75	
16	Small Value Assets	28,640.00	15,500.00	-	44,140.00	100.00%	28,640.00	15,500.00	-	44,140.00	-	-	
17	Other Assets	-	-	-	-	0.00%	-	-	-	-	-	-	
	TOTAL (A)	2,94,94,77,665.00	33,31,15,397.00	-	3,28,25,93,062.00		40,04,83,031.77	9,55,13,477.66	-	49,59,96,509.42	2,78,65,96,552.58	2,54,89,94,633.24	
18	Capital Work In Progress (B)	1,76,23,62,064.00	40,24,79,027.00	25,31,54,369.00	1,91,16,86,722.00	-	-	-	-	-	1,91,16,86,722.00	1,76,23,62,064.00	

S.NO	INTANGIBLE ASSETS	GROSS BLOCK					DEPRECIATION FOR THE YEAR 2023-24					NET BLOCK	
		OP. BAL 01.04.2023	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	AMORTISATION FOR THE YEAR	DEDUCTIONS/ADJUSTMENTS	TOTAL AMORTIZATION/ADJUSTMENTS	31.03.2024	31.03.2023	
19	Computer Software	1,24,77,093.00	21,07,330.00	-	1,45,84,423.00	40.00%	1,01,18,335.60	27,36,977.00	-	1,28,55,312.60	17,29,110.40	23,58,757.40	
20	E-Journals	2,46,57,995.00	3,00,96,229.00	-	5,47,54,224.00	40.00%	1,23,16,639.40	2,02,66,062.00	-	3,25,82,701.40	2,27,71,522.60	1,23,41,355.60	
21	Patents	-	-	-	-	9 YEARS	-	-	-	-	-	-	
	TOTAL (C)	3,71,35,088.00	3,22,03,559.00	-	6,93,38,647.00		2,24,34,975.00	2,30,03,039.00	-	4,54,38,014.00	2,39,00,633.00	1,47,00,113.00	
	GRAND TOTAL (A+B+C)	4,74,89,74,817.00	76,77,97,983.00	25,31,54,369.00	5,26,36,18,431.00		42,29,18,006.77	11,85,16,516.66	0.00	54,14,34,523.42	4,72,21,83,907.58	4,32,60,56,810.24	

Singhania
Accountant



S.K. Singh
Asst. Registrar (F/A)

SCHEDULE 4(i)B - FIXED ASSETS OTHERS (TEQIP/Projects/Others)

Amounts in Rupees

S.NO	ASSET HEADS	GROSS BLOCK					DEPRECIATION FOR THE YEAR 2023-24					NET BLOCK	
		OP. BAL 01.04.2023	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	DEPRECIATION FOR THE YEAR	DEDUCTIONS/ ADJUSTMENTS	TOTAL DEPRECIATION	31.03.2024	31.03.2023	
1	Land	-	-	-	-	0.00%	-	-	-	-	-	-	-
2	Site Development	-	-	-	-	0.00%	-	-	-	-	-	-	-
3	Buildings	-	-	-	-	2.00%	-	-	-	-	-	-	-
4	Roads & Bridges	-	-	-	-	2.00%	-	-	-	-	-	-	-
5	Tubewells and Water Supply	6,41,282.00	-	-	6,41,282.00	2.00%	12,825.64	12,825.64	-	25,651.28	6,15,630.72	6,28,456.36	
6	Sewerage & Drainage	-	-	-	-	2.00%	-	-	-	-	-	-	
7	Electrical Installation & Equipment	1,43,986.00	-	-	1,43,986.00	5.00%	21,597.90	7,199.30	-	28,797.20	1,15,188.80	1,22,388.10	
8	Plant & Machinery	63,67,124.00	-	-	63,67,124.00	5.00%	11,85,384.80	3,18,356.20	-	15,03,741.00	48,63,383.00	51,81,739.20	
9	Scientific & Laboratory Equipment	7,57,81,360.00	10,68,015.00	-	7,68,49,375.00	8.00%	3,84,53,884.32	61,47,949.80	-	4,46,01,834.12	3,22,47,540.88	3,73,27,475.68	
10	Office Equipment	21,06,698.00	2,58,458.00	-	23,65,156.00	7.50%	14,22,021.15	1,77,386.35	-	15,99,407.50	7,65,748.50	6,84,676.85	
11	Audio Visual Equipment	9,94,000.00	76,948.00	-	10,70,948.00	7.50%	1,49,100.00	80,321.00	-	2,29,421.00	8,41,527.00	8,44,900.00	
12	Computers & Peripherals	1,38,63,532.00	2,19,894.00	-	1,40,83,426.00	20.00%	1,11,74,955.20	12,31,187.40	-	1,24,06,142.60	16,77,283.40	26,88,576.80	
13	Furniture Fixtures & Fittings	39,19,659.00	-	-	39,19,659.00	7.50%	24,52,606.75	2,93,974.43	-	27,46,581.18	11,73,077.83	14,67,052.26	
14	Vehicles	-	-	-	-	10.00%	-	-	-	-	-	-	
15	Lib. Books & Scientific Journals	-	-	-	-	10.00%	-	-	-	-	-	-	
16	Small Value Assets	-	-	-	-	100.00%	-	-	-	-	-	-	
17	Other Assets	-	-	-	-	0.00%	-	-	-	-	-	-	
TOTAL (A)		10,38,17,641.00	16,23,315.00		10,54,40,956.00		5,48,72,375.76	82,69,200.12		6,31,41,575.88	4,22,99,380.13	4,89,45,265.25	

18	Capital Work in Progress (B)	-	-	-	-	-	-	-	-	-	-	-
----	------------------------------	---	---	---	---	---	---	---	---	---	---	---

S.NO	INTANGIBLE ASSETS	OP. BAL 01.04.2023	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	AMORTISATION FOR THE YEAR	DEDUCTIONS/ ADJUSTMENTS	TOTAL DEPRECIATION	31.03.2024	31.03.2023
19	Computer Software	82,36,003.00	-	-	82,36,003.00	40.00%	82,16,772.60	19,230.40	-	82,36,003.00	-	19,230.40
20	E-Journals	-	-	-	-	40.00%	-	-	-	-	-	-
21	Patents	-	-	-	-	9 YEARS	-	-	-	-	-	-
TOTAL (C)		82,36,003.00	-	-	82,36,003.00		82,16,772.60	19,230.40	-	82,36,003.00	-	19,230.40
GRAND TOTAL (A+B+C)		11,20,53,644.00	16,23,315.00	-	11,36,76,959.00		6,30,89,148.36	82,88,430.52	-	7,13,77,578.88	4,22,99,380.13	4,89,64,495.65

Accountant



S. K. (F/A) Asst. Registrar (F/A)

SCHEDULE 5 - INVESTMENTS

Amount in Rupees

Sl.no	Particulars	Current Year 2023-24		Previous Year 2022-23	
		-	-	-	-
	TOTAL		-		-

