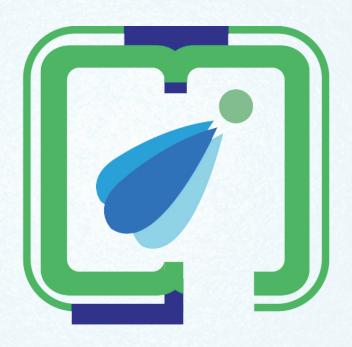
Annual Report 2021-22



Pandit Dwarka Prasad Mishra
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY,
DESIGN AND MANUFACTURING, JABALPUR

(An Institute of National Importance established by an Act of Parliament)

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Virector's Desk





Welcome IIITDM Jabalpur friends & fraternity!

Indian Institute of Information Technology, Design & Manufacturing Jabalpur (IIITDMJ) was established by the Ministry of Human Resource Development (Now Ministry of Education), Government of India on January 24, 2005. The Institute was given the status of 'Institute of National Importance' under the IIIT Act, 2014.

This Annual Report showcases the fulfillment of the Institute for the duration of the financial year 2021-22. I am very much glad to share that this year, 2099 students enrolled in undergraduate, postgraduate and doctoral research programmes, and expect our student strength will rise consistently in coming years. IIITDMJ achieved 80th Rank in the NIRF 2021.

This being an institute with a unique mandate of its kind of providing technical education in IT Enabled Design & Manufacturing, focuses synchronously on solving the contemporary issues of the present day society using Information Technology, besides imparting technical education in specialized field of sciences as its core competence namely Computer Science and Engineering, Design, Mechanical Engineering and Electronics & Communication Engineering.

In the academic year 2021, total 110 companies visited the institute in the session 2021-22 and rolled out 476 offers to the students. Highest package offered in the session to UG students is 45 LPA (CTC) and overall package is 14.70 LPA (CTC). Highest package offered to PG students is 20.40 LPA (CTC) and overall average package remains 10.18 LPA (CTC). There was 100% placement in CSE, 95% in ECE, 90% for Design and above 85% for other streams.

The main strength of an academic institution is its faculty who shape the young minds to be great achievers and help them in their quest to be the best. The Institute has strong faculty bases who are Ph.D from reputed institutes in India and abroad.

The Institute takes pride in having committed Officers/staff on its roll. The members are

Director's Desk



encouraged to participate in various training programs to enhance their working skills to deliver quality service and to move up in their career ladder by giving them sufficient opportunities and share their professional skills.

Hindi Pakhwada- 2021 was celebrated from September 14-28, 2021 and concluded on September 28, 2021. The day of September 14 is observed as Hindi Diwas as on this auspicious day the language Hindi was adopted as an official language of the nation by the constituent assembly in the year 1949. During this period various competitions including essay writing, Hindi speaking, Hindi noting and drafting, etc. were organized for the employees and students. Everyone enthusiastically participated in these competitions in which prizes were awarded to the winners of various competitions.

Besides, imparting technical education the institute also focuses on all round development of the students and hence various extra-curricular activities like cultural, sports and technical are held to keep them motivated and actively involve in their academics. A few are given below:

- "THE BAND WARS" event Somaiya College Engineering, Mumbai on 10th of July, (i) 2021, the participating colleges were IIT Bombay, VJTI Mumbai, VIT, and NMIMS, The event was widely appreciated by audience and the popular Instagram celebrity judges (Mihika Sansare). Under the initiative of Ek Bharat Shreshtha Bharat by the Government of India, Saaz 'the Music Club of our Institute' was asked to collaborate with the musicians at IIIT Dharwad for a performance under the theme of Independence Day. Musicians from both institutes showcased their showmanship on 9th of August, 2021. In order to promote the culture of physical fitness and good health among the teaching and non-teaching employees and the large volume of students in our Institute, FIT INDIA MOVEMENT, Run for Unity Marathon, Badminton, Cricket, Volleyball and Football tournaments were conducted.
- Student Mechanism Design Contest (SMDC): Four teams participated in SMDC (ii) competition organized by Association of Machines and Mechanisms (AMM). The objective of the AMM is to promote innovation among the students. A team of 3 students got first runner up position in the competition.
- A team of 20 members participated in SUPRA 2022, organized by Society of (iii) Automotive Engineers (SAE), to design a student formula-1 racing car. Students started working passionately on design and analysis part from November of 2021. Many online sessions were conducted during lockdown to collaborate between students to create a functional and competitive racing car.
- (iv) IIITDMJ Chess Club team has won the International Chess Competition against Georgia Institute of Technology, in which a total of 160 universities around the globe participated, in the playoff stage, the team faced Purdue University in the quarterfinal, Carnegie Mellon University in the semifinal, and had their final match with Georgia Institute of Technology.

I wish IIITDMJ all the very best and beseech the blessings of the Almighty for its future endeavors.

> (Pravin N. Kondekar) Director

The Institute



Brief Historical Background

Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design & Manufacturing Jabalpur (PDPM IIITDM) was established by the Ministry of Human Resource Development, Government of India on January 24, 2005, under Madhya Pradesh Society Registration Act 1973. The foundation stone of the Institute was laid by Late Shri Arjun Singh Ji, the then Minister of Human Resource Development (MHRD) on February 7, 2005. The first academic session of PDPM IIITDM Jabalpur started from August 2005. The Institute started operating from the temporary location at the IT Bhawan of Jabalpur Engineering College. Prof. Sanjay G. Dhande, Director, IIT Kanpur was given the additional charge as the Director of the Institute. Simultaneously, efforts were on to find suitable land where the campus of the new Institute could be developed. On May 3, 2006, a land of 250 acres near Dumna Airport of Jabalpur was identified by the State Government of M.P. and was handed over to the Institute. Construction work of phase I buildings was started in 2007.

PDPM IIITDMJ & Japan Collaboration

Distinct from many other technical institutions in India IIITDM Jabalpur has an international collaboration with Japan through an MOU signed between the prime ministers of the two countries. IIITDMJ-Japan relationship is an aspect of wider partnership which include : (i) Universities and Industries in consortium, (ii) Institute's participation in various programs such as JENESYS, JICA Innovative Asia Program, JST funded Sakura Science Program, (iii) Infrastructural support from Japan, (iv) Placement and Internship in Japan, (v) Joint programs and events such as Execution of Joint research projects and Design Workshops (DeW) etc. IIITDM Jabalpur holds an annual meeting of the Steering Committee to review the status of collaboration and prospects of strengthening the international cooperation further with Japan.

Vision

PDPM Indian Institute of Information Technology, Design and Manufacturing (IIITDM) Jabalpur shall emerge as a Global Knowledge Hub for quality research and teaching under the broad area of Design and Manufacturing through cross disciplinary, innovative, futuristic and dynamic approaches.

Mission

To create an environment of high quality research and training that:

- Provides maximal opportunities for intellectual and creative development.
- Provides exposure to solve real life problems through interdisciplinary approaches.
- Encourages students to learn through inquiry and hands on experience rather than simple transmission of knowledge through class room teaching.

Values

Besides continuing its ongoing activities, the Institute seeks to act in a manner that is guided by a deep rooted sense of shared values and aspirations for its future planning. Working under such a sound frame of reference, the Institute:

- Seeks to establish and maintain an environment enabling academic community to take intellectual and creative risks and to embrace changes that will lead to the technological innovations and development in future years.
- Encourages, recognizes and rewards high performance in learning, teaching, scholarship, research and other creative activities by promoting intellectual curiosity and protecting the basic principles of academic freedom.
- Provides an environment that imbibes respect for nature and environment, culture and human values.
- Aspires to build an environment of tolerance and reasoned debate without any gender, caste, religious, regional or cross country bias by affirming the worth and personal dignity of every constituent member of the Institute and by contributing to a campus climate of civility.

Institute at a Glance



No. of Faculty	68			
No. of Officers	13 (09 - Administrative Officers, 04 - Technical Officers)			
No. of Support Staff	48	48		
No. of Students	UG - 1742, Ma	asters - 147, Ph.D 210		
Academic Programs	 B.Tech. B.Tech. B.Tech. B.Tech. B.Des M.Tech. M.Tech. M.Tech. M.Tech. M.Tech. M.Tech. M.Tech. M.Des. Ph.D Ph.D Ph.D Ph.D Ph.D Ph.D Ph.D Ph.D Ph.D 	- Computer Science and Engineering - Electronics and Communication Engineering - Mechanical Engineering - Smart Manufacturing - Design - Computer Science and Engineering - Electronics and Communication Engineering - Mechanical Engineering - Mechatronics Engineering - Smart Manufacturing - Design Computer Science and Engineering Electronics and Communication Engineering Mechanical Engineering Design Design Natural Science (Mathematics) Natural Science (Physics) Liberal Arts (English)		
Campus	1000000 Sqm			
Constructed Buildings (Plinth Area)	139662 Sqm.			
	Major Occupied Building	Administrative Block Core Lab Complex + Workshop Annexe Lecture Hall and Tutorial Complex Library cum Computer Center Hostels (Capacity 1400) - 3 No. PG Hostel (Phase-1) (Married Accommodation) Visitor's Hostel		

Institute at a Glance



	Mess and Dining Hall Narmada Residency - III (60 Nos. 3 B Narmada Residency - II (55 Nos. 2 BI Rewa Residency (72 Nos. 2 BHK Flats Type V Quarters - 2 Nos. Primary Health Center Security Barrack Electrical Substation		2 BHK Flats)	
		Basket Ball Court (Indoor) Lawn Tennis Court Volley Ball Ground Common Play Field + 400 mtrs track Students Activity Center		
		PG Hostel (Phase - II) (Bachelor's Accommodation) Hall of Residence - VIII (Girls Hostel)		
Total Institutional Project		Rs. 2719 Lakh		
Total Research Project		Rs. 1392.64 Lakh		
Total Consultancy Project		Rs. 29.50 Lakh		
Income (FY 2021-22) (Rs. in Lakh)	Grant in Aid 4927.00	unspent Balance of FY- 2021-22 NIL		
Expenditure (FY 2021-22) (Rs. in Lakh)	Capital (Head 35) 1172.03	General (Head 31) 2111.81	Salary (Head 36) 2299.16	Total 5583.00

Governance •



Administration and Governance: The Institute is now governed under the IIIT Act 2014. Under the said Act the following are the Administrative Authorities of the Institute:

- Board of Governors (BOG)
- Senate
- \star Finance Committee (FC)
- Building & Works Committee (BWC)

Board of Governors



Chairman **Shri Deepak Ghaisas** Chairman **Gencoval Strategic Services** Pvt. Ltd., Mumbai



Member **Prof. Shailendra Singh** Director IIM, Ranchi



Member (Ex-officio) Shri Manish Rastogi Principal Secretary Dept. of Science & Technology, Govt. of M.P.



Member Ms. Atreyee Borooah Thekedath Founder Director Web.com (India) Pvt. Ltd. Guwahati



Member (Ex-officio) Shri Rakesh Ranjan Additional Secretary (Technical Education) Ministry of Education, Government of India



Member **Shri Prashant Pole** Director Disha Consultants, Jabalpur



Member (Ex-officio) Dr. Jaideep Kumar Mishra Joint Secretary and **Group Coordinator** Ministry of Electronics & Information Technology



Member Shri Subrahmanya S. V. Former Vice President Infosys Ltd., Bengaluru



Member Prof. R. V. Rajakumar Director IIT, Bhubaneshwar



Member **Prof. Tanuja Sheorey** Professor PDPM IIITDM, Jabalpur (April 1, 2021 - Nov. 24, 2021)

Governance





Member Prof. Prashant Jain Professor PDPM IIITDM, Jabalpur (Nov. 25, 2021 - till date)



Member (Ex-officio) **Prof. Sanjeev Jain** Director PDPM IIITDM, Jabalpur (April 1, 2021 - Nov. 24, 2021)



Member Prof. P.N. Kondekar Professor PDPM IIITDM, Jabalpur (April 1, 2021 - Nov. 24, 2021)



Member (Ex-officio) Prof. P.N. Kondekar Director PDPM IIITDM, Jabalpur (Nov. 25, 2021 - till date)



Member Prof. Sanjeev N. Sharma Professor PDPM IIITDM, Jabalpur (Nov. 25, 2021 - till date)



Secretary (Ex-officio) Smt. Swapnali D. Gadekar **Acting Registrar** PDPM IIITDM, Jabalpur

Three meetings of the BOG were held during the year 2021-22.

Senate



Chairperson **Prof. Sanjeev Jain** Director PDPM IIITDM, Jabalpur (April 1, 2021 - Nov. 24, 2021)



Member (Ex-officio) **Prof. Dinesh Kumar Vishwakarma** Dean (RSPC) PDPM IIITDM, Jabalpur (April 1, 2021 - Aug. 18, 2021)



Chairperson Prof. P. N. Kondekar Director PDPM IIITDM, Jabalpur (Nov. 25, 2021 - till date)



Member (Ex-officio) **Prof. Prabin Kumar Padhy** Dean (RSPC) PDPM IIITDM, Jabalpur (Aug. 19, 2021 - till date)



Member (Ex-officio) Prof. P. N. Kondekar Dean (P&D) PDPM IIITDM, Jabalpur



Member (Ex-officio) **Prof. Prashant Jain** Dean (Student Affairs) PDPM IIITDM, Jabalpur (April 1, 2021 - Aug. 18, 2021)



Member (Ex-officio) Prof. V. K. Gupta Dean (Academic) PDPM IIITDM, Jabalpur



Member (Ex-officio) **Prof. Tanuja Sheorey** Dean (Student Affairs) PDPM IIITDM, Jabalpur (Aug. 19, 2021 - till date)

Governance





Member (Ex-officio) **Prof. Puneet Tandon** Head (ME Discipline) PDPM IIITDM, Jabalpur (April 1, 2021 - Aug. 12, 2021)



Member (Ex-officio) Dr. Mukesh Kumar Roy Head (Natural Science) PDPM IIITDM, Jabalpur (Aug. 13, 2021 - till date)



Member (Ex-officio) **Prof. Prashant Jain** Head (ME Discipline) PDPM IIITDM, Jabalpur (Aug. 13, 2021 - till date)



Member (Ex-officio) **Prof. Puneet Tandon** Head (Smart Manufacturing)) PDPM IIITDM, Jabalpur (Aug. 13, 2021 - till date)



Member (Ex-officio) **Prof. Prabin Kumar Padhy** Head (ECE Discipline) PDPM IIITDM, Jabalpur (April 1, 2021 - Aug. 12, 2021)



Member (Ex-officio) **Dr. Sunil Agrawal** Head (LA with managing of **Humanities**) PDPM IIITDM, Jabalpur (Aug. 13, 2021 - till date)



Member (Ex-officio) Dr. Anil Kumar Head (ECE Discipline) PDPM IIITDM, Jabalpur (Aug. 13, 2021 - till date)



Member Prof. Aparajita Ojha Professor PDPM IIITDM, Jabalpur



Member (Ex-officio) Dr. Atul Gupta Head (CSE Discipline) PDPM IIITDM, Jabalpur



Member **Prof. Tanuja Sheorey** Professor PDPM IIITDM, Jabalpur



Member (Ex-officio) Dr. Prabir Mukhopadhyay Head (Design) PDPM IIITDM, Jabalpur



Member **Prof. Sanjeev N. Sharma** Professor PDPM IIITDM, Jabalpur



Member (Ex-officio) Dr. Subir Singh Lamba Head (Natural Science) PDPM IIITDM, Jabalpur (April 1, 2021 - Aug. 12, 2021)



Member Prof. B. K. Chakravarthy Professor IIT, Bombay

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Member Prof. K. K. Biswas **Emeritus Professor** IIT. Delhi



Member Shri C. M. Venugopalan Vice President. Bosch Ltd., Bengaluru



Member **Prof. Sushil Kumar** Professor IIM. Lucknow



Member Shri Rajeev Kumar Singh Global Head Talent Acquisition Wipro Ltd. Pune



Member Shri Jitendra Chaddah Senior Director Intel India, Bengaluru



Secretary (Ex-officio) Smt. Swapnali D. Gadekar **Acting Registrar** PDPM IIITDM, Jabalpur

Three meetings of the Senate were held during 2021-22.

Various Standing Committees of the Senate:

Students Advisory Committee of the Senate (SACS)

1. Prof. Prashant K. Jain, Dean (Students) Convener (Ex-officio) 2. Prof. Aparajita Ojha, Head Counselling Member (Ex-officio)

3. Dr. Manu Srivastava Member (Warden, Hall - 1) 4. Dr. Harpreet Singh Member (Warden, Hall - 3) 5. Dr. Pankaj Sharma Member (Warden, Hall - 4) 6. Dr. Ravi Panwar Member (Warden, PG Hostel)

7. Prof. Preeti Khanna Member (Faculty other than Warden)

8. Mr. Ghulam Ahmed, Roll No. (1913103) Student Member

(Student Senate Representative)

9. Ms. Aayushi Gupta, Roll No. (2018511) Student Member

(Student Senate Representative)

10. Ms. Poornima S. Thakur Roll No. (1811603) Student Member

(Representative of Counselling)

Student Member 11. Mr. Vyom Sharma Roll No. (2017297)

(Representative of Counselling)

Scholarship and Prize Award Committee of Senate (SPACS)

> Dr. Subir Singh Lamba (Convener) : April 1, 2021 - November 10, 2021

: November 11, 2021 - January 30, 2022 Dr. Mukesh K Roy (Convener)

Dr. N K Mahato (Convener) : January 31, 2022 - March 1, 2022

Dr. Rakesh K Jha (Convener) : March 2, 2022 - till date

> Dr. Anil Kumar (Member)

> Dr. M Z Ansari (Member)

> Dr. Shivdayal Patel (Member)

Governance



Academic Programme Committee of Senate (APCS)

- Prof. Vijay K Gupta (Convener)
- Dr. Atul Gupta (Member)
- > Dr. Bhupendra Gupta (Member)
- > Dr. M Z Ansari (Member)
- > Dr. Matadeen Bansal (Member)
- Dr. Sangeeta Pandit (Member)

Other Committee

Institute Library Committee (From April 1, 2021 - June 30, 2021)

- Dr. L K Balyan (Convener)
- Dr. Ayan Seal (Member, CSE)
- Dr. M Amarnath (Member, ME)
- Dr. Trivesh Kumar (Member, ECE)
- Dr. Sangeeta Pandit (Member, Design)
- Dr. N K Jaiswal (Member, NS)

(From July 1, 2021 - March 31, 2022)

- Dr. Mukesh Kumar Roy (Convener)
- Dr. Manish Kumar Bajpai (Member, CSE)
- Dr. Sunil Agrawal (Member, ME)
- Dr. Varun Bajaj (Member, ECE)
- Dr. Amrita Bhattacharjee (Member, Design)
- Dr. Nihar Kumar Mahato (Member, NS)

Finance Committee



Chairman (Ex-officio) **Shri Deepak Ghaisas** Chairman Gencoval Strategic Services Pvt. Ltd., Mumbai



Member **Shri Prashant Pole** Director Disha Consultants, Jabalpur



Member (Ex-officio) Shri Rakesh Ranjan Additional Secretary (Technical Education) Ministry of Education, Government of India



Member (Ex-officio) **Prof. Sanjeev Jain** Director PDPM IIITDM, Jabalpur (April 1, 2021 to - Nov. 24, 2021)



Member (Ex-officio) **Shri Anil Kumar** Director (Finance) Ministry of Education, Government of India



Member (Ex-officio) Prof. P.N. Kondekar Director PDPM IIITDM, Jabalpur (Nov. 25, 2021 - till date)



Member Ms. Atreyee Borooah Thekedath Founder Director Web.com (India) Pvt. Ltd., Guwahati



Secretary (Ex-officio) Smt. Swapnali D. Gadekar **Deputy Registrar** PDPM IIITDM, Jabalpur

Three meetings of the Finance Committee were held during the year 2021-22.

Governance



Building and Works Committee



Chairperson **Prof. Sanjeev Jain** Director PDPM IIITDM, Jabalpur (April 1, 2021 - Nov. 24, 2021)



Member Er. Jayant Kumar Gupta SE (Civil) CPWD, Bhopal (Feb. 22, 2022 - till date)



Chairperson Prof. P.N. Kondekar Director PDPM IIITDM, Jabalpur (Nov. 25, 2021 - till date)



Member Er. Mohd. Ayub Khan SE (Electrical) MPPKVVCL, Jabalpur (April 1, 2021 - Feb. 21, 2022)



Member **Shri Prashant Pole** Director Disha Consultants, Jabalpur



Member **Er. Sunil Trivedi** SE (Electrical) MPPKVVCL, Jabalpur (Feb. 22, 2022 - till date)



Member Prof. P. N. Kondekar Dean (Planning & Development) PDPM IIITDM, Jabalpur



Secretary (Ex-officio) Smt. Swapnali D. Gadekar Acting Registrar & OIC (Estate) PDPM IIITDM, Jabalpur



Member **Shri Atul Kumar Pandey** SE (Civil) IIT, Indore (April 1, 2021 - Feb. 22, 2022)

Three meetings of the B&WC were held during the year 2021-22.

Office Administration •—





Mr. R P Dwivedi Joint Registrar Academic MCA, MPM, LLB



Ms Swapnali D. Gadekar Acting Registrar Deputy Registrar Finance and Accounts, First Appellate Authority (RTI) MBA



Mr. Vijay Kumar Dubey Executive Engineer (Civil) Civil Engineering, MBA



Mr. Rizwan Ahmed Deputy Registrar **Internal Audit General Administration** Establishment M.Sc., LL.B.



Ms. Menika Patel Assistant Registrar Library MLib



Mr. Shailesh Sharma Assistant Registrar Directorate Purchase and Store M.Com, MCA, LL.B., MA (Hindi)



Mr. Santosh Mahobia Assistant Registrar Academic Student Affairs Rajbhasha, CPIO MBA



Mrs. Priti Patel Assistant Registrar IIC & PCC, RSPC, International Affairs M.B.A.



Mr. Omvir Singh Bhadauria Assistant Registrar Placement cum Public **Relation Officer** ME, PGDBA

Technical Officers



Shri Awadhesh Kumar Singh **Technical Officer** Mechatronics ME From Asian Institute of Technology, Thailand



Dr. K K Soundra Pandian Technical Officer (upto 3/7/2021) **Electronics & Communication** PhD – IIT Patna



Shri D S Ramteke Technical Officer Machine Design Pursuing PhD – IIT Indore



Shri Aditya Sharma Technical Officer Computer Science & Engineering M.Tech. (CS), Jodhpur National University

Office Administration



GROUP 'B' STAFF

No.	Name	Designation
1.	Shri R. K. Mishra	Assistant Engineer (Civil)
2.	Shri Sunil Jat	Assistant Engineer (Civil)
3.	Shri Ashok Kumar	Superintendent (on Deputation)
4.	Shri Aloysius Beenu Michael	Jr. Superintendent
5.	Mrs. Megha Kushwah	Jr. Superintendent
6.	Shri Sandeep Awasthi	Jr. Superintendent
7.	Shri Anil Kumar	Jr. Superintendent
8.	Shri Dev Krishna Jha	Jr. Superintendent
9	Shri Kanhaiya Lal Barmaiya	Jr. Superintendent
10.	Shri Nishant Karda	Jr. Superintendent
11.	Dr. Sapna S. Tayade	Jr. Superintendent
12.	Shri Mayank Sharma	Junior Engineer (Civil)
13.	Shri Piyush Jain	Junior Engineer (Civil)
14.	Shri Santosh Kumar Gouda	Junior Engineer (Electrical) (from 08/10/2021)
15.	Shri Sourav Garari	Junior Engineer (Electrical) (from 29/10/2021)
16.	Smt. Savita Shah	Staff Nurse (on contract)

GROUP 'C' STAFF

No.	Name	Designation
1.	Shri Praveen Armo	Sr. Assistant
2.	Shri Kamlesh S. Warkade	Sr. Assistant
3.	Shri Jitendra Bahadur Singh	Sr. Assistant
4.	Shri Pankaj Prajapati	Sr. Assistant
5.	Shri Simanta kar Gupta	Sr. Assistant
6.	Shri Prashant Agnihotri	Sr. Assistant

Office Administration •



7.	Shri Rajesh Kumar	Sr. Assistant
8.	Shri Adesh Kumar	Sr. Assistant
9.	Shri Rajesh	Sr. Assistant
10	Shri Abhishek Bawane	Sr. Assistant
11.	Shri Richard Saberio	Sr. Assistant
12.	Shri Rahul Kumar Deshmukh	Sr. Assistant
13.	Smt. Aishwarya Pradhan	Sr. Assistant
14.	Shri Akhilesh Shrivastava	Sr. Technician
15.	Shri Alok Kulkarni	Sr. Technician
16.	Smt. Bharti Kewat	Sr. Technician
17.	Shri Piyush Kumar Usrethe	Sr. Technician
18.	Shri Anup Bajpai	Sr. Technician
19.	Shri Ghanshyam Meshram	Sr. Technician
20.	Shri Mayur S. Mungole	Sr. Technician
21.	Shri Anupam Shukla	Sr. Technician
22.	Shri Varun Dubey	Sr. Technician
23.	Smt. Aayesha B. Mansoori	Sr. Technician
24.	Shri Ram Dularey Vishwakarma	Sr. Technician
25.	Shri Milind P. Bobde	Sr. Technician
26.	Shri Robinson George Markam	Sr. Technician
27.	Shri Anup Kumar Gupta	Sr. Technician
28.	Shri Tabish Khan	Sr. Technician
29	Shri Manoj Tigga	Sr. Technician
30.	Ms. Neha Sharma	Jr. Technician
31.	Shri Mohd. Izrael Khan	Driver
32.	Shri Ganesh Prasad Kashyap	Driver

Computer Science and **Engineering**

epartment of Computer Science and Engineering (CSE) offers designcentric programs such as B.Tech in CSE, M.Tech in CSE with two specializations (AI & ML and Data Science), and Ph.D. programs in various research areas. The CSE discipline hosts around 1100 outstanding young minds not only from across the country but also from abroad to stride towards innovation, research, and development in various areas and nurture them to become good citizens to contribute to society.

The department laboratories are well equipped with powerful state-of-the-art Workstations, HPC Servers, Debian Linux servers, and network infrastructures such as the ISDN equipment, network distribution switches, firewall, and redundant wireless access controller to cater to the computing needs of the institute research and professional efforts, and to give exposure of the latest technological advances to the students in various fields of Computer Science and Engineering. The curriculum is being regularly upgraded to allow students to be equipped with the necessary skills required for efficient hardware-software interaction and system development. The graduates find broad scope in IT and product manufacturing-related industries in addition to application development avenues and higher studies.

The department has highly qualified faculty members, who graduated from reputed Universities/Institutions, and are involved in cutting-edge teaching and research in AI and Computational Intelligence, IOT and Embedded Systems, Networking and Security, and Image and Vision Engineering domains. The department has organized many national and international conferences, workshops, and national-level training programs.



Faculty CSE





Aparajita Ojha PhD - RDVV Jabalpur Professor CAGD, Finite Elements, Spline Theory, Approximation Theory, Wavelet Analysis



Pritee Khanna PhD - Kurukshetra University Professor Computer Graphics, Dbms, Data Structures, Algorithms, Computer Enabled **Product Design**



Atul Gupta PhD - IIT Kanpur Professor Software Engineering, Machine learning



Sraban Kumar Mohanty PhD - IIT Guwahati Assistant Professor (Grade I) I/O Efficient algorithms for Matrix Computations



Vinod Kumar Jain PhD - ABV-IIITM Gwalior Assistant Professor (Grade I) Location Estimation in Indoor Wireless Networks



Manish Kumar Bajpai PhD - IIT Kanpur Assistant Professor (Grade I) Parallel Algorithms, Image Reconstruction



Ayan Seal PhD - Jadavpur University Assistant Professor (Grade I) Thermal Face Recognition for Biometric security System (Image Processing and Computer Vision)



Munesh Singh PhD - IIT Delhi Assistant Professor (Grade I) Wireless Sensor Network



Kusum Kumari Bharti $PhD-ABV\hbox{-} Indian\ Institute\ of\ Information$ Technology Management, Gwalior Assistant Professor (Grade II) Text Clustering



Neelam Dayal Ph.D. - MNNIT Allahabad Assistant Professor (Grade II) Software Defined Network Security



Durgesh Singh PhD - IIT BHU Assistant Professor (Grade II) **Image Processing**



Abhishek Verma PhD - NIT Kurushetra Assistant Professor (Grade II) Internet of things

Faculty CSE





Avinash Chandra Pandey PhD – JIIT Noida Assistant Professor (Grade II) Machine Learning and Computational Intelligence



Vijaypal Singh Rathor PhD - ABVIIITM Gwalior Assistant Professor (Grade II) Design for Trust Techniques for Trustworthy System Design

Journals

- 1. Avinash Chandra Pandey, Ankur Kulhari, and Deep Shikha Shukla. "Enhancing sentiment analysis using Roulette wheel selection based cuckoo search clustering method." Journal of Ambient Intelligence and Humanized Computing 13, no. 1 (2022):
- 2. Ayan Seal, Aditya Karlekar, Ondrej Krejcar, and Enrique Herrera-Viedma, "Performance and convergence analysis of modified cmeans using Jeffreys-divergence for clustering", International Journal of Interactive Multimedia and Artificial Intelligence, 2021, 10.9781/ ijimai.2021.04.009, IF 2.561.
- Krishna Kumar Sharma, Ayan Seal, Enrique Herrera-Viedma, and Ondrej Krejcar, "An Enhanced Spectral Clustering Algorithm with S-distance", Symmetry, MDPI, vol. 13(4), pp. 596, 2021, doi.org/10.3390/ sym13040596, IF 2.645.
- 4. Krishna Kumar Sharma, Ayan Seal, Anis Yazidi, Ali Selamat, and Ondrej Krejcar, "Clustering Uncertain Data Objects" using Jeffreys-Divergence and Maximum Bipartite Matching based Similarity"Measure", IEEE Access, vol. 9, pp. 79505-79519, 2021, DOI: 10.1109/ACCESS.2021.3083969, IF 3.745.
- 5. Mohan Karnati, Ayan Seal, Anis Yazidi, and Ondrej Krejcar, "LieNet: A Deep Convolution Neural"Networks Framework for Detecting Deception", IEEE Transactions on Cognitive and Developmental Systems, 2021, DOI: 10.1109/TCDS.2021.3086011, IF. 2.667.

- 6. Samir Jain, Ayan Seal, Aparajita Ojha, Anis Yazidi, Jan Bures, Ilja Tacheci, Ondrej Krejcar, "A deep CNN for anomaly detection and localization in wireless capsule endoscopy images", Computers in Biology and Medicine, Elsevier, 2021
- Ashish Kumar Gupta, Ayan Seal, Pritee Khanna, Enrique Herrera-Viedma, Ondrej Krejcar, "ALMNet: Adjacent Layer driven Multi-scale Features for Salient Object Detection", IEEE Transactions on Instrumentation & Measurement, 2021
- Kusum Kumari Bharti and Shivanjali Pandey, Fake Account Detection in Twitter using Logistic Regression with Particle Swarm Optimization, Soft Computing, 2021
- Kailash W Kalare, Manish Bajpai, "Deep Neural Network for Beam Hardening Artifacts Removal in Image Reconstruction", Applied Intelligence, Springer, 52, 6037-6056, 2022, https://doi.org/ 10.1007/s10489-021-02604-y, (Impact Factor: 5.019).
- 10. Raghvendra Mishra, Manish Bajpai, "Hybrid multiagent based adaptive genetic algorithm for limited view tomography using oppositional learning", Biomedical Signal Processing & Control, Elsevier, 75, 1-11, 2022 https://doi.org/10.1016/j.bspc. 2022.103610 (Impact Factor: 5.076).
- 11. Saroj Chandra, Manish Bajpai, "Fractional Model with Social Distancing Parameter for Early Estimation of COVID-19 Spread", Arabian Journal for Science and Engineering, Springer, 2021,



- https://doi.org/10.1007/s13369-021-05827-w, (Impact Factor: 2.807).
- 12. Raghvendra Mishra, Manish Bajpai, "A Priority Based Genetic Algorithm for Limited View Tomography", Applied Intelligence, Springer, 51, 6968-6982, 2021, https://doi.org/10.1007/s10489-021-02192-x, (Impact Factor: 5.019).
- 13. Santosh Mishra, Koushlendra K Singh, Richa Dixit, Manish Bajpai, "Design of Fractional Calculus based Differentiator for Edge detection in Color images", Multimedia Tools and Applications, Springer, 80: 29965-29983, 2021, https://doi.org/ 10.1007/s11042-021-11187-2 (Impact Factor: 2.577).
- 14. Koushlendra K Singh, Suraj Kumar, Prachi Dixit, Manish Bajpai, "Kalman Filter Based Short Term Prediction Model for SARS-COV-2 Spread", Applied Intelligence, Springer, 51: 2714-2726, 2021,, DOI: https://doi.org/ 10.1007/ s10489-020-01948-1 (Impact Factor: 5.019).
- 15. Singh, Munesh, Sourav Kumar Bhoi, and Sanjaya Kumar Panda. "Geometric least square curve fitting method for localization of wireless sensor network." Ad Hoc Networks 116 (2021): 102456.
- 16. Kokkalla, Srinath, Jagadeesh Kakarla, Isunuri B. Venkateswarlu, and Munesh Singh. "Three-class brain tumor classification using deep dense inception residual network." Soft Computing 25, no. 13 (2021): 8721-8729.
- 17. Bhoi, Sourav Kumar, Kalyan Kumar Jena, Debasis Mohapatra, Munesh Singh, Raghvendra Kumar, and Hoang Viet Long. "Communicable disease pandemic: a simulation model based on community transmission and social distancing." Soft Computing (2021): 1-11.
- 18. Chaturvedi Shubhangi, Pritee Khanna, and Aparajita Ojha. "A survey on vision-based outdoor smoke detection techniques for environmental safety." ISPRS Journal of Photogrammetry and Remote Sensing 185 (2022): 158-187.

- 19. Mishra Shiwangi, Beheshti Iman, Tanveer M, and Khanna Pritee, "3D Supervoxel based features for early detection of AD: A microscopic view to the brain MRI." Multimedia Tools and Applications (2022).
- 20. Gour Neha, Tanveer M, and Khanna Pritee, "Challenges for Ocular Disease Identification in the Era of Artificial Intelligence." Neural Computing and Application (2022).
- 21. Mishra Shiwangi, Beheshti Iman, and Khanna Pritee, "A Review of Neuroimaging-Driven Brain Age Estimation for Identification of Brain Disorders." IEEE Reviews in Biomedical Engineering (2021).
- 22. Gaurav Mishra, Amit Kumar Kar, Amaresh Chandra Mishra, Sraban Kumar Mohanty, M.K. Panda, "SEND: A novel dissimilarity metric using ensemble properties of the feature space for clustering numerical data", Information Sciences, Vol 574, Pp 279-296, 2021
- 23. Singh S., Singh D., Sajwan M., Rathor V. S., Garg D., "Hyperspectral image classification using multiobjective optimization". Multimed Tools Appl (2022). https://doi.org/10.1007/ s11042-022-12462-6

Conference Publications

- Shrasti Vyas and Ayan Seal, "A Deep Convolution Neural Networks Framework for Analysing Electroencephalography Signals in Neuromarketing", Frontiers in Computing and Systems, North-Eastern Hill University, Shillong, Meghalaya, India, 29th September to 1st October 2021.
- 2. Girish Sharma, Jyoti Grover, Abhishek Verma, Rajat Kumar, and Rahul Lahre. "Analysis of Hatchetman Attack in RPL based IoT Networks." In 2022 IEEE 5th International Conference on "Emerging Technologies in Computer Engineering: Cognitive Computing and Intelligent IoT."(ICETCE-2022), pp. 666-678. Springer, 2022.
- 3. Raghvendra Mishra, Manish Bajpai, "Selfguided Genetic Algorithm for Limited View



- Tomography", IEEE IST, USA, 2021.
- Raghvendra Mishra, Manish Bajpai, "Multiagent Based GA for Limited View Tomography", International Conference on Machine Vision and Augmented Intelligence (MAI), India, 2021.
- 5. Avaneesh Singh, Saroj Kumar Chandra, Manish Bajpai, "Mathematical Model with Social Distancing Parameter for Early Estimation of COVID-19 spread", International Conference on Machine Vision and Augmented Intelligence (MAI), India, 2021.
- 6. Saroj Kumar Chandra, Abhisek Shrivastava, Manish Bajpai, "Three Dimensional Fractional Operator for Benign Tumor Region Detection", International Conference on Machine Vision and Augmented Intelligence (MAI), India, 2021.
- 7. Shubhangi Chaturvedi, Pritee Khanna, Aparajita Ojha, "Comparative Analysis of Traditional and Deep Learning Techniques for Industrial and Wildfire Smoke Segmentation," Sixth International Conference on Image Information Processing (ICIIP 2021), India, pp. 326-331, doi: 10.1109/ICIIP53038.2021.9702600.

- Pankaj Bamoriya, Gourav Siddhad, Pritee Khanna, Aparajita Ojha, "Cancelable Template Generation using Convolutional Autoencoder and RandNet", presented at 6th International Conference on Computer Vision and Image Processing (CVIP 2021), India, December 2021.
- Nishant Khare, Poornima Singh Thakur, Pritee Khanna, and Aparajita Ojha, "Analysis of Loss Functions for Image Reconstruction using Convolutional Autoencoder", 6th International Conference on Computer Vision and Image Processing (CVIP 2021), India, December 2021.
- 10 Poornima Singh Thakur, Pritee Khanna, Tanuja Sheorey, Aparajita Ojha, "Vision Transformer for Plant Disease Detection: PlantViT", presented at 6th International Conference on Computer Vision and Image Processing (CVIP 2021), India, December 2021.
- 11. Devpriya Kanojia and Vinod Kumar Jain, Adaptive Distributed Queuing Random Access Protocol for LoRa based IoT Networks, 2021 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), Hyderabad, India, 13-16 December 2021.