SCHEDULE 6 - INVESTMENTS- OTHERS

Amount in Rupees

Sl.no	Particulars	Current Year 2023-24		Previous Year 2022-23	
	TOTAL	-	-		

SCHEDULE -7 Current Assets

Amount in Rupees

Sl.no	Particulars	Current Year 2023-24		Previous Year 2022-23	
(a)	Bank balance with schedule bank				
1.	Canara Bank - 28319	22,54,239.00		54,12,88,612.00	
2.	Cont. Edu Prog(CEP 10678399463)	16,239.29		14,982.29	
3.	Edu Loan A/c (34620592283)	2,70,32,845.20		3,32,32,538.20	
4.	PFMS-SBI (38610513962)	1,60,102.50		1,60,751.50	
5.	SBI Bank(Net Banking)- 37806905911	1,55,319.62		1,55,968.62	
6.	SBI FORIEGN REMITANCE AC NO. 37969125197	2,43,35,278.15		1,70,54,770.58	
7.	SBI Group Insurance A/c 30181765720	4,65,800.00		4,53,406.00	
8.	SBI Online Student Fee. A/c -33117999641	23,16,95,102.14		18,00,58,941.94	
9.	SBI Saving A/c -10678399349	8,66,39,652.93		7,23,06,916.68	
10.	SBI Scholarship A/c (34620603401)	71,18,712.50		72,44,258.50	
11.	SBI Spon.Res Project Grant - 10678399441	1,41,06,918.31		1,43,70,762.31	
12.	HDFC SB A/c. 50100374819962	15,02,100.08		57,92,405.08	
13.	PFMS-RBI (10680401001)	-1,84,63,691.00		-1,85,92,316.00	
14.	SBI BANK R & C A/c (38246478714)	3,42,83,789.60		2,39,51,961.10	
14	IAC 2023 A/c (42309459565)	8,63,381.78		-	
	Total (a)		41,21,65,790.10		87,74,93,958.80
(b)	Accrued Income				
1.	Interest accrued on Term Deposits	26,93,148.35		2,97,306.90	
2.	Interest Accrued on FD (Corpus Fund)	7,268.00		-	
3.	Interest Accrued on FD (Institute Dev Fund)	40,292.00		-	
4.	Interest Accrued on FD (Maintenance Fund)	653.00		-	
5.	Interest Accrued on FD (Staff Dev Fund)	1,714.00		-	
6.	Interest Accrued on FD (CEP)	8,721.00		-	
	Total (b)		27,51,796.35		2,97,306.90
(c)	T.D.S. Recoverable from I.T. Dept.				
3.	T.D.S. (2014-15)	15,50,650.00		15,50,650.00	
8	T.D.S. (2022-23)	-		68,24,888.20	
9	T.D.S. (2023-24)	1,40,11,970.00		-	
	Total (c)		1,55,62,620.00		83,75,538.20

S. N. Singh
22/11/24
Accountant

S. K. Singh
22/11/24
Asst. Registrar (F/A)



Sl.no	Particulars	Current Year 2023-24		Previous Year 2022-23	
(d)	Fixed Deposits (Current Assets)				
1	Auto Sweep FD HDFC (50300936887135)	28,74,00,000.00		-	
2	FD HDFC (50300524827542)	2,25,11,861.20		2,15,55,838.00	
3	FD HDFC (50300525128539)	2,25,92,477.60		2,16,30,518.00	
4	FD HDFC (50300525446776)	2,26,12,335.20		2,16,47,013.20	
5	FD HDFC (50300525586685)	2,26,17,717.20		2,16,49,645.70	
6	FD HDFC (50300526361702)	2,26,10,431.45		2,16,30,384.10	
7	FD Canara Bank (145000230211/1)	5,29,62,923.00		-	
8	FD Canara Bank (145000230211/2)	5,29,62,923.00		-	
9	FD Canara Bank (145000230211/3)	5,29,62,923.00		-	
10	FD Canara Bank (145000230211/4)	5,29,62,923.00		-	
11	FD Canara Bank (145000230211/5)	5,29,62,923.00		-	
12	FD Canara Bank (145000230211/6)	5,29,62,923.00		-	
13	FD Canara Bank (145000230211/7)	5,29,62,923.00		-	
14	FD Canara Bank (145000230211/8)	5,29,62,923.00		-	
15	FD Canara Bank (145000230211/9)	5,29,62,923.00		-	
16	FD Canara Bank (145000230211/10)	5,29,62,923.00		-	
17	FD Canara Bank (145000230211/11)	4,23,70,338.00		-	
18	FD with SBI 41790862070	25,00,00,000.00		25,00,00,000.00	
19	FD with SBI 41792217700	25,00,00,000.00		25,00,00,000.00	
20	FD with SBI 41792219810	25,00,00,000.00		25,00,00,000.00	
21	FD with SBI 41792221400	25,00,00,000.00		25,00,00,000.00	
22	FD with SBI 41792223361	25,00,00,000.00		25,00,00,000.00	
23	FD with SBI 41792226328	43,86,22,299.00		43,86,22,299.00	
	Total (e)		2,66,09,66,689.65		1,79,67,35,698.00

(e)	Other Receivables (Current Assets)				
1	CHABBRA ASSOCIATES	-		-	
2	IIIT Ranchi	97,33,352.00		97,33,352.00	
3	Medical Policy for Student (Receivable)	11,68,080.00		11,68,080.00	
4	M/s Eagle Infra Limited	14,160.00		14,160.00	
5	GPF Bank A/c-	-		-	
6	Tax on Advance	15,102.00		15,102.00	
7	Sysnet Global Technologies P. Ltd.	16,439.00		16,439.00	
8	Excess Premium Paid to LIC	1,170.00		1,170.00	
9	State Bank of India	8,480.82		8,480.82	
10	Receivable From SERB	3,12,028.00		3,12,028.00	
11	Mr. Gourav Kumar (Night Canteen - Hostel I & K)	6.00		12.00	
12	M/s Amba Store	13,571.00			
13	Ayaansh Enterprises	3,000.00		10,041.00	
14	Mr. Asit Baran Roy (Night Canteen - J)	2,348.00			
	Total (f)		1,12,87,736.82		1,12,78,864.82
	GRANT TOTAL		3,10,27,34,632.92		2,69,41,81,366.72


Accountant


Asst. Registrar (F/A)