Electronics And Communication Engineering

he discipline of Electronics and Communication Engineering (ECE) has a perfect combination of teaching and research activities pertaining to field of Electronics and Communication. Since its inception the main objective of discipline is to impart quality education, hands-on training and research in the frontier areas of Electronics & Communication Engineering with broad focus on IT enabled design and manufacturing. The research and teaching expertise of the faculty members of the discipline cover the broad domain of applied and fundamental aspects of Electronics and Communication Engineering. Interdisciplinary research between the research groups of the discipline and with other disciplines and institutes is also in practice. The broad areas of research and academic activities in the discipline are:

- RF & Microwave Engineering
- Communication Engineering
- Signal and Image Processing
- Micro & Nano Electronics
- Power and Control Systems

The Discipline offers four years B. Tech programme to cater to the ever challenging needs of technical excellence in field of Electronics and Communication. In addition, it has strong research programmes leading to M.Tech and Ph.D. degree in all major areas of Electronics and Communication Engineering. Currently a large number of Ph.D. and M.Tech students are engaged in cutting edge research in the Discipline. The Discipline has several state of the art facilities for assisting teaching and research and development in RF & Microwave, Printed RF circuits, Wireless Communication, Digital Signal & Image processing, Nano-electronics and VLSI, Drives & Devices etc.

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P N Kondekar PhD - IIT Bombay Professor Microelectronics, VLSI-CMOS level design, Nano electronics devices and Semiconductor power devices, **Technology for Education**



Prabin Kumar Padhy PhD - IIT Guwahati Professor **Control Systems**



Dinesh Kumar Vishwakarma PhD – IISc Bangalore Professor Electromagnetics, Antennas, Microwave, Applied Photonics, Photonic crystals and **Optical Communication**



Sanjeev Narayan Sharma PhD - Thapar University, Patiala . Professor Signal Processing, Computational **Genomics & Proteomics**



Anil Kumar PhD - IIT Roorkee Associate Professor Multirate signal processing



Varun Bajaj PhD From IIT Indore Associate Professor Applied Signal Processing



Rakesh Kumar Jha PhD - NIT Surat Associate Professor Wireless Communications



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Sachin Kumar Jain PhD – IIT Kanpur Assistant Professor (Grade I) Power Quality



Trivesh Kumar PhD - IIT Kanpur Assistant Professor (Grade I) RF, Microwave and Antennas



Matadeen Bansal PhD - ABV-IIITM Gwalion Assistant Professor (Grade I) Wireless Communications & Networking



Biswajeet Mukherjee PhD - IIT Bombay Assistant Professor (Grade I) Microwave and Antenna Engineering

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Ravi Panwar PhD - IIT Roorkee Assistant Professor (Grade I) **Broadband Radar Absorbing Materials** Using Fractal Frequency Selective Surface (FSS) for stealth application.



Dip Prakash Samajdar PhD – University of Calcutta Assistant Professor (Grade II) Electronic Science (Material Science)



Atul Kumar PhD - IIT Guwahati Assistant Professor (Grade II) Chaotic Communication, Wireless Communication



Irshad Ahmad Ansari PhD – IIT Roorkee Assistant Professor (Grade II) Image Processing



Pankaj Sharma PhD – IIT Indore Assistant Professor (Grade II) Nanoelectronics, Photovoltaics, IoT, VLSI



Navjeet Bagga PhD - IIT Roorkee Assistant Professor (Grade II) Microelectronics and VLSI



Amit Vishwakarma PhD – IIT Guwahati Assistant Professor (Grade II) **Computer Vision**



Pushpa Raikwal PhD – DAVV Indore Assistant Professor (Grade II) VLSI Design



Koushik Dutta PhD – IIEST, Shibpur Assistant Professor (Grade II) Metal Oxide Based Gas Sensors



Journals

- 1. Vishwakarma A, and M.K. Bhuyan. "A Curvelet-based Multi-Sensor Image Denoising for KLT-based Image Fusion." Multimedia Tools and Applications 1, no. 1 (2022): 1-22. https://doi.org/10.1007/ s11042-021-11570-z.
- Kose, M.R., Ahirwal, M.K. & Kumar, A. A 2. new approach for emotions recognition through EOG and EMG signals. SIViP (2021). https://doi.org/10.1007/ s11760-021-01942-1
- Bhandari, Ashish Kumar, Kankanala 3. Srinivas, and Anil Kumar. "Optimized histogram computation model using cuckoo search for color image contrast distortion." Digital Signal Processing 118 (2021): 103203.
- Sachchidanand, Garg, Vivek, Anil Kumar, and Pankaj Sharma. "Numerical simulation of novel lead-free Cs3Sb2Br9 absorberbased highly efficient perovskite solar cell." Optical Materials 122 (2021): 111715.
- A. Santhos Kumar, Anil Kumar, Varun Bajaj, Girish Kumar Singh. "Class label altering fuzzy min-max network and its application to histopathology image database." Expert Systems with Applications, Vol 176, 114880, 2021. DOI:https://doi.org/ 10.1016/j.eswa.2021.114880.
- Dixit V., and A. Kumar, "Error analysis of L-PPM modulated MIMO based multi-user NOMA-VLC system with perfect and imperfect SIC." Appl. Opt. 61, no. 4 (2022): 858-867. https://doi.org/ 10.1364/ AO.440511
- Dixit V., and A. Kumar. "Performance Analysis of Angular Diversity Receiver based MIMO-VLC System for Imperfect CSI." J. Opt.23 (2021): 085701. https://doi.org/10.1088/2040-8986/ ac1321

- Sharma P., A. Kumar, and M. Bansal. 8. "Performance Analysis of Downlink NOMA System with Diversity Combining Schemes over ?-μ Fading Channel." Phy. Comm. 47, (2021): 101383. https://doi.org/10.1016/ j.phycom.2021.101383.
- Dixit V., and A. Kumar. "An exact BER analysis of NOMA-VLC system with imperfect SIC and CSI." AEU - International Journal of Electronics and Communications 138 (2021): 153864. https://doi.org/10.1016/j.aeue.2021.153 864
- 10. Sharma P., A. Kumar, and M. Bansal. "Performance analysis for user selectionbased downlink non-orthogonal multiple access system over generalized fading channels." Trans Emerging Tel Tech. 32 (2021): e4347(1-19). https://doi.org/ 10.1002/ett.4347.
- Dixit V., and A. Kumar, "An Exact Error 11. Analysis of Multi-User RC/MRC Based MIMO-NOMA-VLC System With Imperfect SIC," IEEE Access 9, (2021): 136710-136720. https://doi.org/ 10.1109/ ACCESS.2021.3117446.
- 12. Dixit V., and A. Kumar, "BER analysis of dynamic FOV based MIMO-NOMA-VLC system." AEU - International Journal of Electronics and Communications 142 (2021): 153989. https://doi.org/10.1016/ j.aeue.2021.153989
- 13. Dixit V., and A. Kumar, "BER performance of MIMO based NOMA-VLC system with imperfect SIC." Trans Emerging Tel Tech. 33, no. 4 (2022):e4422. https://doi.org/10.1002/ett.4422.
- 14. Chauhan M, B. Mukherjee. "Dual port spiral shaped dielectric resonator MIMO antenna with orthogonal modes for wideband application." Int J RF Microw Comput Aided Eng. 32, no. 2 (2022):e22984. https://doi.org/ 10.1002/ mmce.22984



- 15. Rajput A., M. Chauhan, and B. Mukherjee "A novel multi wideband bandstop filter with annular shaped stubs." AEU -International Journal of Electronics and Communications 142 (2021): 153993. https://doi.org/10.1016/j.aeue.2021.153 993.
- 16. Rajput A., M. Chauhan, and B. Mukherjee "An Ultra-Wideband Bandstop Filter with Circularly Etched Stub Resonator." Microw Opt Technol Lett. 63 (2021): 2958-2963. https://doi.org/10.1002/mop.33001.
- 17. Prashant D.V., S.K. Agnihotri, D.P.Samajdar. "Efficient GaAs nanowire solar cells with carrier selective contacts: FDTD and device analysis." Mater. Sci. Semicon. Processing. 141 (2022):106410. https://doi.org/ 10.1016/j.mssp.2021.106410
- 18. Dixit A., P.K. Kori, C. Rajan, and D.P. Samajdar. "Design Principles of 22-nm SOI LDD-FinFETs for Ultra-Low-Power Analog Circuits." J. Electron. Mater. 51 (2022): 1029-1040. https://doi.org/ 10.1007/s11664-021-09337-1.
- 19. Cecil K., J. Singh, and D.P. Samajdar, "A Raised Source/Drain Dopingless Tunnel FET with Stacked Source: Design and Analysis." Silicon 14 (2022): 3665-3672. https://doi.org/10.1007/s12633-021-01098-0.
- 20. Prashant D.V., S.K. Agnihotri, D.P.Samajdar. "Geometric optimization and performance enhancement of PEDOT: PSS/GaAs NP array based heterojunction solar cells." Opti. Mater. 117 (2021): 111080. https://doi.org/10.1016/ j.optmat.2021.111080.
- 21. Roy D., D.P.Samajdar, and A. Biswas. "Photovoltaic performance improvement of GaAs1-xBix nanowire solar cells in terms of light trapping capability and efficiency." Solar Energy 221 (2021):468-475. https://doi.org/ 10.1016/j.solener. 2021.04.064.

- 22. Dixit A., D.P. Samajdar, and N. Bagga. "Dielectric modulated GaAs1?xSbX FinFET as a label-free biosensor: device proposal and investigation." Semicond. Sci. Technol. 36 (2021): 095033. https://doi.org/10.1088/1361-6641/ ac0d97.
- 23. Chauhan V., and D. P. Samajdar, "Recent Advances in Negative Capacitance FinFETs for Low-Power Applications: A Review." IEEE Trans. Ultrason. Ferroelec. Freq. Cntrl. 68, no. 10 (2021): 3056-3068. https://doi.org/10.1109/ TUFFC.2021. 3095616.
- 24. Agnihotri S.K., D.P. Samajdar, D.V. Prashant, Z. Arefinia. "Numerical analysis of InP based high efficiency radial junction nanowire solar cell." Opti. Mater. 119 (2021): 111365. https://doi.org/10.1016/ j.optmat.2021.111365.
- 25. Chauhan V., D. P. Samajdar, N. Bagga and A. Dixit. "A Novel Negative Capacitance FinFET With Ferroelectric Spacer: Proposal and Investigation." IEEE Trans.Ultrason. Ferroelec. Freq. Cntrl. 68, no. 12 (2021): 3654-3657. https://doi.org/10.1109/ TUFFC.2021.3098045.
- 26. Hidouri T., H. Maaref, D.P. Samajdar, M.B. Rabeh, S. Nasr, F. Saidi, N. Ameur, F. Saidi, J. Dhahri, R. Mghaieth. "Transfer mechanisms and geometry effect on the dynamics of excitons in boron-containing GaAs alloys: Time-resolved photoluminescence investigation." Opti. Mater. 119 (2021): 111386. https://doi.org/10.1016/j.optmat.2021.1 11386.
- Behera, A.K., C. Rajan, D.P. Samajdar, A. Lodhi, J. Patel, K. Mishra, and D.S. Yadav. "Performance Analysis of Sigma Delta ADC Developed using Electrically Doped GAPSb/InP Gate All Around Tunnel Field Effect Transistor." J. Electron. Mater.50 (2021): 5740-5753. https://doi.org/ 10.1007/s11664-021-09112-2.



- 28. Dixit A., D. P. Samajdar, and V. Chauhan, "Sensitivity Analysis of a Novel Negative Capacitance FinFET for Label-Free Biosensing." IEEE Trans. Electron Devices 68, no. 10, (2021): 5204-5210. https://doi.org/10.1109/TED.2021. 3107368.
- 29. Mal I., and D.P. Samajdar. "Investigation of optoelectronic and thermoelectric properties of InAsBi for LWIR applications: A first principles and k dot p study." Mate. Sci. Semicond. Processing 137 (2022): 106178. https://doi.org/10.1016/ j.mssp.2021.106178.
- 30. Agnihotri S.K., D.V. Prashant, D.P. Samajdar, and Z. Arefinia. "Performance analysis of ITO-free PEDOT:PSS/InP nanowire hybrid solar cell." Solar Energy 228 (2021): 418-426. https://doi.org/ 10.1016/ j.solener.2021.09.078.
- 31. Dixit A., D.P. Samajdar, and N. Bagga. "Demonstration of Geometrical Impact of Nanowire on GaAs1-xSbx Transistor Performance." IEEE Trans. Electron Devices 69, no. 1 (2022): 388-394. https://doi.org/10.1109/TED.2021.31308 49.
- 32. Sharma, Amit, Tiwari, Pratik and Vishwakarma, Dinesh Kumar. "Frequency re-configurable metal-graphene hybrid MIMO patch antenna for terahertz communication" Frequenz, vol., no., 2022. https://doi.org/10.1515/freq-2021-0174
- 33. Sahu D., Mourya S., Bansal M., and V. K. Dinesh, "Deep Learning-Based Energy-Efficient Relay Precoder Design in MIMO-CRNs, Vol 50, pp 101486, Oct 2021. DOI: https://doi.org/10.1016/j.phycom.2021. 101486.
- 34. Kritarth Srivastava and Dinesh Kumar V., "Investigation of light coupling between HMIM and HIMI plasmonic waveguides", Optical and Quantum Electronics, Vol 53, Issue 5, pp 1-8, April 2021. DOI:

- 10.1007/s11082-021-02874-3.
- Sharma, Sachin, Smith K. Khare, Varun Bajaj, and Irshad Ahmad Ansari. "Improving the separability of drowsiness and alert EEG signals using analytic form of wavelet transform." Applied Acoustics 181 (2021): 108164.
- Kumar, Saurav, Himanshu Gupta, Drishti Yadav, Irshad Ahmad Ansari, and Om Prakash Verma. "YOLOv4 algorithm for the real-time detection of fire and personal protective equipments at construction sites." Multimedia Tools and Applications (2021): 1-21.
- 37. Dutta Koushik, 2021, "Potential of Impedance Spectroscopy towards Quantified Analysis of Gas Sensors: A Tutorial." IEEE Sensors Journal 21 (20): 22220-31. https://doi.org/10.1109/ JSEN.2021.3082475.
- Sachin Agrawal and Manoj S. Parihar, A rectangular patch loaded circular monopole super wideband antenna with triple-band notch characteristic, Taylor & Francis IETE Technical review, https://doi.org/10.1080/02564602.2021. 1973598,2021.
- Sachin Agrawal, Manoj S. Parihar "Performance Evaluation of RF Energy Harvesting Circuit with DRA and Planar Antennas,"Springer Wireless Personal Communications, vol.00, no.0, pp. 00-00, 2021.
- Sachin Agrawal and Manoj S. Parihar, Patch loaded slot antenna for super wideband applications with dual-band notch characteristic. Springer Wireless Personnel Communication, accepted, 2021.
- 41. Sahu D, S. Maurya, M. Bansal, and D. Kumar. "Data-driven approach to design energy-efficient joint precoders at source and relay using deep learning in MIMO-CRNs." Trans Emerging Tel Tech. 33, no. 5



- (2022): e4454. https://doi.org/10.1002/ ett.4454
- 42. Singh S. and M. Bansal. "On the Outage Performance of Overlay Cognitive STBC-NOMA System With Imperfect SIC." IEEE Wireless Comm. Letters 10, no. 11 (2021): 2587-2591, https://doi.org/ 10.1109/ LWC.2021.3109444.
- 43. Priyank Sharma, Atul Kumar, Matadeen Bansal, "Performance analysis of downlink NOMA system with diversity combining schemes over η-μ fading channel," in Physical Communication, Volume 47, 2021, ISSN 1874-4907.
- 44. Shailendra Singh, Matadeen Bansal, "Outage analysis of cooperative NOMA based hybrid cognitive radio system with channel estimation errors," in Physical Communication, Volume 48, 2021, ISSN 1874-4907, https://doi.org/ 10.1016/ j.phycom.2021.101404.
- 45. Sharma P, Kumar A, Bansal M. Performance analysis for user selection-based downlink non-orthogonal multiple access system over generalized fading channels. Trans Emerging Tel Tech. 2021;e4347. https://doi.org/10.1002/ett.4347
- 46. Singh S. and M. Bansal. "On outage analysis of cooperative overlay NOMA system with CEE and imperfect SIC." Wireless Netw 27, (2021): 4987-4995. https://doi.org/ 10.1007/s11276-021-02784-y.
- 47. Singh S. and M. Bansal. "Performance analysis of non-orthogonal multiple access assisted cooperative relay system with channel estimation errors and imperfect successive interference cancellation." Trans Emerging Tel Tech. 32, no. 12 (2021): e4374. https://doi.org/10.1002/ett.4374.
- 48. Sahu D, S. Maurya, M. Bansal and D. Kumar. "Deep Learning-Based Energy-Efficient Relay Precoder Design in MIMO-CRNs." Physical Communication 50 (2022): 101486. https://doi.org/ 10.1016/

- j.phycom.2021.101486.
- Dixit A., D.P. Samajdar, and N. Bagga. "Demonstration of Geometrical Impact of Nanowire on GaAs1-xSbx Transistor Performance." IEEE Trans. Electron Devices 69, no. 1 (2022): 388-394. https://doi.org/10.1109/TED.2021. 3130.49.
- Chauhan N., N. Bagga, S. Banchhor, C. Garg, A. Sharma, A. Datta, S Dasgupta and A. Bulusu. "BOX Engineering to Mitigate Negative Differential Resistance in MFIS Negative Capacitance FDSOI FET: An Analog Perspective." Nanotechnology 33 (2022): 085203. https://doi.org/ 10.1088/1361-6528/ac328a
- Dixit A, D.P. Samajdar and N. Bagga. "Impact of the mole fraction modulation on the RF/DC performance of GaAs1?xSbx FinFET." Int J Numer Model. 35, No. 2 (2022): e2957. https://doi.org/ 10.1002/jnm.2957.
- 52. Chauhan N., N. Bagga, S. Banchhor, A. Datta, S. Dasgupta and A. Bulusu. "Negative-to-Positive Differential Resistance Transition in Ferroelectric FET: Physical Insight and Utilization in Analog Circuits," IEEE Trans. Ultrason. Ferroelec. Freq. Cntrl. 69, no. 1, (2022): 430-437. https://doi.org/10.1109/ TUFFC. 2021.3116897.
- 53. Chauhan V., D. P. Samajdar, N. Bagga and A. Dixit. "A Novel Negative Capacitance FinFET With Ferroelectric Spacer: Proposal and Investigation." IEEE Trans.Ultrason. Ferroelec. Freq. Cntrl. 68, no. 12 (2021): 3654-3657. https://doi.org/ 10.1109/TUFFC.2021.3098045.
- Patnaik A., N.K. Jaiswal, R. Singh, and P. Sharma. "Analytical Model for 2DEG Charge Density in β-(AlxGa1-x) 203/ Ga2O3 HFET." Semicond. Sci. Technol. 37 (2022): 025002. https://doi.org/ 10.1088/1361-6641/ac3f1f.



- 55. Sachchidanand, Garg, Vivek, Anil Kumar, and Pankaj Sharma. "Numerical simulation of novel lead-free Cs3Sb2Br9 absorberbased highly efficient perovskite solar cell." Optical Materials 122 (2021): 111715.
- 56. Kiran G., R. Krishna, P. Dwivedi,, and R. Singh. "Analytical Modeling of MgZnO/ZnO MOSHEMT Based Biosensor for Biomolecule Detection." Micro and Nanostructures 163 (2022): 107130. https://doi.org/10.1016/ j.spmi.2021.107130.
- 57. Sharma S., and P.K. Padhy. "Indirect outputerror modeling scheme for continuous processes with unknown time delay using iterative instrument variable approach." Int. J. Dynam. Control 10 (2022): 1637–1648. https://doi.org/ 10.1007/ s40435-021-00896-z.
- 58. Sharma S. and P.K. Padhy. "Extended Bpolynomial Neural Network for Timedelayed System Modeling Using Sampled Data." Journal of Intelligent & Fuzzy Systems 41 no. 2 (2021): 3277 - 3288. https://doi.org/10.3233/JIFS-210580.
- 59. Trivedi R., and P.K. Padhy. "Novel Rational Approximated Fractional Order Lead Compensator." IETE Journal of Research (2021). https://doi.org/ 10.1080/ 03772063.2021.2007799.
- 60. Gnaneshwar K., and P.K. Padhy. "Robust Design of Tilted Integral Derivative Controller for Non-integer Order Processes with Time Delay." IETE Journal of Research (2021). https://doi.org/ 10.1080/03772063.2021.2004462.
- 61. Verma B., and P.K. Padhy. "Integral-Square-Error Based Normalized Relative Gain Array for the Input-Output Pairing and Equivalent Transfer Function Design of MIMO Processes." IETE Journal of Research (2021). https://doi.org/ 10.1080/03772063.2021.1984996

- Sharma S., P.K. Padhy. "An indirect 62. approach for online identification of continuous time-delay systems." Int J Numer Model 35, no. 1 (2022) :e2947. https://doi.org/10.1002/jnm.2947.
- Raikwal P., A.P. Shah, and V. Neema. "A Low-Leakage Variation-Aware 10T SRAM Cell for IoT Applications." Journal of Circuits, Systems and Computers 30 (2021):13. https://doi.org/10.1142/ S0218126621502431.
- 64. Sharma A., R. Panwar, and R. Khanna. "Development of single-layered, wideangle, polarization-insensitive metamaterial absorber." Defence Science Journal 71, no. 3 (2021): 372-377. https://doi.org/10.14429/dsj.71.16701.
- Kala T., K. Maharshi, S. Patel, and R. Panwar. "Electromagnetic and Mechanical Characterization of Iron Reinforced Natural Fiber Composites for Microwave Absorbing Applications." Advanced Composite Materials 30, no. 6 (2021): 559-569, https://doi.org/ 10.1080/ 09243046.2021.1904345.
- 66. Yadav R., and R. Panwar. "Improved performance of electronic waste constituted cost-effective microwave absorber using cavitation." J. Electron. Mater. 50 (2021): 3862-3875. https://doi.org/10.1007/s11664-021-08900-0.
- 67. Das P., and R. Panwar. "Broadband RCS reduction of microstrip antenna in the THz Band." Opt Quant Electron 53 (2021): 410. https://doi.org/10.1007/ s11082-021-03063-y.
- Chaudhary V., and R. Panwar. "ECM Enabled Whale optimization assisted facile design of dual-band conformal FSS for WLAN shielding applications." J. Electromag. Waves Appli. 35, no. 9 (2021): 1261-1272. https://doi.org/ 10.1080/ 09205071.2021.1884995.



- 69. Yadav R., and R. Panwar, "Numerical and Experimental Dielectric Investigation of Heterogeneous Electronic Waste Derived Cost-Effective Composite for Stealth Applications." IEEE Transactions on Dielectrics and Electrical Insulation 28, no. 5 (2021): 1743-1750. https://doi.org/ 10.1109/TDEI.2021.009564.
- 70. Chaudhary V., and R. Panwar. "Hybrid ECM Blended Whale Optimization Derived Frequency-Selective Conformal EMI Shielding Structure Using Ferrite Substrate." IEEE Transactions on Magnetics 57, no. 8 (2021): 2800710. https://doi.org/10.1109/TMAG.2021.308 6724.
- 71. Yadav R., and R. Panwar, "Microwave Heat-Treated Electronic Waste Constituted X-Band Radar Absorbing Structure Using Electromagnetic Mixing Model Assisted Optimization Strategy." IEEE Transactions on Electromagnetic Compatibility 63, no. 4 (2021): 996-1006. https://doi.org/ 10.1109/TEMC.2021.3056545.
- 72. Yadav R., and R. Panwar, "Multilayer Gradient Perforated Radar Absorbing Structure for Stealth Applications." IEEE Transactions on Magnetics 58, no. 2, (2022): 2800305, https://doi.org/ 10.1109/TMAG.2021.3103133.
- 73. Chaudhary V., and R. Panwar. "FSS Derived Using a New Equivalent Circuit Model Backed Deep Neural Network," IEEE Antennas and Wireless Propagation Letters 20, no. 10 (2021): 1963-1967. https://doi.org/10.1109/LAWP.2021.3101 225.
- 74. Jain D., S.N.Sharma, A. Jain. "Guided Filtering Based Efficient Digital Differentiator Design for Electrocardiogram Signal Processing." International Journal of Intelligent Engineering and Systems 14, no.6 (2021): 137-145. https://doi.org/ 10.22266/ ijies2021.1231.13.

- 75. Yadav Y., S.N. Sharma, D.K. Shakya, and A. Panchal. "Hot spots localization in proteins by optimized short time Ramanujan Fourier transform." Journal of **Bioinformatics and Computational Biology** 19, no. 02 (2021): 2150004. https://doi.org/10.1142/S021972002150 0049.
- 76. Agrawal M., and T. Kumar. "A substrate integrated waveguide (SIW) based selfquadruplexing antenna for Ku-band applications." International Journal of Microwave and Wireless Technologies (2022): 1-9. https://doi.org/10.1017/ \$1759078722000265
- 77. Agrawal M., and T. Kumar. "A Multiband E-Shaped Substrate Integrated Waveguide-Based Antenna for X, Ku, K-Band Applications." IETE Journal of Research (2021). https://doi.org/ 10.1080/ 03772063.2021.1994038
- 78. Agrawal M., and T. Kumar. "SIW-based enhanced gain self-diplexing antenna using higher order modes." Journal of Electromagnetic Waves and Applications 36, no. 7 (2022): 912-927. https://doi.org/ 10.1080/09205071.2021.1995899
- 79. Khare, S.K., and V. Bajaj. 2020. "Optimized Tunable Q Wavelet Transform Based Drowsiness Detection From Electroencephalogram Signals". IRBM. doi:10.1016/j.irbm.2020.07.005.
- Khare, S.K., and V. Bajaj. "A hybrid decision support system for automatic detection of Schizophrenia using EEG signals." Computers in Biology and Medicine 141 (2022): 105028. https://doi.org/10.1016/ j.compbiomed.2021.105028
- 81. Gupta K., V. Bajaj and I. A. Ansari. "OSACN-Net: Automated Classification of Sleep Apnea Using Deep Learning Model and Smoothed Gabor Spectrograms of ECG Signal." IEEE Transactions on Instrumentation and Measurement 71



- (2022): 1-9. https://doi.org/10.1109/ TIM.2021.3132072.
- 82. Sinhal R., S. Sharma, I.A. Ansari, and V. bajaj. "Multipurpose medical image watermarking for effective security solutions." Multimed Tools Appl 81 (2022): 14045–14063. https://doi.org/10.1007/ s11042-022-12082-0.
- 83. Kumar, A. Santhos, Anil Kumar, Varun Bajaj, and Girish Kumar Singh. "Class label altering fuzzy min-max network and its application to histopathology image database." Expert Systems with Applications 176 (2021): 114880.
- 84. Singh, Himanshu, Sethu Venkata Raghavendra Kommuri, Anil Kumar, and Varun Bajaj. "A new technique for guided filter based image denoising using modified cuckoo search optimization." Expert Systems with Applications 176 (2021): 114884.
- 85. Khare, Smith K., Varun Bajaj, and U. Rajendra Acharya. "Spwvd-cnn for automated detection of schizophrenia patients using eeg signals." IEEE Transactions on Instrumentation and Measurement 70 (2021): 1-9.
- 86. Taran, Sachin, Varun Bajaj, G. R. Sinha, and Kemal Polat. "Detection of sleep apnea events using electroencephalogram signals." Applied Acoustics 181 (2021): 108137.
- 87. Khare, Smith K., Varun Bajaj, and U. Rajendra Acharya. "Detection of Parkinson's disease using automated tunable Q wavelet transform technique with EEG signals." Biocybernetics and Biomedical Engineering 41, no. 2 (2021): 679-689.
- 88. Sharma, Sachin, Smith K. Khare, Varun Bajaj, and Irshad Ahmad Ansari. "Improving the separability of drowsiness and alert EEG signals using analytic form of wavelet transform." Applied Acoustics 181

- (2021): 108164.
- Khare, Smith K., Varun Bajaj, and U. Rajendra Acharya. "PDCNNet: An automatic framework for the detection of Parkinson's Disease using EEG signals." IEEE Sensors Journal (2021).
- 90. Khare, Smith K., and Varun Bajaj. "A Self-Learned Decomposition and Classification Model for Schizophrenia Diagnosis." Computer Methods and Programs in Biomedicine (2021): 106450.
- Kaity A., S. Singh, and P.N. Kondekar. "Silicon-On-Nothing Electrostatically Doped Junctionless Tunnel Field Effect Transistor (SON-ED-JLTFET): A Short Channel Effect Resilient Design." Silicon 13 (2021): 9-23. https://doi.org/10.1007/ s12633-020-00404-6.
- Singh, Himanshu, Sethu Venkata 92. Raghavendra Kommuri, Anil Kumar, and Varun Bajaj. "A new technique for guided filter based image denoising using modified cuckoo search optimization." Expert Systems with Applications 176 (2021): 114884.
- 93. Chaudhary V. and R. Panwar, "Neural Network Topology-Based Terahertz Absorber Using Fractal Frequency Selective Surface," IEEE Sensors Journal 21, no. 21 (2021): 24028-24037, https://doi.org/10.1109/ JSEN.2021. 3112336.
- Dixit A., D.P. Samajdar, and N. Bagga. "Dielectric modulated GaAs1?xSbX FinFET as a label-free biosensor: device proposal and investigation." Semicond. Sci. Technol. 36 (2021): 095033. https://doi. org/10.1088/1361-6641/ac0d97.

Conference Publications

A. Kumar, A. Vishwakarma, V. Bajaj, A. Sharma and C. Thakur, "Colon Cancer Classification of Histopathological Images Using Data Augmentation," 2021



- International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-5, doi: 10.1109/ CAPS52117.2021.9730704.
- H. Gupta, H. Singh, A. Kumar and A. 2. Vishwakarma, "Pixel Corrected Adaptive Conductance Function based Diffusion Filter and Image Denoising using Bidimensional Empirical Mode Decomposition," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-6, doi: 10.1109/ CAPS52117. 2021.9730521.
- H. S. Pal, A. Kumar and A. Vishwakarma, "Electrocardiogram Compression using Optimized TQWT and Dead-Zone Quantizer," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-6, doi: 10.1109/CAPS52117.2021.9730603.
- 4. A. Kumar, A. Kumar and A. K. Vishwakarma, "Multilevel Crop Image Segmentation using Bacterial Foraging Optimization Based on Minimum Cross Entropy," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-6, doi: 10.1109/ CAPS52117.2021.9730680.
- H. S. Pal, A. Kumar and A. Vishwakarma, "TQWT based Electrocardiogram Compression using Optimized Thresholding," 2021 Advanced Communication Technologies and Signal Processing (ACTS), 2021, pp. 1-5, doi: 10.1109/ACTS53447.2021.9708289.
- Kumar Arun, Anil Kumar and Amit Kumar Vishwakarma, Heung-No Lee. "Multilevel Crop Image Segmentation using Firefly Algorithm and Recursive Minimum Cross Entropy." MISP2022, (2022): 1-5. https://doi.org/10.1049/sil2.12148
- Sachchidanand, Garg, Vivek, Anil Kumar, and Pankaj Sharma. "A model

- development of lead-free Cs3Sb2Br9 based novel perovskite solar cell by SCAPS-1D." In 2021 IEEE 48th Photovoltaic Specialists Conference (PVSC), pp. 1199-1203. IEEE, 2021.
- K. Baderia, A. Kumar, N. Agrawal and R. 8. Kumar, "Minor Component Analysis Based Design of Low Pass and BandPass FIR Digital Filter Using Particle Swarm Optimization and Fractional Derivative," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-6, doi: 10.1109/CAPS52117.2021.9730580.
- Sachchidanand, A. Kumar and P. Sharma, 9. "A comparative study of the organic and inorganic photovoltaic cells with/ without lead cation," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-5, doi: 10.1109/CAPS52117.2021. 9730721.
- 10. A. Kumar, A. Kumar and A. K. Vishwakarma, "Multilevel Crop Image Segmentation using Bacterial Foraging Optimization Based on Minimum Cross Entropy," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-6, doi: 10.1109/ CAPS52117.2021.9730680.
- 11. H. S. Pal, A. Kumar and A. Vishwakarma, "Electrocardiogram Compression using Optimized TQWT and Dead-Zone Quantizer." 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-6, doi: 10.1109/CAPS52117.2021.9730603.
- H. Singh, H. Gupta, A. Kumar and L. K. Balyan, "Fractional-order High-boost Filtering for Textural Improvement of Images using Relative Spatial Entropy Quartiles," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-6, doi: 10.1109/CAPS52117.2021.9730658.



- 13. H. Gupta, H. Singh, A. Kumar and A. Vishwakarma, "Pixel Corrected Adaptive Conductance Function based Diffusion Filter and Image Denoising using Bidimensional Empirical Mode Decomposition," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-6, doi: 10.1109/ CAPS52117. 2021.9730521.
- 14. H. S. Pal, A. Kumar and A. Vishwakarma, "TQWT based Electrocardiogram Compression using Optimized Thresholding," 2021 Advanced Communication Technologies and Signal Processing (ACTS), 2021, pp. 1-5, doi: 10.1109/ACTS53447.2021.9708289.
- 15. S. Bhalerao, I. A. Ansari and A. Kumar, "Analysis of DNN based image watermarking data generation for selfrecovery," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-6, doi: 10.1109/CAPS52117.2021.9730546.
- 16. Dixit V. and A. Kumar, "Error Analysis of L-PPM modulated ADT based VLC System with Perfect and Imperfect CSI," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), (2021) :1-6, doi: 10.1109/ CAPS52117.2021.9730708.
- 17. Chauhan M., A. Rajput and B. Mukherjee, "Low Profile Three Element Half Cylindrical Dielectric Resonator Antenna for MIMO Application," 2022 16th European Conference on Antennas and Propagation (EuCAP), 2022, pp. 1-5, doi: 10.23919/ EuCAP53622.2022.9768975.
- 18. Agnihotri S.K., D.V. Prashant, D.P. Samajdar. "FDTD Analysis of Nanowire Based InP/Ge Tandem Solar Cell for Enhanced Power Conversion Efficiency." In: Chanda, C.K., Szymanski, J.R., Sikander, A., Mondal, P.K., Acharjee, D. (eds) Advanced Energy and

- Control Systems. Lecture Notes in Electrical Engineering, vol 820 (2022). Springer, Singapore. https://doi.org/ 10.1007/978-981-16-7274-3 15
- 19. Singh P., D. P. Samajdar and D. S. Yadav, "Doping and Dopingless Tunnel Field Effect Transistor," 2021 6th International Conference for Convergence in Technology (I2CT), 2021, pp. 1-7, doi: 10.1109/ I2CT51068.2021.9418076.
- 20. Dixit A., D. P. Samajdar and N. Bagga, "Performance Evolution of the GaAs1-xSbx FinFET for the Mole Fraction Variation," 2021 Devices for Integrated Circuit (DevIC), 2021, pp. 1-4, doi: 10.1109/DevIC50843.2021.9455890.
- Dixit A., D. P. Samajdar and N. Bagga, "Label-Free Biosensing using Dielectric Modulated GaAs1-x Sbx FinFET under Dry/Wet Environment," 2021 IEEE 18th India Council International Conference (INDICON), 2021, pp. 1-5, doi: 10.1109/INDICON52576.2021.9691731.
- 22. Dixit A., D. P. Samajdar and N. Bagga, "Analysis of GaAs1-xSbx Label-Free Biosensor using Trigate and Gate-allaround FET," 2021 IEEE Bombay Section Signature Conference (IBSSC), 2021, pp. 1-4, doi: 10.1109/IBSSC53889.2021. 9673398.
- 23. A. Sharma and D. K. Vishwakarma, "Circularly Polarized Graphene Antenna for THz Applications," 2021 IEEE 18th India Council International Conference (INDICON), 2021, pp. 1-5, doi: 10.1109/ INDICON52576.2021.9691640.
- 24. Bhalerao S., I. A. Ansari and A. Kumar, "Analysis of DNN based image watermarking data generation for selfrecovery," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-6, doi: 10.1109/CAPS52117.2021.9730546.