SCHEDULE 8 - LOANS, ADVANCES & DEPOSITS

Amount in Rupees

Particulars	Current Year 2023-24		Previous Year 2022-23	
A. Advances				
a.) Out of Capital fund				
i). Opening Balance	4,29,59,779.39		5,35,23,011.39	
ii). Add Paid during the Year	-		-	
iii). Less Adjusted during the Year	-1,38,87,600.00		-1,05,63,232.00	
Advance outstanding for more than 6 months		2,90,72,179.39		4,29,59,779.39
Advance outstanding for less than 6 months				
Total		2,90,72,179.39		4,29,59,779.39
b.) Out of Revenue fund				
i). Opening Balance	1,24,31,886.79		2,18,51,951.30	
ii). Add Paid during the Year	50,65,300.00		36,35,034.00	
iii). Less Recovered during the Year	-33,63,866.00		-32,48,511.00	
iv). Less Adjusted during the Year	-21,43,253.00		-39,98,302.00	
v). Less Re-grouped			-58,08,285.51	
Advance outstanding for more than 6 months		1,13,99,673.79		1,16,75,058.79
Advance outstanding for less than 6 months		5,90,394.00		7,56,828.00
Total		1,19,90,067.79		1,24,31,886.79
c.) Advances to CPWD				
i. Capital Advance				
i). Opening Balance	15,98,02,329.00		2,40,73,168.00	
ii). Add Paid during the Year	31,73,80,806.00		19,21,26,773.00	
iii). Less Adjusted during the Year			-	
iv). Less trf to Capital Work in progress	-40,24,79,027.00		-5,63,97,612.00	
		7,47,04,108.00		15,98,02,329.00
i. Revenue Advance				
i). Opening Balance	1,90,18,668.00		1,91,43,012.00	
ii). Add Paid during the Year	2,41,00,000.00		1,98,34,527.00	
iii). Less Adjusted during the Year	-2,36,36,097.00		-	
iv). Less trf to Capital Work in progress			-1,99,58,871.00	
		1,94,82,571.00		1,90,18,668.00
d.) Security Deposit to HEFA				
10,39,04,440.57			5,63,57,282.57	
Add: During the year	-		4,55,00,000.00	
Add: Interest received	30,03,232.00		20,47,158.00	
Less: TDS Receivable	-		-	
		10,69,07,672.57		10,39,04,440.57
e.) Security Deposit to Others				
i). Jusco Ltd.	62,64,237.00		62,64,237.00	
ii). Security deposit for LPG	5,050.00		5,050.00	
		62,69,287.00		6269287.00
f.) R&C Deptt. - Advance				
i). Opening Balance	-			
ii). Add Paid during the Year	10,03,000.00			
iii). Less Adjusted during the Year	-7,11,649.00			
		2,91,351.00		
TOTAL		24,87,17,236.75		34,43,86,390.75

S. K. Singh
28/11/24
Accountant

S. K. Singh
28/11/24
Asst. Registrar (F/A)



SCHEDULE 9 - ACADEMIC RECEIPTS

Amount in Rupees

Particulars	Current Year 2023-24		Previous Year 2022-23	
A. Academic				
1. Tuition fee	20,68,79,211.00		18,54,07,281.00	
2. Library Fee	1,83,39,500.00		1,61,09,500.00	
3. Institute Fee (Executive Ph.d)	3,23,000.00		20,000.00	
3. Admission/Processing Fee inst Cont	97,500.00		46,800.00	
4. PhD Thesis Fee	3,35,000.00	22,59,74,211.00	1,85,000.00	20,17,68,581.00
B. Examinations				
1. Examination Fee	46,48,000.00		40,33,500.00	
2. Degree Fee	27,41,000.00		23,59,500.00	
3. Migration Fee	49,850.00	74,38,850.00	30,800.00	64,23,800.00
C. Other Fee				
1. Fine/Misc Fee	18,53,361.00		4,80,155.00	
2. Medical & Insurance Fee	45,37,500.00		16,84,342.00	
3. Bus Charges (Transportation Fee)	91,54,871.00		90,88,989.00	
4. E Campus Fee	1,81,50,000.00		1,61,06,000.00	
5. Training & Placement Fee	45,38,000.00		40,27,500.00	
6. Computer & Internet Fee	91,35,256.00		88,32,454.00	
7. Student wellness Fee	45,37,500.00		40,92,250.00	
8. Convocation Fee	-		-	
9. Library Book Fine	1,75,499.20		1,96,016.42	
10. PhD Application Fee	4,71,500.00		4,16,000.00	
11. Transcript Fee	1,18,850.00		1,31,600.00	
12. Maintance & Establishment Fee	5,16,83,413.00		4,03,96,481.00	
13. Innovation Project Fee			52,54,000.00	
14. Supplementary Exam Fee	3,34,666.00	10,46,90,416.20	28,800.00	9,07,34,587.42
TOTAL		33,81,03,477.20		29,89,26,968.42


Accountant


Asst. Registrar (F/A)



SCHEDULE 10 - GRANTS/SUBSIDIES (IRREVOCABLE GRANTS RECEIVED)

Amount in Rupees

Particulars	Current Year 2023-24		Previous Year 2022-23	
Grant Received from Govt. of India				
Revenue Grant (Recurring) Received				
- Other than PFMS Grant				
- PFMS Grant	1,23,63,80,028.00		1,09,27,73,583.00	
Less: Trf to Capital Fund to the extent utilized for Cap. Expend.				
Less: Trf to Unutilised Grant				
Less: Grant Returned Back	-2,746.00		-2,74,040.00	
Add: Trf from Unutilised Grant				
TOTAL		1,23,63,77,282.00		1,09,24,99,543.00

SCHEDULE 11 - INCOME FROM INVESTMENTS

Amount in Rupees

Particulars	Current Year 2023-24		Previous Year 2022-23	
Interest on Security Deposit	30,03,232.00		22,05,474.00	
Int on Term Deposits	16,44,38,935.10		7,81,63,038.80	
TOTAL		16,74,42,167.10		8,03,68,512.80

SCHEDULE 12 - INTEREST EARNED

Amount in Rupees

Particulars	Current Year 2023-24		Previous Year 2022-23	
Int on S.B. A/c No. 33117999641	38,13,293.00		48,33,419.00	
Int on Canara Bank S.B a/c (28319)	9,65,689.00		36,703.00	
Int on SB A/c No.10678399441	4,13,156.00		3,38,253.00	
Interest on TDS Receivable	2,80,763.60		7,34,567.90	
Int on SB A/c No.10678399349	2,61,689.00		1,67,837.00	
Interest on HDFC Bank A/c No. 50100374819962	24,13,575.00		1,37,62,901.00	
TOTAL		81,48,165.60		1,98,73,680.90

S. Singh
28/5/24
Accountant

S. K. Bhatnagar
Asst. Registrar (F/A)



SCHEDULE 13 - OTHER INCOME

Amount in Rupees

Particulars	Current Year 2023-24		Previous Year 2022-23	
A. Income from Land and Building				
1. Hostel Room Rent Fee Receipt	4,46,09,625.00		3,96,84,619.00	
2. License fee (House Rent Recovery)	18,68,494.00		17,53,722.00	
3. Electricity charges recovered (Staff & others)	36,74,652.88		26,14,031.00	
4. Water Charges recovered (Staff & Others)	1,05,436.00		1,01,117.00	
5. Elect. & Water Chg Receipts (Student)	1,48,93,511.00		1,36,61,981.00	
6. Let Out Property/Quarters	10,73,717.23		9,01,550.14	
Total (A)		6,62,25,436.11		5,87,17,020.14
B. Others				
1. Leave Salary Contribution	1,87,581.00		1,43,292.00	
2. LTC Recovery	4,40,966.00		8,33,848.00	
3. Misc Income	13,58,764.20		4,33,840.00	
4. Pension Contribution	68,211.00		2,70,066.00	
5. Project Overhead Receipt	7,50,599.00		13,71,040.00	
6. Recruitment Application Fee	20,28,000.00		20,35,500.00	
7. Revenue from Testing Consultancy	72,60,848.49		57,43,957.99	
8. Vehicle Recovery	777.00		6,720.00	
9. Penalty Charges Receipt	4,377.00		-	
10. Sale of Scrap Battery	18,50,011.00		-	
11. Round Off			0.27	
Total (B)		1,39,50,134.69		1,08,38,264.26
TOTAL		8,01,75,570.80		6,95,55,284.40

S. K. Singh
28/11/24
Accountant

S. K. Singh
Asst. Registrar (F/A)



SCHEDULE 14 - PRIOR PERIOD INCOME

Particulars	Amount in Rupees			
	Current Year 2023-24		Previous Year 2022-23	
a) Academic Receipt	-	-	-	-
b) Income From Investment	-	-	-	-
c) Interest Earned	-	-	-	-
d) Other Income	-	-	-	-
TOTAL				

SCHEDULE 15 - STAFF PAYMENTS & BENEFITS (Establishment Expenses)

Particulars	Amount in Rupees			
	Current Year 2023-24 (Non Plan)		Previous Year 2022-23 (Non Plan)	
a) Salary and Wages				
Adm & Tech Staff Regular	14,50,05,687.00		13,29,45,083.00	
Academic Staff Regular	42,82,63,342.00		37,24,23,616.00	
Adm & Tech Staff Adhoc	63,23,881.00		1,16,05,073.00	
Academic staff Adhoc	36,43,156.00		33,30,645.00	
		58,32,36,066.00		52,03,04,417.00
b) Contribution to National Pension Scheme	3,04,81,132.00		2,21,81,406.00	
c) LTC Facility	22,68,075.00		9,29,090.00	
d) Children Education Allowance	24,84,000.00		24,73,000.00	
e) Honorarium	-		-	
f) Professional Development Allowance (CPDA)	78,37,223.00		26,96,875.00	
g) Leave Encashment against LTC	19,35,439.00		16,35,637.00	
h) Medical Facility	76,75,549.00		92,80,091.00	
i) Uniform Allowance	3,85,000.00		4,05,000.00	
j) Retirement Benefits				
Gratuity (Actuarial)	5,51,09,015.00		23,16,761.00	
Leave Encashment (Actuarial)	2,69,22,773.00		-2,92,17,883.00	
Arrear of Pension & Family Pension	2,12,15,997.00		25,12,621.00	
k) Arrear Salary Academic Staff	-		17,21,913.00	
l) Arrear Salary Adm & Tech Staff	5,33,391.00		-	
m) DA/TA Arrear (Academic Staff)	27,775.00		4,412.00	
n) DA/TA Arrear (Adm & Tech Staff)	18,837.00		4,63,420.00	
o) DA/TA Arrear (Pensioner)	-		32,57,660.00	
p) H R A Arrear	-		3,40,535.00	
q) Pension	18,91,47,765.00		17,22,81,714.00	
r) Pension Commutation	1,20,91,756.00		49,97,532.00	
s) Composit Transfer and Packing Grant			2,37,790.00	
t) Transportation of Personal Effects			99,150.00	
		35,81,33,727.00		19,86,16,724.00
Total Staff payment & Benefit		94,13,69,793.00		71,89,21,141.00
TOTAL		94,13,69,793.00		71,89,21,141.00

S. N. Singh
Accountant



S. K. Singh
Asst. Registrar (F/A)

SCHEDULE 16 - ACADEMIC EXPENSES

Amount in Rupees

Particulars	Current Year 2023-24		Previous Year 2022-23	
a) Examination Expenses	9,45,375.00		6,84,593.00	
b) Convocation Expenses	24,91,097.00		18,39,491.00	
c) Research and Development Exp	-		42,250.00	
d) Stipend (PG, Phd & other students)	9,35,35,888.00		9,63,77,628.00	
e) Training and Placement Exp	11,94,065.00		11,14,696.00	
f) HRA (Stipend)	1,25,33,858.00		1,01,17,721.00	
g) Honorerium to Visiting Faculty & Others	31,34,930.00		21,63,305.00	
h) Laboratory Expenses	11,85,358.00		6,70,739.00	
i) Online Subscription (E-Learning Resources)	-		57,89,183.00	
j) NBA Accrediation	-		63,210.00	
k) Arrear of Stipend & HRA	1,82,77,922.00			
k) Seminars/Conference/Workshop Exp	18,76,854.00		2,06,413.00	
TOTAL		13,51,75,347.00		11,90,69,229.00

S. N. Singh
28/11/24
Accountant

S. K. P. Singh
Asst. Registrar (F/A)



SCHEDULE 17 - ADMINISTRATIVE AND GENERAL EXPENSES

Amount in Rupees

Particulars	Current Year 2023-24		Previous Year 2022-23	
A. Infrastructure				
a) Electricity and Power	2,58,48,320.00		2,09,73,965.00	
b) Water Charges	23,22,144.00		23,22,144.00	
		2,81,70,464.00		2,32,96,109.00
B. Departmental Operating Cost	30,34,416.00	30,34,416.00	26,20,151.00	26,20,151.00
C. Communication				
a) Postage and Stationery	1,12,131.00		50,000.00	
b) Telephone Charges	63,744.00		46,287.00	
c) Internet Port Charges	37,69,510.00		60,34,723.00	
		39,45,385.00		61,31,010.00
D. Advertisement and Publicity	4,30,716.00	4,30,716.00	7,92,722.00	7,92,722.00
E. Legal Expenses	10,81,912.00	10,81,912.00	4,59,005.00	4,59,005.00
F. Others				
a) Printing and Stationery	9,44,492.00		2,49,614.00	
b) Travelling and Conveyance Expenses	53,26,722.00		11,98,564.00	
c) Hospitality Expenses	1,47,381.00		1,69,744.00	
d) Auditors Remuneration:				
i. Statutory Audit fee & Remuneration	4,91,400.00		-	
e) Professional Charges	26,83,178.00		41,07,750.00	
f) Meeting Expenses	76,477.00		89,155.00	
g) Misc. Expenses	3,87,208.00		6,48,644.00	
h) Outsourcing of Accounting Services				
i) Interview/Recruitment Expenses	2,63,011.00		5,59,160.00	
j) GST on Purchase from URP under RCM	11,62,214.00		11,09,851.00	
k) Security Expenses	2,82,70,397.00		1,96,06,935.00	
l) Manpower Services	1,22,80,374.00		1,60,64,862.00	
m) Holding Taxes	70,06,579.00		76,40,224.00	
n) Pest Contraol Services	72,098.00		-	
		5,91,11,531.00		5,14,44,503.00
Total Administrative and General Exp		9,57,74,424.00		8,47,43,500.00
Expenses from IRG				
Testing & Consultancy Expenses	77,40,543.00		97,40,514.00	
Medical Insurance - Students	35,30,172.00		-	
Foreign Exchange Fluctuation Loss	5,96,038.36		-	
Hostel Maintenance - DOC	20,68,914.00		-	
		1,39,35,667.36		97,40,514.00
Total		10,97,10,091.36		9,44,84,014.00