- 25. Jaiswal R., I.A. Ansari. TDS Level Control of Water Purifier Using Fuzzy-PID Controller. In: Kumar, R., Ahn, C.W., Sharma, T.K., Verma, O.P., Agarwal, A. (eds) Soft Computing: Theories and Applications. Lecture Notes in Networks and Systems, 425. Springer, Singapore (2022). https://doi.org/10.1007/978-981-19-0707-4 9
- 26. Madhavan, K.P., I.A. Ansari . Maximum Power Point Tracking of Partially Shaded PV System with Improved PSO Strategy. In: Kumar, R., Ahn, C.W., Sharma, T.K., Verma, O.P., Agarwal, A. (eds) Soft Computing: Theories and Applications. Lecture Notes in Networks and Systems, vol 425. Springer, Singapore (2022). https://doi.org/10.1007/978-981-19-0707-4_80.
- 27. Singh Sadhna, Indranil Mal, Dip Prakash Samajdar, Koushik Dutta, "Geometrical Optimization of Gallium Arsenide (GaAs) nanostructure based Solar Cells," Materials Today: Proceedings, Vol. 28, pp. 686-691, DOI: 10.1016/j.matpr. 2022.02.178.
- 28. Bagga N., K. Ni, N. Chauhan, O. Prakash, X. S. Hu and H. Amrouch, "Cleaved-Gate Ferroelectric FET for Reliable Multi-Level Cell Storage," 2022 IEEE International Reliability Physics Symposium (IRPS), 2022, pp. P5-1-P5-5, doi: 10.1109/ IRPS48227.2022.9764553.
- 29. Chauhan N. et al., "Impact of Random Spatial Fluctuation in Non-Uniform Crystalline Phases on Multidomain MFIM Capacitor and Negative Capacitance FDSOI," 2022 IEEE International Reliability Physics Symposium (IRPS), 2022, pp. P23-1-P23-6, doi: 10.1109/IRPS48227. 2022.9764552.
- 30. Dixit A., D. P. Samajdar and N. Bagga, "Label-Free Biosensing using Dielectric Modulated GaAs1-x Sbx FinFET under Dry/Wet Environment," 2021 IEEE 18th

- India Council International Conference (INDICON), 2021, pp. 1-5, doi: 10.1109/INDICON52576.2021.9691731.
- 31. Dixit A., D. P. Samajdar and N. Bagga, "GaAs1-xSbx Label-Free Biosensor using Trigate and Gate-all-around FET," 2021 IEEE Bombay Section Signature Conference (IBSSC), 2021, pp. 1-4, doi: 10.1109/IBSSC53889.2021. 9673398.
- 32. Sarkhel S., R.R. Dey, S. Das, S. Sarkar, T. Santra, N. Bagga, (2023). A Novel Dual Metal Double Gate Grooved Trench MOS Transistor: Proposal and Investigation. In: Basu, S., Kole, D.K., Maji, A.K., Plewczynski, D., Bhattacharjee, D. (eds) Proceedings of International Conference on Frontiers in Computing and Systems. Lecture Notes in Networks and Systems, vol 404. Springer, Singapore. https://doi.org/10.1007/978-981-19-0105-8_50
- Dixit A., D. P. Samajdar and N. Bagga, "Performance Evolution of the GaAs1-xSbx FinFET for the Mole Fraction Variation," 2021 Devices for Integrated Circuit (DevIC), 2021, pp. 1-4, doi: 10.1109/DevIC50843.2021.9455890.
- 34. Sharma A. and S. K. Jain, "LSTM-based short-term electrical load forecasting framework with improved input feature space," 2021 International Conference on Technology and Policy in Energy and Electric Power (ICT-PEP), 2021, pp. 390-394, doi: 10.1109/ICT-PEP53949. 2021.9600923.
- 35. Choubey A., P. K. Padhy and S. K. Jain, "Model Predictive control for DC-DC Boost converter," 2021 IEEE Conference on Energy Conversion (CENCON), 2021, pp. 58-63, doi: 10.1109/CENCON51869.2021. 9627268.
- 36. Agrawal M. and T. Kumar, "Wideband SIW Based Self-diplexing Antenna Using Parasitic Slots," 2021 Second International



- Conference on Electronics and Sustainable Communication Systems (ICESC), 2021, pp. 649-652, doi: 10.1109/ICESC51422. 2021.9532801.
- 37. Saraswat K., and T. Kumar, "Characteristic Mode Analysis of Koch Fractal Dipole Antenna," 2021 Second International Conference on Electronics and Sustainable Communication Systems (ICESC), 2021, pp. 659-662, doi: 10.1109/ICESC51422. 2021.9532726.
- 38. Agrawal, M., K. Saraswat, T. Kumar (2022). Wideband Substrate Integrated Waveguide Based Dual-Polarized Antenna for Satellite Applications in Ku-Band. In: Chowdary, P.S.R., Anguera, J., Satapathy, S.C., Bhateja, V. (eds) Evolution in Signal Processing and Telecommunication Networks. Lecture Notes in Electrical Engineering, vol 839. Springer, Singapore. https://doi.org/10.1007/978-981-16-8554-5 12
- 39. Saraswat K. and T. Kumar, "Design and CM Analysis of Fractal Inspired Frequency Reconfigurable Antenna for RFID Application," 2021 IEEE International Conference on RFID Technology and Applications (RFID-TA), 2021, pp. 231-234, doi: 10.1109/RFID-TA53372.2021. 9617333.
- 40. Agrawal M., and T. Kumar, "Half Substrate Integrated Waveguide Based Wideband Slot Antenna," 2021 IEEE 18th India Council International Conference (INDICON), 2021, pp. 1-5, doi: 10.1109/

INDICON52576.2021.9691484.

- Kumar A., A. Vishwakarma, V. Bajaj, A. Sharma and C. Thakur, "Colon Cancer Classification of Histopathological Images Using Data Augmentation," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-5, doi: 10.1109/ CAPS52117.2021.9730704.
- 42. Smith K Khare, Varun Bajaj, "A CACDSS for automatic detection of Parkinson disease using EEG signals," 2021 International Conference on Control, Automation, Power and Signal Processing (CAPS), 2021, pp. 1-5, doi: 10.1109/CAPS52117.2021. 9730723.
- Sharma A. and S.K. Jain. "LSTM-based short-term electrical load forecasting framework with improved input feature space" IEEE PESGM 2021, USA, (2021).
- Singh Sadhna, Indranil Mal, Dip Prakash Samajdar, Koushik Dutta, "Geometrical Optimization of Gallium Arsenide (GaAs) nanostructure based Solar Cells," Materials Today: Proceedings, Vol. 28, pp. 686-691, DOI: 10.1016/j.matpr. 2022.02.178.
- Sachchidanand, Garg, Vivek, Anil Kumar, and Pankaj Sharma. "A model development of lead-free Cs3Sb2Br9 based novel perovskite solar cell by SCAPS-1D." In 2021 IEEE 48th Photovoltaic Specialists Conference (PVSC), pp. 1199-1203. IEEE, 2021.

Mechanical Engineering

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Faculty ME





Puneet Tandon PhD - IIT Kanpur Professor Computer Aided Design, computer Aided manufacturing, Rapid Prototyping & Tooling Technologies, Reverse Engineering, Product Innovation, Design and Development



Tanuja Sheorey PhD - IIT Kanpur Professor CFD, Algorithm Development, Parallel Computation.



Vijay Kumar Gupta PhD – IIT Bombay Professor Mechanical Engineering (Design)



Prashant Kumar Jain PhD - IIT Delhi Professor Rapid Prototyping & Tooling, CNC machining, Geometric Modeling, CAD/CAM Integration, Computational geometry, Nano Technologies in Manufacturing



Sunil Agarwal PhD – IIT Kanpur Associate Professor Industrial Engineering



Goutam Dutta PhD - IIT Bombay Associate Professor (on lien) Thermal and Fluid Engineering (Mechanical)



Mohd Zahid Ansari PhD – Inha University, Korea Associate Professor MEMS, Biosensor, Mechanical Design, Optimization



M Amarnath PhD - IIT Madras Assistant Professor (Grade I) Condition based maintenance, Tribology



H Chelladurai PhD – IIT Kanpur Assistant Professor (Grade I) Design & Manufacturing



Sujoy Mukherjee PhD - IISc Bangalore Assistant Professor (Grade I) Smart Materials and Structures, Structural Dynamics, Aeroelasticity, Flapping Wing MAV



Himansu Sekhar Nanda PhD - National Institute for Materials Science, Japan (Degree awarded from University of Tsukuba, Japan Assistant Professor (Grade I) Advanced Health Care Material Manufacturing (scaffold based biomaterials for tissue engineering and drug delivery)



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Faculty ME





Ponappa K PhD - IIT Delhi Assistant Professor (Grade I) (Casting of Metal Matrix Composites & Machining) Fabrication of Magnesium Based Metal Matrix Composites by two step Stir Casting Process and their Grindability Studies.



R Seetharam Ph.D. - NIT, Warangal Assistant Professor (Grade II) Metal Forming - Bulk/Sheet Metal Forming Metal flow analysis and micro structure modeling of hot upset Al-B4C composite



Shivdayal Patel PhD – IIT Delhi Assistant Professor (Grade II) Progressive Damage Modelling, Composites, Stochastic Finite element Analysis, Impacts, Probabilistic Design, Sensitivity based Design Optimization



Tushar Choudhary Ph.D. - NIT, Jamshedpur Assistant Professor (Grade II) CFD, FEA, Automobile, Thermodynamics, I.C. Engine, Manufacturing



Manu Srivastava PhD – Delhi University Assistant Professor (Grade II) Additive Manufacturing



Journals

- Soni, Rahul, K. Ponappa, and Puneet Tandon. "A review on customized food fabrication process using Food Layered Manufacturing." LWT (2022): 113411.
- 2. Kumar, Pavan, Satwik Priyadarshi, and Puneet Tandon. "Investigating the incremental forming capabilities of extra deep drawn steel." Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science (2021): 09544062211027201.
- 3. Kumar, Pavan, and Puneet Tandon. "Investigating the capability of the Lemaitre damage model to establish the incremental sheet forming process." Archives of Civil and Mechanical Engineering 22, no. 2 (2022): 1-18.
- Shahare, Harshal Y., Abhay Kumar Dubey, Pavan Kumar, Hailiang Yu, Alexander Pesin, Denis Pustovoytov, and Puneet Tandon. "A Comparative Investigation of Conventional and Hammering-Assisted Incremental Sheet Forming Processes for AA1050 H14 Sheets." Metals 11, no. 11 (2021): 1862.
- 5. Nagargoje, Aniket, Pavan Kumar Kankar, Prashant Kumar Jain, and Puneet Tandon. "Application of artificial intelligence techniques in incremental forming: a stateof-the-art review." Journal of Intelligent Manufacturing (2021): 1-18.
- 6. Kumar, P. and Puneet Tandon. "Design Decision in the manufacturing environment using an improved multiple criteria performance evaluation method." Arabian Journal for Science and Engineering (2021).
- 7. Sharma, Gourav K., Piyush Pant, Prashant K. Jain, Pavan K. Kankar, and Puneet Tandon. "Numerical and experimental analysis of heat transfer in inductive conduction based wire metal deposition process." Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science (2021): 09544062211028267.
- 8. Li, J., Gao, H., Kong, C., Tandon, P., Pesin, A., and Yu, H., "Mechanical properties and

- thermal stability of gradient structured Zr via cyclic skin-pass cryorolling". Materials Letters, 302(1) (2021)
- Pustovoytov, Denis, Alexander Pesin, and Puneet Tandon. "Asymmetric (Hot, Warm, Cold, Cryo) Rolling of Light Alloys: A Review." Metals 11, no. 6 (2021): 956.
- 10. Wang, Lin, Charlie Kong, Puneet Tandon, Alexander Pesin, Denis Pustovoytov, and Hailiang Yu. "Effect of Rolling Temperature and Subsequence Ageing on the Mechanical Properties and Microstructure Evolution of an Al-Cu-Li Alloy." Metals 11, no. 6 (2021): 853.
- 11. Sharma G.K., Pant P., Jain P.K., Kankar P.K. and Tandon, P. "Analysis of Novel Induction Heating Extruder for Additive Manufacturing using Aluminium Filament." Proc. IMechE Part B: Journal of Engineering Manufacture (2021)
- 12. Soni Rahul, K. Ponappa, and Puneet Tandon. "A review on customized food fabrication process using Food Layered Manufacturing" LWT (2022): 113411.
- 13. Khan Nasir; Rathee Sandeep; Srivastava Manu. Parametric Optimization of Friction Stir Welding of Al-Mg-Si Alloy: A Case Study. Yugoslav Journal of Operations Research, [S.l.], v. 31, n. (2), p. 265-272, mar. 2021. ISSN 2334-6043. Available at: http://yujor.fon.bg.ac.rs/index.php/yujor/ article/view/898>
- 14. Anand Baghel, Chaitanaya Sharma, Sandeep Rathee, Manu Srivastava, Influence of activated flux on micro-structural and mechanical properties of AISI 1018 during MIG welding, Materials Today: Proceedings, 2021, ISSN 2214-7853
- 15. Sandeep Rathee, Manu Srivastava, Pulak Mohan Pandey, Abhishek Mahawar, Siddhant Shukla, "Metal additive manufacturing using friction stir engineering: A review on microstructural evolution, tooling and design strategies, "CIRP Journal of Manufacturing Science and Technology, "Volume 35, "2021,"Pages 560-588.



- 16. Surakasi, Raviteja, Mohd Yunus Khan, Arif Senol Sener, Tushar Choudhary, Sumantha Bhattacharya, Piyush Singhal, Bharat Singh, and Velivela Lakshmikanth Chowdary. "Analysis of environmental emission neat diesel-biodiesel-algae oil-nanometal additives in compression ignition engines." Journal of Nanomaterials 2022 (2022).
- 17. Choudhary, Tushar, Mithilesh Kumar Sahu, Vikas Shende, and Ajay Kumar. "Computational analysis of a heat transfer characteristic of a wavy and corrugated channel." Materials Today: Proceedings (2022).
- 18. Sahu, Mithilesh Kumar, Ajit Kumar Singh, and Tushar Choudhary. "Experimental investigation of thermal potential at diesel engine exhaust and numerical simulation of heat recovery in heat exchangers." Materials Today: Proceedings (2022).
- 19. Jain, Sarika, Sarita Rathee, Ajay Kumar, Anivel Sambasivam, Rahul Boadh, Tushar Choudhary, Parveen Kumar, and Pravin Kumar Singh. "Prediction of temperature for various pressure levels using ANN and multiple linear regression techniques: A case study." Materials Today: Proceedings (2022).
- 20. Rajpoot, Aman Singh, Tushar Choudhary, H. Chelladurai, Tikendra Nath Verma, and Vikas Shende. "A comprehensive review on bioplastic production from microalgae." Materials Today: Proceedings (2022).
- 21. Pachori, Himanshu, Tushar Choudhary, and Tanuja Sheorey. "Significance of thermal energy storage material in solar air heaters." Materials Today: Proceedings (2022).
- 22. Singh M., Singh A. and Patel S. (2022) "Fault Analysis of Spur Gear using XFEM" Journal of Engineering Failure Analysis, :134, 106060, https://doi.org/10.1016/ j.engfailanal.2022.106060, IF: 3.114?
- 23. Patel S. and Patel M., (2022 The efficient design of hybrid and metallic sandwich structure under air blast loading, Journal of Sandwich Structures and Materials (Published) 1-20 https://doi.org/ 10.1177/10996362211065748 IF: 5.497

- 24. Joshi S, Shivdayal Patel (2021) Review on mechanical and thermal properties of pineapple leaf fiber (PALF) reinforced composite. Journal of Natural Fibers, (Accepted) IF: 5.32
- 25. Maharshi K, Patel S. and Panwar R. (2021) Experimental statistical analysis of tensile and shear properties of the jute fabric epoxy composites. Journal of Natural Fibers, (Accepted) IF: 5.32
- 26. Vijay Kumar Gupta, Ahirwar, Harbhajan, Vijay Kumar Gupta, and Himansu Sekhar Nanda, Finite element analysis of fixed bone plates over fractured femur model, Computer Methods in Biomechanics and Biomedical Engineering, 24(15), 1742-1751, 13-04-2021, 07-06-2021.
- 27. Vijay Kumar Gupta, Rakesh Kumar Haldkar, Vijay Kumar Gupta, Tanuja Sheorey and I.A. Parinov, Design, Modeling, and Analysis of Piezoelectric-Actuated Device for Blood Sampling, Applied Sciences, 11(18) 8449, 09-09-2021, 11-09-2021.
- 28. Amarnath M., Praveen Krishna, I. R., & Krishnamurthy, R. (2021). Experimental Investigations to Study the Effectiveness of Cepstral Features to Detect Surface Fatigue Wear Development in a FZG Spur Geared System Subjected to Accelerated Tests. Archives of Acoustics, 479-489.
- 29. Ramteke S.M., Chelladurai H. & Amarnath M. Effects of Piston Scuffing Fault on the Performance and Vibro-Acoustic Characteristics of a Diesel Engine: An Experimental Study. J Nondestruct Eval 40, 81 (2021). https://doi.org/10.1007/s10921-021-00811-8
- 30. Ramteke, S.M., Chelladurai, H. & Amarnath, M. Diagnosis and Classification of Diesel Engine Components Faults Using Time-Frequency and Machine Learning Approach. J. Vib. Eng. Technol. (2021). https://doi.org/10.1007/s42417-021-00370-2
- 31. Dr. R. Seetharam, P. Madhukar, G. Yoganjaneyulu, S. Kanmani Subbu and M. J. Davidson, Mathematical Models to Predict Flow Stress and Dynamically Recrystallized



- Grain Size of Deformed AA7150-5 wt% B4C Composite Fabricated using Ultrasonic-Probe Assisted Stir Casting Process, Metal and materials international, 04-01-2021, 05-21-2021
- 32. Dr. R. Seetharam, Pagidi Madhukar, N. Selvaraj, Veeresh Kumar G B, C. S. P. Rao, Faruq Mohammad, Seetharam R, Murthy CAVALLI, Influence of TiC nano-particulates on the physical and mechanical properties of AA7150-TiC MMC: Fabricated by advanced novel process, Nano Select, May 2021
- 33. Dr. R. Seetharam, Pagidi Madhukar, N. Selvaraj, Veeresh Kumar G B, C. S. P. Rao, Faruq Mohammad, Seetharam R, Murthy CAVALLI, "Influence of ultrasonic vibration towards the microstructure refinement and particulate distribution of AA7150-B4C nanocomposites", Coatings, February 2022
- 34. Mohd. Zahid Ansari, Sahu, S., Ukey, P.D., Kumar, N., Singh, R.P. and Ansari, M.Z., Three dimensional modelling of aluminum foam through computed tomography scan technique, World Journal of Engineering, 06-04-2021, 06-04-2021
- 35. Rakesh Kumar Haldkar, Vijay Kumar Gupta, Tanuja Sheorey and Ivan Parinov, Design, Modeling, and Analysis of Piezoelectric-Actuated Device for Blood Sampling, Applied Sciences, 11-18, 09-09-21, 24-09-21
- 36. Singh, Adarsh Kumar, Ankit Nayak, Narendra Kumar, Ravi Pratap Singh, and Prashant K. Jain. "Fabrication of personalized lithophane via additive manufacturing." Sustainable Operations and Computers 3 (2022): 17-21.
- 37. Thakur, Vinod Singh, Pavan Kumar Kankar, Anand Parey, Arpit Jain, and Prashant Kumar Jain. "Force and vibration analysis in biomechanical preparation of root canals using reciprocating endodontic file system: In vitro study." Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine 236, no. 1 (2022): 121-133.
- 38. Prajapati Dhirendra, M. M. Kumar, Saurabh Pratap, H. Chelladurai, and Mohd Zuhair.