S. Singh
Accountant

S. C. Bhatnagar
Asst. Registrar (F/A)



SCHEDULE 18 - TRANSPORTATION EXPENSES

Particulars	Amount in Rupees	
	Current Year 2023-24	Previous Year 2022-23
a) Vehicle Running and Maintenance Exp	21,02,046.00	11,00,863.00
b) Vehicle Insurance and Taxes	1,82,804.00	1,86,110.00
Total	22,84,850.00	12,86,973.00

SCHEDULE 19 - REPAIRS AND MAINTENANCE

Particulars	Amount in Rupees	
	Current Year 2023-24	Previous Year 2022-23
a) Repair & Maintenance (Refrigeration & AC)	5,19,012.00	10,50,576.00
b) Repair & Maintenance (Computer and Networking)	2,72,758.00	36,69,634.00
c) Repair & Maintenance (Electrical)	1,29,16,492.00	65,675.00
d) Sanitation and Cleaning	2,54,95,452.00	2,34,51,397.00
e) Repair and Maintenance (furniture & fixture)	2,23,045.00	1,11,421.00
f) Repair and Maintenance (Civil Work)	17,55,874.00	4,58,630.00
g) Repair & Maintenance (P&M, Equipment)	1,39,408.00	6,47,933.00
h) Repair & Maintenance (CPWD)	1,14,08,760.00	5,98,64,726.00
Total	5,27,30,801.00	8,93,19,992.00

SCHEDULE 20 - FINANCE COST

Particulars	Amount in Rupees	
	Current Year 2023-24	Previous Year 2022-23
a) Bank Charges	65,068.89	62,935.27
b) Stamp Duty & Taxes	-	10,01,630.00
c) Interest on HEFA Loan	3,58,68,626.00	4,52,73,583.00
Total	3,59,33,694.89	4,63,38,148.27

SCHEDULE 21 - OTHER EXPENSES

Particulars	Amount in Rupees	
	Current Year 2023-24	Previous Year 2022-23
a) Provision for Bad and Doubtful Debts/Advance	-	-
b) Irrecoverable Balances Written-off	-	-
c) Grants/Subsidied to others institutions/organisation	-	-
d) Others	38.38	-
Total	38.38	-

SCHEDULE 22 - PRIOR PERIOD EXPENDITURE

Particulars	Amount in Rupees	
	Current Year 2023-24	Previous Year 2022-23
Academic Expenses	3,63,897.00	-
Administrative Expenses	-	17,477.00
Establishment Exp.	-	-
Other Expenses	1,16,34,168.00	10,414.00
Repairs and Maintenance	-	25,000.00
Total	1,19,98,065.00	52,891.00

S. N. Singh
Accountant

S. K. Singh
Asst. Registrar (F/A)



SCHEDULE - 23

SIGNIFICANT ACCOUNTING POLICIES

1. Basis for preparation of accounts: The accounts are prepared under the Historical Cost Convention and generally on the Accrual method of accounting.

2.Revenue Recognition: Fees from students are accounted on realization basis. Fees collected from students towards Mess advance and Student Activities are transferred to relevant hostel and SAS accounts respectively. The expenditure incurred out of above fees is accounted by Dean(SW), Chief warden &PI, SAS and the same are not shown in Institute's Income & Expenditure Accounts.

3. Fixed Assets and Depreciation: Fixed assets are stated at cost of acquisition including inward freight, duties and taxes and incidental and direct expenses related to acquisition, installation and commissioning. Depreciation on fixed assets is provided on Straight line method in annual accounts of the Institute at the rate as prescribed.

Since inception of the institute to 31.03.2014 fixed assets were being recorded at cost and no depreciation was being charged. Now the Asset Register till 31/03/2014 has been prepared in revised formats of financial statement for central higher educational institutions issued by MoE and the same had been presented before the CAG Audit team during audit of Annual Accounts for the FY 2019-20.

However, assets register has been prepared for assets purchased from 1st April 2014 and depreciation on the same is being charged at the rate prescribed in revised formats of financial statement for central higher educational institutions issued by MoE. Depreciation is provided for whole year on addition during the year.

4.Stocks: Inventories purchased by various departments/centres/sections are treated as consumed during the year of purchase and booked to revenue expenditure.

5. Retirement Benefits: Since FY 2020-21, provisions for Gratuity and Leave Encashment had been made on the basis of actuarial valuation. During the FY 2023-24, ₹2,16,93,112.00 and ₹1,97,83,518.00 has been paid for gratuity and leave encashment (retirement benefit) respectively. The balance of provisions for Gratuity and Leave Encashment at the end of FY 2023-24 is ₹21,70,25,885.00 and ₹18,07,61,167.00 respectively. Other retirement benefits are accounted on cash basis.

6. Government grants: Government grants are accounted on realization basis. However where a sanction for release of grant pertaining to the financial year is received before 31st March the same is accounted on accrual basis. Capital and Revenue Grant to the extent it is utilized for capital expenditure is added to Corpus/Capital Fund with effect from financial year 2014-15 as per guidelines given in the unified formats of financial statement for central higher educational institutions issued by MoE. Utilization certificates for Revenue and Capital Grant received for any year are issued only after receipt of Audit Certificate for that year.

7.Investments: The funds of the institute are deposited in short term fixed deposits/Savings bank account in nationalized banks. Interest earned on fixed deposits is accounted on accrual basis with effect from financial year 2014-15. Interest on saving accounts is accounted on cash basis. The income out of investment of balance of various funds is credited to respective fund account.

8. Income Tax: The income of the institute is exempted from Income Tax under section 10(23C) of the Income Tax Act. Therefore, no provision of Tax is made in the accounts.

9.PF Accounts: Since FY 2020-21 a saving bank account has been opened in the name of GENERAL PROVIDENT FUND, NIT JAMSHEDPUR and PF contributions are deposited in the above mentioned account.

10. Electricity & Licence Fee: Recovery of Electricity amount and Licence Fee are being accounted on realization basis.


(Accountant)


(Asst. Registrar F/A)



SCHEDULE - 24

CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS

1. Contingent liabilities: As on 31.03.2024 arbitration case no. I.A.No. 1234 of 2012 in A.A.21 filed by Jamshedpur Utilities Service Co. Ltd. (JUSCO) presently known as Tata Steel Utilities and Infrastructure Services Limited (TSUIS) is pending for decision. The claim in the above case is amounting to ₹8,59,16,657.00

2. Capital commitment: There is no capital commitment towards contracts to be executed on capital account.

3. Current assets loans and advances: In the opinion of the Institute the current assets, loans, advances and deposits have a value on realization in the ordinary course equal at least to the aggregate amount shown in the balance sheet.

4. Capital & Revenue Grant: The Details of Capital and Revenue Grant received during F.Y. 2023-24 are as under:

Letter No.	Sanction Order Date	Instalment No.	Grant Amount
F.No.36-4/2023-TS.III [112-31]	18-04-2023	1 st	₹ 3,97,00,000
F.No.36-4/2023-TS.III [789-31]	18-04-2023	1 st	₹ 31,00,000
F.No.36-4/2023-TS.III [796-31]	18-04-2023	1 st	₹ 16,00,000
F.No.36-4/2023-TS.III [112-36]	18-04-2023	1 st	₹ 4,74,00,000
F.No.36-4/2023-TS.III [789-36]	18-04-2023	1 st	₹ 37,00,000
F.No.36-4/2023-TS.III [796-36]	18-04-2023	1 st	₹ 20,00,000
F.No.36-4/2023-TS.III [112-35]	18-04-2023	1 st	₹ 3,35,00,000
F.No.36-4/2023-TS.III [789-35]	18-04-2023	1 st	₹ 26,00,000
F.No.36-4/2023-TS.III [796-35]	18-04-2023	1 st	₹ 14,00,000
F.No.36-4/2023-TS.III [112-31]	03-05-2023	2 nd	₹ 3,97,00,000
F.No.36-4/2023-TS.III [789-31]	03-05-2023	2 nd	₹ 31,00,000
F.No.36-4/2023-TS.III [796-31]	03-05-2023	2 nd	₹ 16,00,000
F.No.36-4/2023-TS.III [112-36]	03-05-2023	2 nd	₹ 4,74,00,000
F.No.36-4/2023-TS.III [789-36]	03-05-2023	2 nd	₹ 37,00,000
F.No.36-4/2023-TS.III [796-36]	03-05-2023	2 nd	₹ 20,00,000
F.No.36-4/2023-TS.III [112-31]	08-06-2023	4 th	₹ 3,99,00,000
F.No.36-4/2023-TS.III [789-31]	08-06-2023	4 th	₹ 31,00,000
F.No.36-4/2023-TS.III [796-31]	08-06-2023	4 th	₹ 16,00,000
F.No.36-4/2023-TS.III [112-36]	08-06-2023	4 th	₹ 4,75,00,000
F.No.36-4/2023-TS.III [789-36]	08-06-2023	4 th	₹ 37,00,000
F.No.36-4/2023-TS.III [796-36]	08-06-2023	4 th	₹ 20,00,000
F.No.36-4/2023-TS.III [112-31]	20-06-2023	6 th	₹ 4,73,00,000
F.No.36-4/2023-TS.III [789-31]	20-06-2023	6 th	₹ 37,00,000
F.No.36-4/2023-TS.III [796-31]	20-06-2023	6 th	₹ 20,00,000
F.No.36-4/2023-TS.III [112-36]	20-06-2023	6 th	₹ 5,31,00,000

F.No.36-4/2023-TS.III [789-36]	20-06-2023	6 th	₹ 42,00,000
F.No.36-4/2023-TS.III [796-36]	20-06-2023	6 th	₹ 22,00,000
F.No.36-4/2023-TS.III [112-35]	20-06-2023	6 th	₹ 6,16,00,000
F.No.36-4/2023-TS.III [789-35]	20-06-2023	6 th	₹ 48,00,000
F.No.36-4/2023-TS.III [796-35]	20-06-2023	6 th	₹ 26,00,000
F.No.36-4/2023-TS.III [112-31]	02-08-2023	7 th	₹ 4,73,00,000
F.No.36-4/2023-TS.III [789-31]	02-08-2023	7 th	₹ 37,00,000
F.No.36-4/2023-TS.III [796-31]	02-08-2023	7 th	₹ 20,00,000
F.No.36-4/2023-TS.III [112-36]	02-08-2023	7 th	₹ 5,31,00,000
F.No.36-4/2023-TS.III [789-36]	02-08-2023	7 th	₹ 42,00,000
F.No.36-4/2023-TS.III [796-36]	02-08-2023	7 th	₹ 22,00,000
F.No.36-4/2023-TS.III [112-31]	14-09-2023	8 th	₹ 4,74,00,000
F.No.36-4/2023-TS.III [789-31]	14-09-2023	8 th	₹ 37,00,000
F.No.36-4/2023-TS.III [796-31]	14-09-2023	8 th	₹ 19,00,000
F.No.36-4/2023-TS.III [112-36]	14-09-2023	8 th	₹ 5,32,00,000
F.No.36-4/2023-TS.III [789-36]	14-09-2023	8 th	₹ 41,00,000
F.No.36-4/2023-TS.III [796-36]	14-09-2023	8 th	₹ 22,00,000
F.No.36-4/2023-TS.III [112-31]	19-10-2023	9 th	₹ 3,49,00,000
F.No.36-4/2023-TS.III [789-31]	19-10-2023	9 th	₹ 27,00,000
F.No.36-4/2023-TS.III [796-31]	19-10-2023	9 th	₹ 15,00,000
F.No.36-4/2023-TS.III [112-36]	19-10-2023	9 th	₹ 3,99,00,000
F.No.36-4/2023-TS.III [789-36]	19-10-2023	9 th	₹ 31,00,000
F.No.36-4/2023-TS.III [796-36]	19-10-2023	9 th	₹ 17,00,000
F.No.36-4/2023-TS.III [112-35]	19-10-2023	9 th	₹ 6,16,00,000
F.No.36-4/2023-TS.III [789-35]	19-10-2023	9 th	₹ 48,00,000
F.No.36-4/2023-TS.III [796-35]	19-10-2023	9 th	₹ 26,00,000
F.No.36-4/2023-TS.III [112-31]	02-11-2023	10 th	₹ 3,49,00,000
F.No.36-4/2023-TS.III [789-31]	02-11-2023	10 th	₹ 27,00,000
F.No.36-4/2023-TS.III [796-31]	02-11-2023	10 th	₹ 15,00,000
F.No.36-4/2023-TS.III [112-36]	02-11-2023	10 th	₹ 3,99,00,000
F.No.36-4/2023-TS.III [789-36]	02-11-2023	10 th	₹ 31,00,000
F.No.36-4/2023-TS.III [796-36]	02-11-2023	10 th	₹ 17,00,000
F.No.36-4/2023-TS.III [112-31]	05-12-2023	11 th	₹ 3,50,00,000
F.No.36-4/2023-TS.III [789-31]	05-12-2023	11 th	₹ 28,100
F.No.36-4/2023-TS.III [796-31]	05-12-2023	11 th	₹ 14,00,000
F.No.36-4/2023-TS.III [112-36]	05-12-2023	11 th	₹ 4,00,00,000
F.No.36-4/2023-TS.III [789-36]	05-12-2023	11 th	₹ 32,00,000
F.No.36-4/2023-TS.III [796-36]	05-12-2023	11 th	₹ 16,00,000
F.No.36-4/2023-TS.III [112-31]	25-01-2024	12 th	₹ 5,16,00,000
F.No.36-4/2023-TS.III [789-31]	25-01-2024	12 th	₹ 39,00,000
F.No.36-4/2023-TS.III [796-31]	25-01-2024	12 th	₹ 22,00,000
F.No.36-4/2023-TS.III [112-36]	25-01-2024	12 th	₹ 4,92,00,000