- 2021. "Sustainable Logistics Network Design for Delivery Operations with Time Horizons in B2B E-Commerce Platform" Logistics 5, no. 3: 61. https://doi.org/10.3390/logistics 5030061
- 39. Ramteke S.M., Chelladurai H. & Amarnath M. Effects of Piston Scuffing Fault on the Performance and Vibro-Acoustic Characteristics of a Diesel Engine: An Experimental Study. J Nondestruct Eval 40, 81 (2021). https://doi.org/10.1007/s10921-021-00811-8
- 40. Ramteke S.M., Chelladurai H. & Amarnath M. Diagnosis and Classification of Diesel Engine Components Faults Using Time-Frequency and Machine Learning Approach. J. Vib. Eng. Technol. (2021). https://doi.org/10.1007/s42417-021-00370-2
- 41. Prajapati D., Zhou F., Zhang M. et al. Sustainable logistics network design for multi-products delivery operations in B2B ecommerce platform. Sādhanā 46, 100 (2021). https://doi.org/10.1007/ s12046-021-01624-1
- 42. Patel S N and Mukherjee S, "Manufacturing, characterization and experimental investigation of the IPMC shoe energy harvester", Journal of the Brazilian Society of Mechanical Sciences and Engineering, 44:42 (2022), 7 January 2022
- 43. Gupta A and Mukherjee S, Position Control of a Biomimetic IPMC Underwater Propulsor, Journal of The Institution of Engineers (India): Series C Mechanical, Production, Aerospace and Marine Engineering, Vol. 102, No. 4, 1031 – 1040, 20 May 2021

Conference Publications

1. Gupta, A., Prajapati S. K. and Mukherjee, S., Position control using a physics-based model for biomimetic underwater propulsor actuated by IPMC, 5th International and 20th National Conference on Machines and Mechanisms (iNaCoMM 2021), IITDM Jabalpur, 9 - 11 December 2021



- 2. Patel Narendra Kumar and Tushar Choudhary. "Investigational exploration of EDM process parameters on MRR and surface roughness of AISI304 stainless steel." Materials Today: Proceedings (2021).
- 3. Tushar Choudhary; Mithilesh Kumar Sahu; Vikas Shende; Ajay Kumar, Computational Analysis of a Heat Transfer Characteristic of a Wavy And Corrugated Channel, International Conference on Materials, Machines & Information Technology - 2022, Amity University Jharkhand (AUJ), Ranchi, 24th - 25th, January 2022
- 4. Pachori, Himanshu, Tushar Choudhary, and Tanuja Sheorey. "Significance of thermal energy storage material in solar air heaters." Materials Today: Proceedings (2022).
- 5. Rajpoot, Aman Singh, Tushar Choudhary, H. Chelladurai, Tikendra Nath Verma, and Vikas Shende. "A comprehensive review on bioplastic production from microalgae." Materials Today: Proceedings (2022).
- 6. Raghav M.S., Singh A, Patel S "Crack Propagation Analysis of Spur Gear " Proc. of International Conference on Futuristic Advancements in Materials, Manufacturing and Thermal Sciences, ICFAMMT-2022, Institute of Infrastructure Technology Research and Management -Gujarat 20-21 Jan 2022.
- 7. Patel M, Patel S (2021) "Numerical Analysis on Hexagonal Honeycomb Sandwich Structure under Air Blast Loading" Proc. of 5th International Conference on Machines and Mechanisms (iNaCoMM 2021) IIITDM Jabalpur, 9-11 Dec 2021. ISBN:978-9355-933-195
- 8. Patel S, Sheorey T (2021) "Design and Development of Double Air Suction Resuscitation Device using Scotch Yoke Mechanism " Proc. of 5th International Conference on Machines and Mechanisms (iNaCoMM 2021) IIITDM Jabalpur, 9-11 Dec 2021. ISBN: 978-9355-933-195
- 9. Pathak RK, Patel S and Gupta VK (2021) "Ballistic impact behaviour of 3D hybrid laminates " Proc. of composite

- International Conference on Machines and Mechanisms (iNaCoMM 2021) IIITDM Jabalpur, 9-11 Dec 2021. ISBN: 978-9355-933-195
- 10. Mudahi A, Athira N, Patel M, Patel S (2021) ""Blast analysis of Hybrid Sandwich Structures " Proc. International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE- 2021) Dr B R Ambedkar National Institute of Technology, Jalandhar, Punjab, 25-27 June 2021.
- 11. Singh A. and Patel S. (2021) "Fatigue Failure Analysis of Spur Gear" Proc. International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE-2021) Dr B R Ambedkar National Institute of Technology, Jalandhar, Punjab, 25-27 June 2021.
- 12. Sen V. and Patel S. (2021) "Low Velocity Impact Analysis of Corrugated Sandwich Structure" Proc. International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE- 2021) Dr B R Ambedkar National Institute of Technology, Jalandhar, Punjab, 25-27 June 2021.
- 13. Rajpoot, Aman Singh, Tushar Choudhary, H. Chelladurai, Tikendra Nath Verma, and Vikas Shende. "A comprehensive review on bioplastic production from microalgae." Materials Today: Proceedings (2022).
- 14. Patel M. and Patel S. (2021) "Safety Analysis of Honeycomb Sandwich Structure under Blast Load" Proc. International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE- 2021) Dr B R Ambedkar National Institute of Technology, Jalandhar, Punjab, 25-27 June 2021.
- 15. Kumar M. and Patel S. (2021) "Experimental Uncertainty Analysis of Failure Strains for Jute Fiber Composites" Proc. International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE-2021) Dr B R Ambedkar National Institute of Technology, Jalandhar, Punjab, 25-27 June 2021.



- 16. Joshi S., Patel S., Panwar R. (2021) "Natural fiber constituted electromagnetic wave absorbing composites: A short review" Proc. International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE-2021) Dr B R Ambedkar National Institute of Technology, Jalandhar, Punjab 25-27 June 2021.
- 17. Sen V. and Patel S. (2021) "Corrugated sandwich structure modeling under low velocity impact" Proc. 6th International Conference on Advanced Production and Industrial Engineering (ICAPIE 2021) Delhi Technological University-New Delhi 18-19 June 2021.
- 18. Soni S., Pathak R.K. and Patel S (2021) "High velocity impact analysis of CFRP composite" Proc. 6th International Conference on Advanced Production and Industrial Engineering (ICAPIE 2021) Delhi Technological University-New Delhi 18-19 June 2021.
- 19. Pathak RK, Patel S and Gupta VK (2021) "Ballistic performance of 3D hybrid composite laminates" Proc. 6th International Conference on Advanced Production and Industrial Engineering (ICAPIE 2021) Delhi Technological University-New Delhi, 18-19 June 2021.
- 20. Maharshi K. and Patel S. (2021) "Experimental and Statistical analysis of the Jute fabric composites under tensile loading" Proc. 6th International Conference on Advanced Production and Industrial Engineering (ICAPIE 2021) Delhi Technological University-New Delhi,18-19 June 2021.
- 21. Kamarapu, S.K., Amarnath, M., Suresha, B. (2022). Experimental Investigations to Enhance the Rheological Properties of Vegetable Oils Blending with Mineral Oil. In: Dave, H.K., Dixit, U.S., Nedelcu, D. (eds) Recent Advances in Manufacturing Processes and Systems. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/ 978-981-16-7787-8_39.

- 22. Kumar S., Bhoi N. K., Singh H., Experimental study of aluminium metal matrix composite using electro-discharge machine: A review, "International Conference on Industrial and Manufacturing Systems (CIMS-2020)", NIT Jalandhar India, October 9-11, 2021
- 23. N. Kumar, M. Z. Ansari, H. Singh, Numerical Modelling of Plastic Behaviour and Temperature Distribution during FSW Process, RAM 2021: Advances in Manufacturing: Modelling & Optimization, MANIT, Bhopal, India, 10-12/06/2021
- 24. Swapnil Deokar and Prashant K. Jain, Simulation of single point incremental sheet metal forming for investigation of stress and forces in the manufacturing process, 6th International Conference on Advanced Production and Industrial Engineering (ICAPIE 2021), Delhi Technological University, Delhi, June 18-19, 2021
- 25. Dhirendra Prajapati, Rajeev Agarwal, H. Chelladurai, Lakshay Lakshay and Saurabh Pratap, Develop a frame work for sustainable supply chain problem for textile industry :In B2b E commerce plat form, International Conference on Industrial Engineering and Management (ICIEM-2021), MNIT Jaipur, 17-19, December 2021
- 26. Ankur Gupta and Sujoy Mukherjee, Actuation Characteristics and Experimental Identification of IPMC Actuator for Underwater Biomimetic Robotic Application, 9th International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (AFTMME2021), Indian Institute of Technology Ropar, Paper ID EC05, 9 - 11 December 2021.
- 27. Gupta, A., Prajapati S. K. and Mukherjee, S., Position control using a physics-based model for biomimetic underwater propulsor actuated by IPMC, 5th International and 20th National Conference on Machines and Mechanisms (iNaCoMM 2021), IITDM Jabalpur, Paper ID – 4, 9 - 11 December 2021

Design

he Design Discipline at PDPM Indian Institute of Information Technology, Design and Manufacturing, Jabalpur offers a "holistic" design program. The discipline offers four years Bachelors in Design (BDes), two years Masters in Design (MDes) and PhD in Design programmes. The curriculum is a unique blend of design and technology so as to ensure that they are well equipped when they finally graduate from the Institute. The uniqueness of the curriculum is that, all the students have to mandatorily learn different areas of design in the initial semesters. In the advanced semesters, students are given a choice to choose electives mainly in three major domains; product, space and communication design. The students have the liberty to pursue Bachelors / Master's thesis in their domain of interest. Thus, the students graduating from the discipline have a good understanding of different facets of design, different technologies related to design and at the same time specialises along one of the major domains namely product, space or communication design, giving them an advantage of convenient and efficient switches from one domain to another.

The discipline, which started in the year 2008, has produced many good designers who have excelled in different facets of design as practicing designers, design entrepreneurs and design educators. The students of our discipline are trained in a manner that facilitate them taking up any challenging role which demands design intervention. On behalf of the discipline, we wish them all the best with this hope and trust that they will play a pivotal role in applying their knowledge of design in different sectors in the country as well as globally. We are confident that the discipline trains them adequately well to meet the aspirations of design recruiters.



Faculty Design





Puneet Tandon PhD - IIT Kanpur Professor Computer Aided Design, computer Aided manufacturing, Rapid Prototyping & Tooling Technologies, Reverse Engineering, Product Innovation, Design and Development



Prabir Mukhopadhyay PhD - University of Limerick, Ireland Associate Professor Ergonomics



Sangeeta Pandit PhD – IIT Guwahati Assistant Professor (Grade II) **Design Ergonomics**



Tripti Singh PhD - Banasthali University Assistant Professor (Grade II) Visual Communication, New Media



Amrita Bhattacharjee PhD – IIT Guwahati Assistant Professor (Grade II) Lighting Design and Visual Perception



Journals

- 1. Mukhopadhyay, P., & Jhodkar, D. (2021). Tire tread removing units in Central India: risk factors and potential interventions. IISE transactions on occupational ergonomics and human factors, 1-5.
- Bhattacharjee, Amrita, and Swati Pal. "Preferred combination of color temperature and illuminance by the viewers for viewing paintings displayed under LED lighting." Journal of Optics 51, no. 1 (2022): 115-123.00749-0
- 3. Patel, G., & Mukhopadhyay, P. (2021). Comprehensibility evaluation and redesign of safety/warning pictograms used on pesticide packaging in Central India. Human and Ecological Risk Assessment: An International Journal, 1-21.
- Bhattacharjee, Amrita, and Pallavi Rani. "Design Thinking: Construction of a Meme-Based Model for Culture-Specific Design." Journal of the Knowledge Economy (2022): 1-14.
- 5. Kamble R, Sahu A, Pandit S. Occupational ergonomic assessment of hand pain symptoms among Bagh hand block print artisans of the handicraft textile industry in Madhya Pradesh, India. Int J Occup Saf Ergon. 2021 Nov 12:1-9. doi: 10.1080/10803548. 2021.1991131. Epub ahead of print. PMID: 34622747.

Conference Publications

- 1. Kavindra Singh, Sanandan Ratkal, Sarvesh Tripathi, Dr. Tripti Singh, Improving Single Use Plastic Packets Opening Experience for Better Disposal, 3rd Innovative Product Design and Intelligent Manufacturing Systems (IPDIMS 2021), Department of Industrial Design at National Institute of Technology Rourkela, Accepted, 30th to 31st December 2021, Springer Nature Singapore Pvt. Ltd.
- 2. Jaison K. Thomas, Vishnu M, Sarvesh Tripathi, Dr. Tripti Singh, Designing an Experience for Conducting Online Exam, Evaluation and Feedback, 3rd Innovative Product Design and Intelligent Manufacturing Systems (IPDIMS 2021), Department of Industrial Design at National Institute of Technology Rourkela, Accepted, 30th to 31st December 2021, Springer Nature Singapore Pvt. Ltd.

- 3. Patil, Amol, and Amrita Bhattacharjee, "Identifying Ergonomic Issues and Redesigning of Mango Plucking Tool", In International Conference of the Indian Society of Ergonomics, pp. 581-591. Springer, Cham, 2022 and Systems, vol 391. Springer, Cham. https://doi.org/10.1007/978-3-030-94277-9 50
- Kamble R., Pandit S., Sahu A. (2022). Contributing Towards Blue Economy with Ergonomic Assessment of Musculoskeletal Disorder (MSD) Among Workers Involved in Harvesting Living Resources. In: Chakrabarti D., Karmakar S., Salve, U.R. (eds) Ergonomics for Design and Innovation. HWWE 2021. Lecture Notes in Networks and Systems, vol 391. Springer, Cham. https://doi.org/ 10.1007/978-3-030-94277-9_49
- 5. Vinu Vimal, V.J., Pandit, S., Neha, Prakash, B.S. (2022). Identification of Ergonomic Problem of Paddy Harvesting Due to Climatic Change at Small Scale Farms of Kerala, India. In: Chakrabarti, D., Karmakar, S., Salve, U.R. (eds) Ergonomics for Design and Innovation. HWWE 2021. Lecture Notes in Networks and Systems, vol 391. Springer, Cham. https://doi.org/10.1007/978-3-030-94277-9 114
- Kamble, R., Neha, Vinu Vimal, V.J., Pandit, S. (2022). Ergonomic Study on Farmers Involved with Cotton Harvesting in Haryana. In: Chakrabarti, D., Karmakar, S., Salve, U.R. (eds) Ergonomics for Design and Innovation. HWWE 2017. Lecture Notes in Networks and Systems, vol 391. Springer, Cham. doi.org/10.1007/978-3-030-94277-9 76
- 7. Patankar, J.H., Kamble, R., Krishna, S., Pandit, S. (2022). Ergonomic Study in Information System Design of Two Major Railway Platforms of India. In: Chakrabarti, D., Karmakar, S., Salve, U.R. (eds) Ergonomics for Design and Innovation. HWWE 2021. Lecture Notes in Networks and Systems, vol 391. Springer, Cham. https://doi.org/ 10.1007/978-3-030-94277-9 70
- Sahu, A., Kamble, R., Pandit, S. (2022). Identification of Ergonomic Risk Factors in Dhokra Bell Metal Handicraft Industry of Chhattisgarh, India. In: Chakrabarti, D., Karmakar, S., Salve, U.R. (eds) Ergonomics for Design and Innovation. HWWE 2017. Lecture Notes in Networks and Systems, vol 391. Springer, Cham. doi.org/10.1007/978-3-030-94277-9_113

Natural Science

atural Sciences are the integral part of IIITDM Jabalpur since its inception. The fields of Natural Sciences, already integrate various other disciplines of the Institute with some emerging fields such as Materials engineering, Nanomaterials, Biomedical Physics, Numerical Analysis & Scientific Computing, Image processing etc. Moreover the applications of various science and technology based knowledge emerges out of Natural Sciences.

The basic purpose of interdisciplinary curriculum of the Institute is expanding the knowledge and applications overlapping different fields of experts. Learning process cannot be restricted to a limited space and therefore Natural Sciences coupled with other disciplines to follow the same. The intellectual growth through liberal education would fulfill the desire of satisfaction qualitatively rather than quantitatively. Research and development is the key to future generation and prosperity of a nation through an academic Institution with interdisciplinary curriculum. The source of basic science knowledge is the foundation of all other disciplines inventions as well as applications. Having Physics and Mathematics as an integral part of the UG & PG curriculum directly play an important role in the growth of research and development at IIITDM Jabalpur.

Physics

Physics discipline has six faculty members who undertake cutting edge research on various fields of application in the field of science and technology. Some of these areas are Magnetic materials, Multiferroics, Nanomaterials for magnetism and other applications, Biomedical Physics and Electrodeposited magnetic thin films.

Mathematics

Mathematics discipline has six faculty members and discipline would focus in various fields of Parallel Computing, Computational Fluid Dynamics, Hyperbolic IBVP, Spectral Method and Probability Theory and Topological study of Wireless Networks and Wireless Communication.

Faculty Natural Science •





Asish Kumar Kundu PhD - INCASR Deemed University Associate Professor **Solid State Physics**



Subir Singh Lamba PhD – IIT Kanpur Assistant Professor (Grade I) Parallel Computing, Spectral Method and



Mukesh Kumar Roy PhD - IIT Kanpur Assistant Professor (Grade I) Nuclear Physics Technique, Material Science



Bhupendra Gupta PhD - IIT Kanpur Assistant Professor (Grade I) **Probability Theory**



Lokendra Kumar PhD - IIT Kanpur Assistant Professor (Grade I) Spectral Methods, High Performance Computing, Elliptic Partial Differential Equations



Nihar Ranjan Jena PhD - Banaras Hindu University Assistant Professor (Grade I) Molecular modelling of structures and interactions of biomolecules, complexes and clusters



Amaresh Chandra Mishra PhD – IIT Kharagpur Assistant Professor (Grade I) Electrodeposited magnetic film coated wires for GMI (Giant magneto-impedance) sensor applications



Nihar Kumar Mahato PhD – IIT Kharagpur Assistant Professor (Grade I) Applied Functional Analysis and optimization



Manoj Kumar Panda PhD - IIT Kanpur Assistant Professor (Grade I) Mathematical Modelling of Bio-Fluid Dynamics (Phototactic bioconvection), CFD, Hydrodynamic Instability



Neeraj Kumar Jaiswal PhD - ABV-IIITM Gwalior Assistant Professor (Grade I) **Applied Physics**



Deepmala PhD - Pt. Ravishankar Shukla University, Raipur Assistant Professor (Grade I) Fixed Point theory and Applications, Dynamic Programming, Integral Equations, Nonlinear Analysis



Yashpal Singh Katharria PhD - Jawaharlal Nehru University/ Inter-University Accelerator Centre, New Delhi Assistant Professor (Grade I) **Experimental Condensed Matter Physics**



Journals

- Singh A. K., Gupta M., Sathe V., and Katharria Y. S., "Effect of annealing temperature on ß-Ga2O3 thin films deposited by RF sputtering method", Superlattices and Microstructures 156 (2021) 106976. https://doi.org/ 10.1016/j.spmi.2021.106976
- 2. Das, A., Jana, R. and Deepmala, On the Convergence of an Iterative Method for Solving Linear Complementarity Problem with WGPSBD Matrix, Thai Journal of Mathematics, 19 (4), 1375-1384 (2021)
- 3. Kundu, T., Deepmala & Jain, P.K. A hybrid salp swarm algorithm based on TLBO for reliability redundancy allocation problems. Appl Intell (2022). https://doi.org/ 10.1007/s10489-021-02862-w
- 4. Amar Deep, Deepmala and Hazarika, B., An existence result for Hadamard type two dimensional fractional functional integral equations via measure of noncompactness, Chaos Solit. Fract. 147 (2021), 110874.
- 5. N.S. Raghuvanshi, G. Dutta, M.K. Panda, Identification of stable zone via linear stability analysis of supercritical water natural circulation loop, Journal of Mechanical Science and Technology, 35(2), 747-759, 13-07-21
- 6. G. Mishra, A.K. Kar, A. C. Mishra, S.K. Mohanty and M.K. Panda. "SEND: A novel dissimilarity metric using ensemble properties of the feature space for clustering numerical data "

- Information Sciences 574 (2022): 279-296. https://doi.org/10.1016/ j.ins.2021.05.059
- 7. N.S. Raghuvanshi, G. Dutta, M.K. Panda, Steady-state and nonlinear stability analysis for the feasibility of different fluids in a supercritical natural circulation loop", Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering", special, 1-15, 2021, 13-07-21
- Rahul and N. K. Mahato, Existence 8. solution of a system of differential equations using generalized Darbo's fixed point theorem, AIMS Mathematics, 6(12), 13358-133369, doi: 10.3934/math.2021773, 19-08-21, 16-09-21.
- 9. A. Das, B. Hazarika, N. Saikia & N. K. Mahato, Darbo's fixed point theorem, São Paulo Journal of Mathematical Sciences, 29-Jun-21, 15-Jul-21, https://doi.org/10.1007/ s40863-021-00255-y
- 10. Rakesh, Ajay Kumar, Ravindra Kumar, Rachana Yogi, Anil Govindan, and Neeraj K. Jaiswal, "Tuning the Electronic Structure of Zigzag Boron Nitride Nanoribbons via $sp2/$sp 3$ Edge Functionalization." Journal of Electronic Materials In Press (2022): 1-9.
- 11. Kharwar, Saurabh, Sangeeta Singh, and Neeraj K. Jaiswal. "Selective Edge-Hydrogenated Zigzag Boron Nitride Nanoribbons for Giant Magnetoresistance and Rectifying Behavior." IEEE



- Transactions on Electron Devices 68, no. 11 (2021): 5894-5900.
- 12. Patnaik, Akash, Neeraj K. Jaiswal, Rohit Singh, and Pankaj Sharma. "Analytical model for 2DEG charge density in ß-(Al x Ga1-x) 203/Ga203 HFET." Semiconductor Science and Technology 37, no. 2 (2021): 025002.
- 13. Rachana Yogi, Neeraj K. Jaiswal, "Firstprinciple investigations of zigzag III-V nitride nanoribbons as CS2 scavengers", Appl. Surf. Sci., 545, 148969, 15 Apr. 2021, doi.org/10.1016/ j.apsusc.2021.148969

Conference Publications

H. Singh, L K Balyan, Spectral approximation for elliptic eigenvalue problems on non-smooth domains, 37th MP Young Scients Congres, March 14-17, 2022 INDIA (Won first Prize of Rs. 25000/-)

- 2. H Singh, H Gupta, A Kumar L K Balyan, Fractional-order High-boost Filtering for Textural Improvement of Images using Relative Spatial Entropy Quartiles, International conference on control, Automation, Power and Signal Processing, December 10-12, 2021, INDIA (Won First Prize)
- Rahul and N K Mahato, Solvability of Infinite System of Volterra Integral Equations in the Tempered Space, ICMC 2022, Department of Mathematics School of Advanced Sciences, Vellore Institute of Technology, Vellore, Tamil Nadu, India, Jan 6-8, 2022
- Rahul and N K Mahato, On the Solution of Generalized Proportional Hadamard Fractional Integral Equations, ICNAAO-2021, IIT-BHU, 21-22 Dec, 2021.

Liberal Arts

DPM IIITDMJ founded the department of Liberal Arts with induction of Humanities on 13th August, 2021. But since the founding of the Institute in 2006, Humanities courses have been given very valuable weightage aiding the goals of the students in the technical courses. Humanities has played a critical role in the placement of the students by developing their interpersonal skills through communication strategies and soft skills. The personality of the students was further shaped by popular courses like Culture and Human Values and Indian Philosophy. Students also get a professional edge in their fields by pursuing the courses like Science and Culture, Culture and Technology. Many students have engineered designs of engineering products inspired through poems.

PhD English program is the crown of the Liberal Arts department. The maiden researches of the research scholars in English have won international and national acclaims. The scholars are vetting their research ideas in the field of Consciousness studies, Cognitive Sciences, Cultural Studies, Language and Literature along with newly emerging areas of critical importance like medical humanities.

Liberal Arts





Sunil Agarwal PhD – IIT Kanpur Associate Professor **Industrial Engineering**



Mamta Anand PhD – Banasthali Vidyapith, Rajasthan Fulbright Fellow, Harvard University (USA) Assistant Professor (Grade I) Cultural Studies, Language, Literature, Communication & Cognitive Science



J. Al Muzzamil Fareen PhD - Anna University Chennai Assistant Professor (Grade II) Language, Literature, Linguistics & Communication

Journals

- Fareen, Jabbar Al Muzzamil. "The Evolution of Twentieth Century ESP Syllabus Design: A Critical Review". Korean TESOL Journal, 17, no.2 (2022): 185-210.
- Fareen, Jabbar Al Muzzamil & Farhana, Mubarak Al Muthassir. "Humanitarian precepts and the relevance of Jawaharlal Nehru's Tryst with Destiny speech and ideals today: A critical review". Journal of the Maharaja Sayajirao University of Baroda, 55, no.4 (2021):62-66.
- Fareen, Jabbar Al Muzzamil. "Digital Learning in Higher Education: A Road to Transformation and Reform". European Journal of Interactive Multimedia and Education 2022 3 no. 1e02206. https://doi.org/10.30935/ejimed/114
- Fareen, Jabbar Al Muzzamil. "English for Placement Purposes: Understanding target specificity to develop professional competence of engineering students." International Journal of Higher Education and Sustainability, (2021): 304-316.

Conference Publications

Fareen, Jabbar. & Farhana, Mubarak. Humanitarian precepts and the

- relevance of Jawaharlal Nehru's Tryst with Destiny speech and ideals today: A critical review. Journal of the Maharaja Sayajirao University of Baroda, 55 no.4, (2021): 62-66.
- 2. Fareen, Jabbar. & Farhana, Mubarak. Teacher's Effectiveness, Challenges and Contributions in Online Higher Education in New Normalcy, Online First International Congress on Teaching & Teacher Education (iCOTTE-2021) (2021): 41
- 3. Mamta Anand, "Exploring the trajectories of mind body medicine- a study on the essays of Swami Vivekananda and Deepak Chopra", IHML (DEC 2021) 53.
- Mamta Anand, "Being and Becoming: Positioning Self from the perspective of Sri Aurobindo and Henry David Thoreau", IHML (DEC 2021) 52
- Mamta Anand, "Multiculturalism: 5. Emenating from the idea that God is one, Through a reading of the Hindu View of Life of S. Radhakrishnan", IHML (DEC 2021) 53.
- Mamta Anand, "A Post Humanistic Study of Soul Concentrics in Tagore's Sadhana", FAHSS (FEB 2022) 88.
- 7. Mamta Anand, "Stone Women Ahalya and Galatea- A Feminist Perspective on works of Kavita Kane and Madeline Miller", URUAE (March 2022) 29.



Dr. Manish Kumar Bajpai

Machine Vision and Augmented Intelligence—Theory and Applications, Springer, 978-981-16-5077-2, Koushlendra Kumar Singh, George Giakos, 2021

Dr. Durgesh Singh

Artificial Intelligence for Societal Issues, Springer, 1868-4394, Anupam Biswas, Vijay Bhaskar Semwal, 2022

Dr. Avinash Chandra Pandey

An Efficient Bag-of-Features for Diseased Plant Identification, Computer Vision and Machine Learning in Agriculture, Springer, 978-981-33-6424-0, Raju Pal, Himanshu Mittal, Mukesh Saraswat, 2021

Dr. A. Kumar

"Computational Intelligence and Biomedical "Signal Processing: An Interdisciplinary Easy and Practical Approach", Springer-Verlag, 978-3-030-67098-6, M.K. Ahirwal, and G. K. Singh, 2021

Dr. Varun Bajaj and Mr. GR Sinha (Editors)

- Computer-aided Design and Diagnosis Methods for Biomedical Applications, CRC Taylor & Francis Group, 978-0-367-63883-2/410018. Book Edited, 2021
- Analysis of medical modalities for improved diagnosis in modern healthcare, CRC Taylor & Francis Group, 978-0-367-70536-7, Book Edited, 2021
- Artificial Intelligence based Brain Computer Interface, Elsevier, 9780323914123, Book Edited, 2021

Dr. Varun Bajaj (Editors) and Dr. Irshad Ahmad Ansari

1. High performance computing for Intelligent Medical Systems, IOP Books

Submitted, 978-0-7503-3815-8, Book Edited, 2021

Dr. Matadeen Bansal

Outage Performance Comparison of DF/AF Cooperative Relaying System with SC/MRC Diversity Techniques, Springer, 978-3-031-04320-8, Shailendra Singh, Book chapter in the book "Towards a Wireless Connected World: Achievements and New Technologies", 2022

Prof. Puneet Tandon

- Quantitative and Qualitative Study on Lifestyle of Polycystic Ovarian Syndrome or Disease (PCOS/PCOD) Patients, In: Ergonomics for Design and Innovation. HWWE 2017. Chakrabarti, D., Karmakar, S., Salve, U.R. (eds). Lecture Notes in Networks and Systems, vol 391. Springer, Cham, DOI: 10.1007/978-3-030-94277-9 16, Gohil, Y. and Tandon, P., 2022
- 2. Toolpath Generation of a Human Anatomical Shape for Double-Sided Incremental Forming, In: Recent Advances in Operations Management Applications. Lecture Notes in Mechanical Engineering, Eds: Sachdeva, A., Kumar, P., Yadav, O.P., Tyagi, M., Springer, Singapore, DOI: 10.1007/978-981-16-7059-6_23, Sahu, A., Jain, P.K., and Tandon, P., 2022
- Overview of Current Additive 3. Manufacturing Technologies for Titanium Bioimplants, In: Nanoscale Engineering of Biomaterials: Properties and Applications, Eds: Lalit M. Pandey and Abshar Hasan, Springer, Chapter 5, pp.117-130 DOI: 10.1007/978-981-16-3667-7, ISBN 978-981-16-3666-0 ISBN 978-981-16-3667-7 (eBook), Telang, V.S., Pemmada, R., Ramakrishna, S., Tandon, P. and Nanda, H.S., 2022
- 3D Printing for Functional Tissue 4.



Engineering, In: Tissue Engineering: Current Status and Challenges" (Eds: Chandra P Sharma, Thomas Chandy, Vinoy Thomas and Finosh G Thankam), Academic Press, Elsevier pp. 415-430, DOI: 10.1016/C2020-0-01183-7, ISBN 978-0-12-824064-9, Pemmada, R., Telang, V.S., Dash, M., Richard, J.L.C., Tandon, P., Ramakrishna, S. and Nanda, H.S., 2022

Dr. Ponappa K.

Metals and Alloys for lightweight automotive structures, CRC Press, Yash Panchal, 2021

Dr. Manu Srivastava

- Metal Additive Manufacturing, CRC 1. Press, Taylor & Francis group, Contract Signed, Pulak Mohan Pandey, Sandeep Rathee, 2021*
- 2. Functionally graded materials, CRC Press, Taylor & Francis group, Contract Signed, Pulak Mohan Pandey, Prashant K. Jain, Sandeep Rathee, 2021*
- Editor for conference proceedings of 3. International Conference on Advances in Design, Materials and Manufacturing (ICRADMM 2020) in the journal entitled Materials Today: Proceedings, Elsevier, Contract Signed, Sandeep Rathee, Manu Srivastava, 2021*
- Layout optimization for fused deposition modelling process, Springer, https://doi.org/10.1007/ 978-3-030-68024-4_26, Dr. Sandeep Rathee, 2021
- Fabrication of Functionally Graded 5. Materials (FGMs) via Additive Manufacturing Route, Springer, https://doi.org/10.1007/978-981-16-7377-1 9, "Pushkal Badoniya, Ashish Yadav"Prashant K Jain, Sandeep Rathee"", First online since

09/12/2021

- 6. Trends and applications of FGM, CRC Press, Taylor & Francis group, ISBN 9780367483814, "Pushkal Badoniya, Ashish Yadav "Prashant K Jain, Sandeep Rathee"", 2021
- Analysis of temperature concentration 7. during single layer metal deposition using GMAW- WAAM: A case study, Springer, https://doi.org/10.1007/ 978-981-16-7377-1_8, Sandeep Rathee, Mehul Dongre, Ankit Tiwari, First online since 09/12/2021

Mr. Abhinav Anand Sinha, Dr. Tushar Choudhary, Dr. Mohd. Zahid Ansari

Chapter Integrated Fuel Cell Hybrid Technology, book title Hybrid Power Cycle Arrangements for Lower Emissions, CRC Press (Taylor & Francis Group) USA, 9781003213741, 2022

Dr. Shivdayal Patel

- "Numerical Analysis on Hexagonal Honeycomb Sandwich Structure under Air Blast Loading", Springer, ISBN:978-9355-933-195, Murlidhar Patel, 2022
- 2. "Design and Development of Double Air Suction Resuscitation Device using Scotch Yoke Mechanism", Springer, ISBN:978-9355-933-195, T. Sheorey, 2022
- 3. "Ballistic impact behaviour of 3D hybrid laminates", Springer, composite ISBN:978-9355-933-195, Pathak RK and Gupta VK, 2022
- Fatigue Failure Analysis of Spur Gear, 4. CRC Press, Accepted, Amandeep Singh,
- 5. Low Velocity Impact Analysis of Corrugated Sandwich Structure, CRC Press, Accepted, Vikrant Sen, 2021
- Safety Analysis of Honeycomb 6. Sandwich Structure under Blast Load,



CRC Press, Accepted, Murlidhar Patel, 2021

- Experimental Uncertainty Analysis of Failure Strains for Jute Fiber Composites, CRC Press, Accepted, Kumar Maharshi, 2021
- Natural fiber constituted 8. electromagnetic wave absorbing composites: A short review, CRC Press, Accepted, Sarang Joshi, Ravi Panwar, 2021
- Corrugated sandwich structure 9. modeling under low velocity impact, Springer, Accepted, Vikrant Sen, 2021
- 10. High velocity impact analysis of CFRP composite, Springer, https://doi.org/ 10.1007/978-981-16-9523-0 12, Sajal Soni, Roopendra Pathak, 2022
- 11. Ballistic performance of 3D hybrid composite laminates, Springer, https://doi.org/10.1007/978-981-16-9523-0_13, Roopendra Pathak, 2022
- 12. Experimental and Statistical analysis of the Jute fabric composites under tensile loading, Springer, https://doi.org/10.1007/978-981-16-9523-0 15, Kumar, Maharshi, 2022
- 13. Investigation of Macro-hardness and Immersed Corrosion Behavior of Sand Cast SiC and B4C Particulate Reinforced AA5052 MMCs, Springer, Accepted, Patel M, Sahu DP, Sahu SK and Singh MK, 2021
- 14. Fault Diagnosis of Gearbox using ITD-Tunable Q-Factor Wavelet Transformation, Springer, Accepted, Verma, Jay Govind, Pavan Kumar Kankar, 2021

Prof. Vijay Kumar Gupta

iNaCoMM 2021: Abstract and Schedule Book, V.K. Gupta, 978-93-5593-319-5, Prof. C. Amarnath, Prof. Puneet Tandon, Prof. Tanuja Sheorey, Dr. M.Zahid Ansari, 2021

Prof. Prashant K. Jain

- Condition Monitoring in Additive Manufacturing Using Support Vector Machine, Recent Advances in Mechanical Engineering. Lecture Notes in Mechanical Engineering. Springer, Singapore. pp. 119-126, 978-981-15-8703-0, Nainwal D., Kankar P.K., Jain P.K., 2021
- CFD analysis in a heating bed with two 2. inlets and one outlet cooling configuration for application in AM process, Lecture notes in Materials Today: Proceedings, Vol 43, Part 1, 2021, Pp. 124-129, ISSN 2214-7853, Gourav K. Sharma, Piyush Pant, Prashant K. Jain, Pavan K. Kankar and Puneet Tandon, 2021
- 3. 3D printed carbon fiber reinforced thermoplastic composites: A Review, Lecture notes in Materials Today: Proceedings, Vol 43, Part 1, 2021, Pp. 605-607, Nidhi Dixit and Prashant K. Jain, 2021
- Use of 3D printing for home 4. applications: A new generation concept, Lecture notes in Materials Today: Proceedings, Vol 43, Part 1, 2021, Pp. 678-681, Prateek K. Jain and Prashant K. Jain, 2021
- Design and FEA Analysis of 5. Polycaprolactone Based Bio-Resorbable Cardiovascular Stent, Recent Advances in Mechanical Engineering. Lecture Notes in Mechanical Engineering. Springer, Singapore. Pp. 797-804, 978-981-15-9677-3, Hrishabh Dubey, Nidhi Dixit and Prashant K. Jain, 2021
- Thermal and fluid flow modelling of a heating bed for application in metal AM process, Recent Advances in Mechanical Engineering.



- Notes in Mechanical Engineering. Springer, Singapore, Pp. 841-849, 978-981-15-9677-3, Gourav K. Sharma, Piyush Pant, Prashant K. Jain, P. K. Kankar and P. Tandon, 2021
- Functionally Graded Materials, Applications and Future Challenge, Functionally Graded Materials (FGMs): Fabrication, Properties, Applications, and Advancements, 978-036-74-83814, Ashish Yadav, Pushkal Badoniya, Manu Srivastava, Prashant K. Jain, and Sandeep Rathee, 2021
- Optimization of Direct Slicing using DICOMS for Additive Manufacturing, Lecture Notes on Multidisciplinary Industrial Engineering, 978-3-030-73494-7, U.S. Thakur, A. Nayak, V.K. Gupta and P.K. Jain, 2021

Heterogeneous modeling for fabrication of anatomical structure from DICOM image using additive manufacturing, Lecture Notes on Multidisciplinary Industrial Engineering, 978-3-030-73494-7, V. K. Gupta, A. Nayak, , U.S. Thakur and P.K. Jain, 2021.

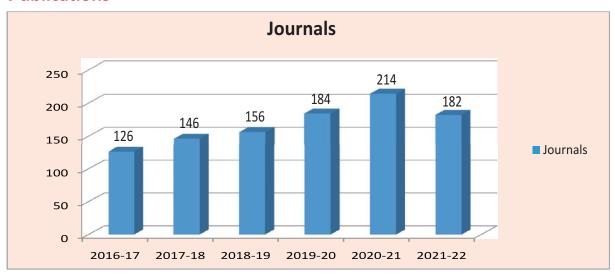
Dr. Mamta Anand

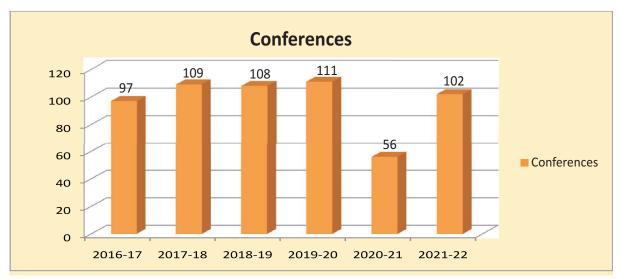
- Missing Girl: Geometry of Creation, Authorspress, New Delhi, 9789390588435, 2021
- 2. Melody of Love- Great Life a Beacon of Light, Authorspress, New Delhi, 9789390588008, 2021
- Transformative Innovation- Designing 3. Future, Authorspress, New Delhi, 9789390588237, 2021

Patents & Publication

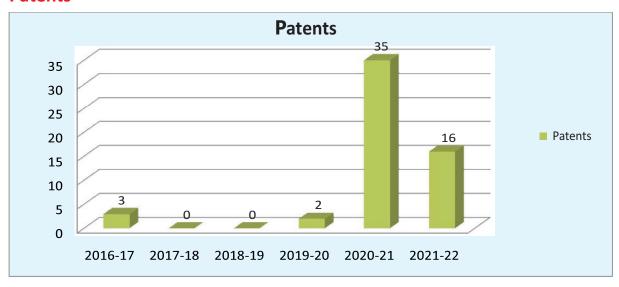


Publications





Patents



Academic and Research Activities •



A. **Academic Programmes**

Undergraduate Programmes:

The Institute has a unique undergraduate curriculum for imparting education in the following Discipline of engineering:

B.Tech. Computer Science and Engineering (CSE)

B.Tech. Electronics and Communication Engineering (ECE)

B.Tech. Mechanical Engineering (ME)

B.Tech. Smart Manufacturing (SM)

B. Des. Design (DS)

Postgraduate Programmes:

The Institute runs M.Tech., M.Des. and Ph.D. Programmes in the following Branch:

Computer Science and Engineering (CSE) M.Tech.