F.No.36-4/2023-TS.III [789-36]	25-01-2024	12 th	₹ 34,00,000
F.No.36-4/2023-TS.III [796-36]	25-01-2024	12 th	₹ 19,00,000
F.No.36-4/2023-TS.III [112-31]	07-02-2024	14 th	₹ 5,16,00,000
F.No.36-4/2023-TS.III [789-31]	07-02-2024	14 th	₹ 39,00,000
F.No.36-4/2023-TS.III [796-31]	07-02-2024	14 th	₹ 22,00,000
F.No.36-4/2023-TS.III [112-36]	07-02-2024	14 th	₹ 4,92,00,000
F.No.36-4/2023-TS.III [789-36]	07-02-2024	14 th	₹ 34,00,000
F.No.36-4/2023-TS.III [796-36]	07-02-2024	14 th	₹ 19,00,000
F.No.36-4/2023-TS.III [112-31]	12-03-2024	15 th	₹ 4,26,00,000
F.No.36-4/2023-TS.III [789-31]	12-03-2024	15 th	₹ 32,00,000
F.No.36-4/2023-TS.III [796-31]	12-03-2024	15 th	₹ 18,00,000
F.No.36-4/2023-TS.III [112-36]	12-03-2024	15 th	₹ 4,00,00,000
F.No.36-4/2023-TS.III [789-36]	12-03-2024	15 th	₹ 28,00,000
F.No.36-4/2023-TS.III [796-36]	12-03-2024	15 th	₹ 17,00,000
F.No.36-5/2023-TS.III [112-31]	12-04-2023	1 st	₹ 1,03,54,000
F.No.36-5/2023-TS.III [789-31]	12-04-2023	1 st	₹ 8,15,000
F.No.36-5/2023-TS.III [796-31]	12-04-2023	1 st	₹ 4,65,168
F.No.36-5/2023-TS.III [112-31]	17-07-2023	3 rd	₹ 68,42,000
F.No.36-5/2023-TS.III [789-31]	17-07-2023	3 rd	₹ 13,32,000
F.No.36-5/2023-TS.III [796-31]	17-07-2023	3 rd	₹ 7,11,360
F.No.36-5/2023-TS.III [112-31]	12-10-2023	5 th	₹ 62,09,000
F.No.36-5/2023-TS.III [789-31]	12-10-2023	5 th	₹ 12,10,000
F.No.36-5/2023-TS.III [796-31]	12-10-2023	5 th	₹ 6,45,488
F.No.36-5/2023-TS.III [112-31]	19-01-2023	8 th	₹ 93,96,012
GRAND TOTAL			₹ 141,18,80,028.00

During the FY 2021-22, PFMS system had been applied in the Institute. Total revenue grant and capital grant under PFMS received for FY 2023-24 by the Institute is ₹123,63,80,028.00 and ₹17,55,00,000.00 respectively. At the end of FY 2023-24, unutilized revenue grant and capital grant under PFMS ₹2,746.00 and ₹727.00 respectively, automatically returned back to the Ministry of Education.

5. Schedule 01 to 24 is annexed to form an integral part of the Balance Sheet as at 31.03.2024 and the Income & Expenditure for the year ended on that date.

6. Previous year figures have been regrouped/re-arranged wherever necessary

7. As per the requirement of AS 15(Revised 2005) on "Employee Benefits" issued by The Institute of Chartered Accountants of India, retirement benefits of employees have been provided in the Annual Accounts of FY 2023-24 on the basis of actuarial valuation report as on 31.03.2024.

Particulars	Gratuity	Leave Encashment	Total
Closing Balance(A)	₹21,70,25,885	₹18,07,61,167	₹39,77,87,052
Opening Balance(B)	₹18,36,09,982	₹17,36,21,912	₹35,72,31,894
Payment during FY 2023-24 (C)	₹2,16,93,112	₹1,97,83,518	₹4,14,76,630
Provision for the FY 2023-24 {A-(B-C)}	₹5,51,09,015	₹2,69,22,773	₹8,20,31,788

9. The Institute leased land to DAV Management Society for running a School within a campus of the Institute.


(Accountant)


(Asst. Registrar F/A)



NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR

Receipts and Payments

1-Apr-2023 to 31-Mar-2024

Receipts	Amount (Rs)	Payments	Amount (Rs)
Opening Balance		Opening Balance	
Bank Accounts	89,60,86,274.80	Bank Accounts	1,85,92,316.00
Capital Grant & Loan		Capital Grant & Loan	
Outside Account	1,257.00	Loan From HEFA	18,90,00,000.00
Sponsored Projects (Scheme Grant)	3,28,79,201.00	Sponsored Projects (Scheme Grant)	2,53,01,652.00
Grant (Head 35)	17,55,00,000.00		21,43,04,652.00
	20,83,80,458.00		
Capital Fund		Capital Fund	
	27,52,755.00		28,23,755.00
Current Liabilities & Provision		Current Liabilities & Provision	
Balance on CGI A/c	12,394.00	Admission withdrawn From CCMN-2023	50,000.00
Mess Advance Fee	2,33,93,000.00	Liabilities for Conducting JSSC 2023 Exam	94,500.00
TCC Society	10,500.00	Leave Encashment	6,28,170.00
Admission Fee against NIMCET & CCMN-2023	1,60,000.00	Mess Advance Fee	53,000.00
Liabilities for Conducting JSSC 2023 Exam	94,500.00	Duties & Taxes	86,32,454.61
Innovation Project Fee	28,81,000.00	Voluntary Scheme	90,000.00
		Payable to Student (Fee Waiver)	3,14,40,453.00
Duties & Taxes		Provisions	
CGST	4,87,617.18	Pension Payable (F.Y.22-23)	1,32,44,055.00
IGST	1,93,390.00	Provision for Contribution to New Pension Scheme	24,64,419.00
SGST	4,87,617.18	Salary Payable (F.Y.23-24)	3,43,50,424.00
NPS Subscription	1,35,668.00	Other Payables	3,72,78,418.00
PF subscription	88,200.00	Scholarship	35,59,813.00
TDS Payable	48,59,964.00	Short Term Course/workshop Fund	57,05,756.00
TDS under CGST	6,06,224.13	Statutory Liabilities	14,82,40,959.00
TDS under SGST	6,06,224.13	Sundry Deposit (Debt & Deposit)	4,69,34,594.00
TDS under IGST	80,414.74	Student Fund & Ohters	5,83,84,500.00
Payable to Student (Fee Waiver)	11,41,497.00	Unutilized Grant (35) Refunded to Ministry	727.00
CSAB - 2023 Payable	4,96,000.00	Professional Development Fund	23,700.00
Sundry Creditors	40,025.00	Research & Development Fund	69,518.00
Prize Money for Robofest Gujarat 3.0	50,000.00	R&C Division	
Industry Academia Conclave 2023	19,19,500.00		39,12,45,460.61
Scholarship	28,24,916.00	Fixed Assets	
Statutory Liabilities	16,44,815.00	Fixed Assets (From 35 Gant)	11,03,81,933.00
Sundry Deposit (Debt & Deposit)	7,42,91,423.71	Fixed Assets (From Other Funds)	16,23,315.00
Other Payables	32,12,784.00	NIT Transit House	7,00,000.00
Interest on Project	8,28,204.00		11,27,05,248.00
Workshop/conference	83,43,957.00		
	12,88,89,835.07	Current Assets	
Current Assets		Other Receivable (Curent Assets)	
Loans, Advances & Deposits	17,14,043.00	Fixed Deposits	82,74,00,000.00
Sundry Debtors	1,34,78,133.52	Loans, Advances & Deposits	7,75,49,106.00
IT Refund	73,70,889.80	Sundry Debtors	11,88,754.00
FD Encashed			90,61,37,860.00
	2,25,63,066.32	Academic Receipt	
Academic Receipt		Academic	1,45,000.00
Academic	22,63,38,040.00	Examinations	3,000.00
Examinations	73,42,850.00	Other Fee	4,15,336.00
Other Fee	10,26,63,790.00		5,63,336.00
Institute Fee (for Executive Ph.d)	3,33,000.00	Expenditure Grant Head-36	
	33,66,77,680.00	Unutilized Grant (36) Refunded to Ministry	2,581.00
Grant/subsidies		Staff Payments and Benefits (Estb. Exp)- Head-36	45,21,61,972.89
Grant (Head 31)	61,07,80,028.00		45,21,64,553.89
Grant (Head 36)	62,56,00,000.00	Expenditure Under Grant Head-31	
	1,23,63,80,028.00	Academic Expenses	13,24,22,382.90
Interest Earned		Administrative Expenses	8,86,73,575.00
	12,74,29,988.00	Finance Cost	3,80,45,214.89
Other Income		Repair & Maintenance	4,13,22,041.00
	6,30,35,756.20	Staff Payment & Benefit (Estb. Exp)- Head-31	19,58,79,228.00
Other Misc Exp (Round off)		Transportation Expense	13,19,898.00
	119.00	Holding Tax	70,06,579.00
Expenditure Under Grant Head-31	4,61,564.00	Unutilized Grant (31) Refunded to Ministry	165.00
Expenditure Grant Head-36	4,49,649.00		50,46,69,083.79
Expenditure from IRG	3,58,045.00	Hostel Maintenance & Establishment Exp	10,35,232.00
Closing Balance		Foreign Exchange Fluctuation Loss	6,02,696.42
Bank Accounts	1,84,63,691.00	Testing & Consultancy Exps.	31,94,273.00
		Medical Policy for Students	38,63,658.00
			80,93,163.00
		Closing Balance	
		Bank Accounts	43,06,29,481.10
	3,04,19,28,909.39		3,04,19,28,909.39



S Singhania
Accountant

S. Singhania
Asst. Registrar (F/A)

S. Singhania
28/5/24
Registrar

S. Singhania
28.5.2024
Director

NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR
GENERAL PROVIDENT FUND ACCOUNT
Balance Sheet for the year ended 31.03.2024

(Amount in Rupees)

Liabilities	Current Period	Previous Period	Assets	Current Period	Previous Period
	31-03-2024	31-03-2023		31-03-2024	31-03-2023
CAPITAL FUND(GPF)			INVESTMENT:		
Opening Balance 01.04.2023	9,67,54,777.32	8,59,64,542.90	Investment in Bank FD	8,73,15,803.00	9,26,17,003.00
Add: GPF Subscription	1,23,32,080.00	1,50,07,000.00	Acrued Interest against auto sweep	31,68,909.00	25,34,130.00
Add: Last Year Adjustment	-	39,41,229.11	GPF Subscription Receivable (March 23)	9,86,378.00	11,08,500.00
Less: GPF paid during the year	-2,25,59,510.80	-1,29,74,756.68			
	8,65,27,346.52	9,19,38,015.33	Current Assets:		
			TDS Receivable (FY 2022-23)	4,55,820.00	4,55,820.00
Add: Excess of Income over Expenditure	60,00,122.00	48,16,761.99	TDS Receivable (FY 2023-24)	5,99,868.00	
			Balance at Bank A/c	690.52	39,324.32
TOTAL	9,25,27,468.52	9,67,54,777.32	TOTAL	9,25,27,468.52	9,67,54,777.32


Accountant


Asst. Registrar (F/A)


Registrar



NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR
GENERAL PROVIDENT FUND ACCOUNT
Income and Expenditure Account for the year ended 31.03.2024

(Amount in Rupees)

Expenditure	Current Period	Previous Period	Income	Current Period	Previous Period
	31-03-2024	31-03-2023		31-03-2024	31-03-2023
Bank Commission	-	177.00	Interest earned on SB (39414984167)	2,068.00	2,817.00
Excess of Income over Expenditure	60,00,122.00	48,16,761.99	Interest earned on Old A/c	-	16,293.99
			Interest on Auto Sweep A/c	59,98,054.00	47,88,164.00
			Interest on IT Refund	-	9,664.00
Total	60,00,122.00	48,16,938.99	Total	60,00,122.00	48,16,938.99

S.M.G.
 Accountant

S.K. Chatterjee
 Asst. Registrar (F/A)

[Signature]
 Registrar



NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR
GENERAL PROVIDENT FUND ACCOUNT
Receipt & Payment Account for the year ended 31.03.2024

(Amount in Rupees)

Receipt	Current Period	Previous Period	Payment	Current Period	Previous Period
	31-03-2024	31-03-2023		31-03-2024	31-03-2023
Closing Balance			Accumuated Funds		
SB (39414984167)	39,324.32	1,09,716.00	GPF Withdrawl	2,25,59,510.80	1,29,74,756.68
Old A/c (SB/FD)	-	25,31,900.01	Investment		
Accumuated Funds			Investment during the Year	9530000	1,58,70,000.00
GPF Subscription for the year (39414984167)	1,13,45,702.00	1,38,98,500.00	Expenses		
Capital Fund	-	9,70,619.00	Bank Commission	-	177.00
Investment			Closing Balance		
Investment encashed on FD	1,95,94,607.00	92,73,758.00	SB (39414984167)	690.52	39,324.32
Interest earned on Auto Sweep A/c	-	17,98,214.00			
Current Assets					
TDS Receivable (FY 2020-21)	-	5,815.00			
TDS Receivable (FY 2021-22)	-	2,66,961.00			
GPF Subcription Receivable	11,08,500.00	-			
Interest					
Interest earned on SB (39414984167)	2,068.00	2,817.00			
Interest earned on SB/FD (Old A/c)	-	16,293.99			
Interest on IT Refund	-	9,664.00			
Total	3,20,90,201.32	2,88,84,258.00	Total	3,20,90,201.32	2,88,84,258.00


Accountant


Asst. Registrar (F/A)


Registrar



ANNUAL REPORT

2023-24



NATIONAL INSTITUTE OF TECHNOLOGY
JAMSHEDPUR-831014, INDIA

info@nitjsr.ac.in +91 657 2373407 www.nitjsr.ac.in