M.Tech. Electronics and Communication Engineering (ECE)

M.Tech. Mechanical Engineering (ME)

Mechatronics (MT) M.Tech.

M. Des. Design (DS)

Ph.D. Computer Science and Engineering (CSE)

Ph.D. Electronics and Communication Engineering (ECE)

Ph.D. Mechanical Engineering (ME)

Ph.D. Design (DS)

Ph.D. Natural Science (Mathematics)

Ph.D. Natural Science (Physics)

Ph.D. Liberal Arts (English)

Academic and Research Activities —

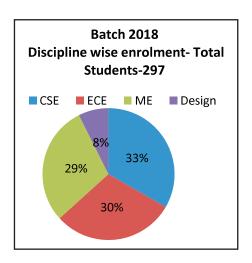


Academic & Students Enrolment В.

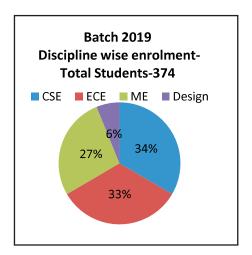
Undergraduate Programmes

B.Tech. Programme- Students Enrolment

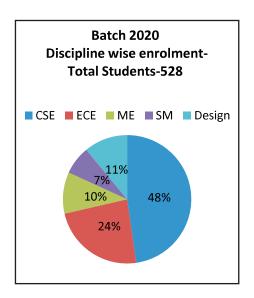
2018 Batch									
Discipline	iscipline OP OB SC ST Total								
CSE	53	26	14	6	99				
ECE	46	26	12	5	89				
ME	35	30	14	8	87				
Design	12	6	2	2	22				
Total	146	88	42	21	297				



2019 Batch									
Discipline	cipline OP EWS OB SC ST Tot								
CSE	55	10	34	18	8	125			
ECE	40	17	39	19	9	124			
ME	35	8	36	15	8	102			
Design	11	0	8	2	2	23			
Total	141	35	117	54	27	374			



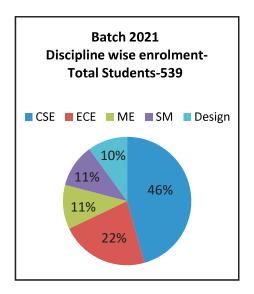
2020 Batch								
Discipline	OP	OP EWS OB SC ST						
CSE	99	32	65	37	19	252		
ECE	44	18	35	19	9	125		
ME	11	8	24	9	3	55		
SM	9	5	12	9	3	38		
Design	21	5	18	5	9	58		
Total	184	68	154	79	43	528		



Academic and Research Activities



2021 Batch								
Discipline	OP	EWS	ОВ	SC	ST	Total		
CSE	99	24	67	37	19	246		
ECE	49	12	32	19	8	120		
ME	24	6	17	8	5	60		
SM	22	6	16	10	5	59		
Design	21	4	14	10	5	54		
Total	215	52	146	84	42	539		



(11) **B.Tech Programme - Academic Performance Evaluation Committee Report**

Undergraduate Semester II (2020-21)

Batch	No. of Register Students	No. of students Passed	No. of Students Terminated/Withdrawal
2015	5	5	0
2016	267	267	0
2017	301	298	3 (withdrawal)
2018	304	298	6 (Withdrawal)
2019	390	385	5 (Withdrawal)
2020	550	544	6 (Withdrawal)

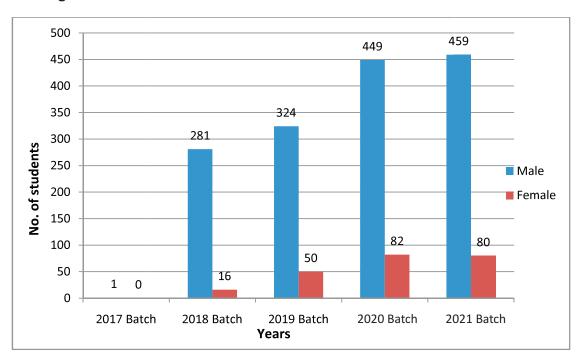
Undergraduate Semester I (2020-21)

Batch	No. of Register Students	No. of students Passed	No. of Students Terminated/Withdrawal
2016	4	4	0
2017	298	298	0
2018	298	298	0
2019	374	372	2 (Withdrawal)
2020	538	532	6 (Withdrawal)
2021	550	539	11 (Withdrawal)

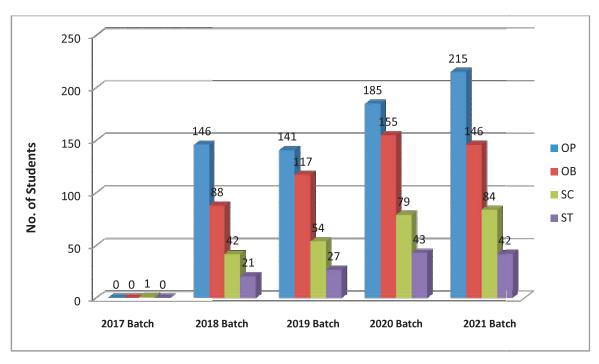
Academic and Research Activities •



Graph Showing Status of Male and Female Students in the Undergraduate (III) Programme.



(IV) **Graph Showing Status of Category wise Students in Undergraduate Programme**



Academic and Research Activities •— •

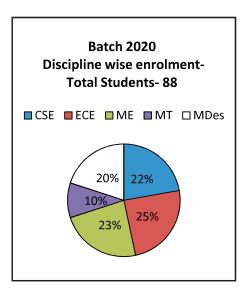


Postgraduate Programmes

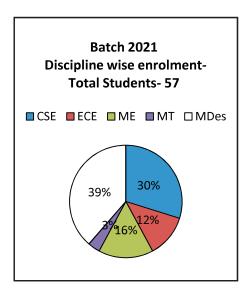
Institute offers master's degree Programme in : -

- M. Tech. (a)
 - (i) Computer Science & Engineering (CSE)
 - (ii) Electronics & Communication Engineering (ECE)
 - (iii) Mechanical Engineering (ME)
 - (iv) Mechatronics
- Master of Design (M.Des) (b)
- (1) **Students Enrolment**

2020 Batch									
Discipline	ОР	EWS	ОВ	sc	ST	Total			
CSE	8	0	8	4	0	20			
ECE	13	1	4	4	0	22			
ME	7	3	7	3	1	21			
MT	5	0	4	0	0	9			
MDes	11	2	3	2	0	18			
Total	44	6	26	13	1	90			



2021 Batch									
Discipline	OP	EWS	ОВ	SC	ST	Total			
CSE	12	1	1	3	0	17			
ECE	6	0	1	0	0	7			
ME	4	0	1	4	0	9			
MT	2	0	0	0	0	2			
MDes	10	1	6	3	2	22			
Total	34	2	9	10	2	57			



Academic and Research Activities •



(II) Postgraduate - Academic Performance Evaluation Committee Report

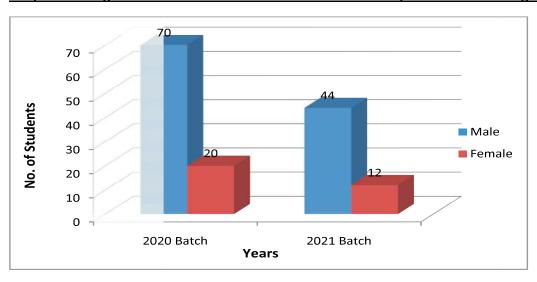
Post Graduate Semester II (2020-21)

Batch	No of Student	No of Pass	No of Terminated/ Withdrawal	
2019	81	79	2 (withdrawal)	
2020	91	90	1 (withdrawal)	

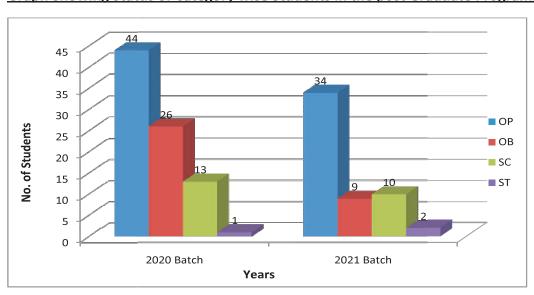
Post Graduate Semester I (2021-22)

Batch	No of Student	No of Pass	No of Terminated/Withdrawal
2020	90	90	0
2021	60	57	3 (withdrawal)

Graph Showing Status of Male and Female Students in the post Graduate Programme.



Graph Showing Status of Category wise Students in the post Graduate Programme.



Academic and Research Activities •— •



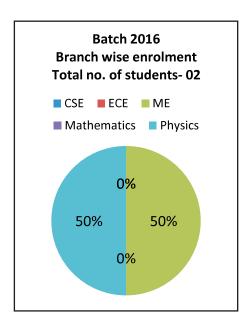
Ph.D. Programs

The Institute offers Ph.D in following Discipline

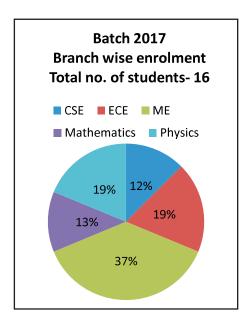
- Computer Science & Engineering (CSE) (i)
- Electronics & Communication Engineering (ECE) (ii)
- Mechanical Engineering (ME) (iii)
- Design (Design) (iv)
- (v) Natural Science (Physics, Mathematics)
- Liberal Arts (English) (vi)

(1) Students Enrolment in Ph.D

2016 Batch								
Discipline	OP	ОВ	sc	ST	Total			
CSE	0	0	0	0	0			
ECE	0	0	0	0	0			
ME	1	0	0	0	1			
Mathematics	0	0	0	0	0			
Physics	1	0	0	0	1			
Total	2	0	0	0	2			



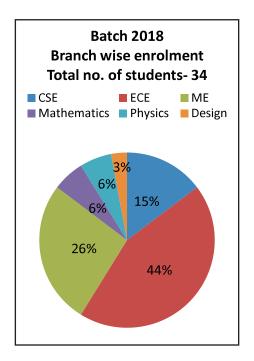
2017 Batch								
Discipline	OP	ОВ	SC	ST	Total			
CSE	1	1	0	0	2			
ECE	3	0	0	0	3			
ME	3	2	1	0	6			
Mathematics	0	2	0	0	2			
Physics	1	2	0	0	3			
Total	8	7	1	0	16			



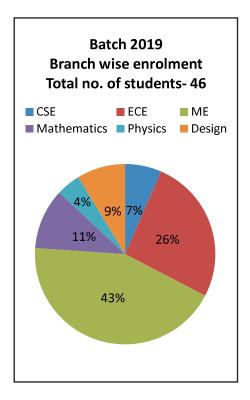
Academic and Research Activities — [



2018 Batch								
Discipline	OP	ОВ	SC	ST	Total			
CSE	4	1	0	0	5			
ECE	9	5	1	0	15			
ME	5	2	2	0	9			
Mathematics	0	2	0	0	2			
Physics	1	1	0	0	2			
Design	1	0	0	0	1			
Total	20	11	3	0	34			



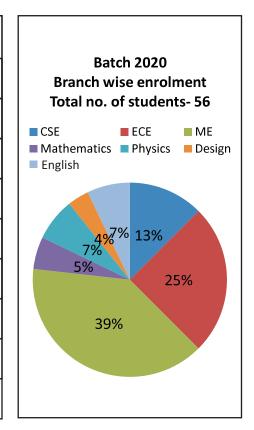
2019 Batch									
Discipline	ОР	EWS	ОВ	sc	ST	Total			
CSE	3	0	0	0	0	3			
ECE	5	0	6	1	0	12			
ME	8	0	6	5	1	20			
Mathematics	1	0	4	0	0	5			
Physics	1	0	1	0	0	2			
Design	0	0	1	1	2	4			
Total	18	0	18	7	3	46			



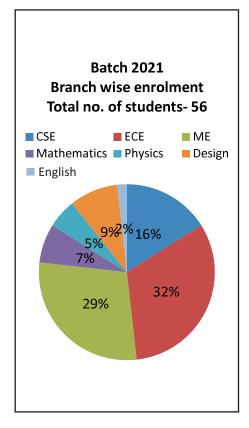
Academic and Research Activities •—



2020 Batch									
Discipline	ОР	EWS	ОВ	sc	ST	Total			
CSE	2	0	4	1	0	7			
ECE	7	0	6	1	0	14			
ME	14	0	5	3	0	22			
Mathematics	0	1	2	0	0	3			
Physics	2	0	2	0	0	4			
Design	1	0	1	0	0	2			
English	1	0	3	0	0	4			
Total	27	1	23	5	0	56			



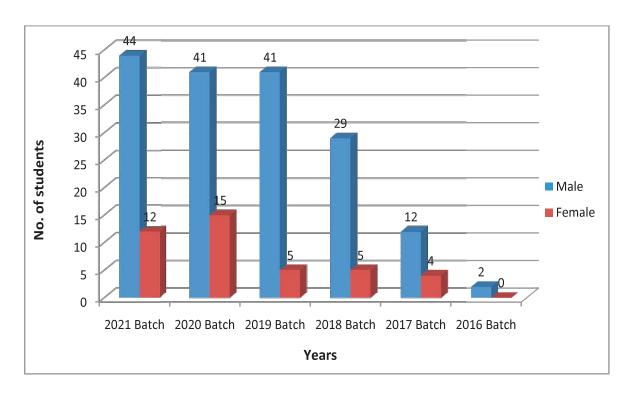
2021 Batch								
Discipline	ОР	EWS	ОВ	sc	ST	Total		
CSE	6	0	1	1	1	9		
ECE	6	1	7	4	0	18		
ME	9	1	5	1	0	16		
Mathematics	1	1	1	1	0	4		
Physics	2	0	0	1	0	3		
Design	0	0	4	1	0	5		
English	1	0	0	0	0	1		
Total	25	3	18	9	1	56		



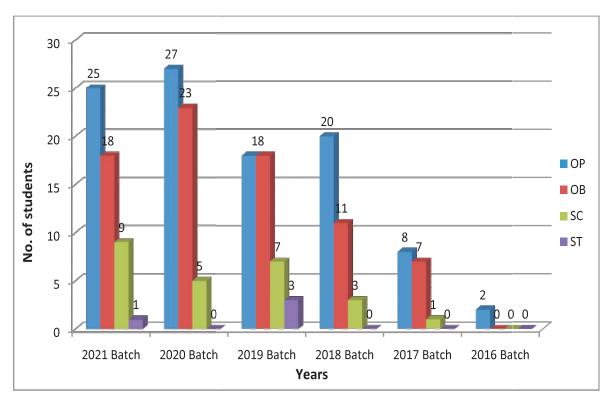
Academic and Research Activities •—



(II) Graph Showing Status of Male and Female Students in the Ph.D Programme.



Graph Showing Status of Category wise Students in the Ph.D Programme (III)



Projects



Financial Year 01/04/2021 to 31/03/2022

PROJECTS

(I) Institutional Projects

S. No.	Project Title	Duration	Investigator	Funding Agency	Total Sanctioned Amount Rs. in Lakh	Status
1	Electronics & ICT Academy	2015-22	Chief Investigator: Prof. Aparajita Ojha, Co-Chief Investigators: Prof. V.K. Gupta, Prof. P.N. Kondekar, Dr. Atul Gupta, Dr. P.K. Jain	Ministry of Communications and Information Technology, DEIT HRD Division	Rs. 2,500.00	Ongoing
2	National Initiative for setting up DIC Hub / Spoke Model	2016-22	Coordinators : Prof. Tanuja Sheorey and Dr. Atul Gupta	MHRD, Govt. of India through RDVV JABALPUR	Rs. 100.00	Ongoing
3	Special Manpower Development Programme for Chips to System Design	2015-21	PI: Prof. P.N. Kondekar, Co-PI: Dr. Jawar Singh & Dr. Dheeraj Sharma	CEERI	Rs. 119.00	Completed



(II) Research Projects

SI. No.	Project Title	Duration	Investigator	Funding Agency	Total Sanctioned Amount in Rs. Lakh	Status
1.	Smart Manufacturing and Condition Monitoring	2018-23	PI: Prof. Vijay K Gupta, Co PI: Prof. P Tandon	DST-FIST	194.40	On-Going
2.	Establishment of Research facility for Advanced Microwave and Communication Engineering	2018-23	PI: Dr. Dinesh Kumar V. Co-PI: Dr. Manoj S Parihar, Dr. Matadeen Bansal	DST-FIST	205.20	On-Going
3.	Development of Mathematical Models to Minimize the impact of Airline disruption in Real Time Basis	2018-21	PI: Dr. Deepmala	CSIR	18.96	On-Going
4.	Analytical Modeling & Simulation of 3-5 nano structure-based hybrid solar cells	2018-21	PI: Dr. D P Samajdar	SERB	26.70	On-Going
5.	Modelling suspensions of active swimming micro-organisums under external graditents via Bioconvection	2019-22	Dr. Manoj Kumar Panda	SERB	21.92	On-Going
6.	Scientific and Industrial Applications of Bioconvection Via Mathematical Modelling	2019-22	Dr. Manoj Kumar Panda	CSIR	5.47	On-Going
7.	Mathematical and Computational modelling of Epidemic Forecast and Disease Transformation	2019-21	Dr. Manish Kumar Bajpai	SPARC	48.90	On-Going
8.	Prediction of Diseases through computer assisted diagnosis system using images captured by minimally-invasive and non- invasive modalitiees	2019-21	Dr. Ayan Seal	SPARC	47.69	On-Going
9.	Investigation of sp2/sp3 edge functionalized GaNnanoriboons for spintronic device applications	2019-22	Dr. Neeraj Kumar Jaiswal	SERB	21.44	On-Going



10.	Development of Multi- operational Microwave Heating Setup for the near net shape material processing	2019-21	Dr. Harpreet Singh	SERB	22.04	On-Going
11.	Studies on electronic and optical Properties in Group III -V _ N Quaternanry Semiconductor Quantum Dots Uaing Density Functional Theory And K Dot Method	2019-22	Dr. DIP Prakash Samajdhar	CSIR	17.10	On-Going
12.	Design and Development of centralized database on scholarship/ fellowships awarded in S&T Sector	2020-23	Dr. Manish Kumar Bajpai	DST	24.13	On-Going
13.	Ergonomic Intervention In the Classroom Environment for Enhanced Learning	2020-22	Dr. Prabir Mukhopadhyay	NCERT	07.98	On-Going
14.	MI studies of electrodeposited nickel based thinfilm alloys for lowmagnetic field sensor application	2020-23	Dr. Amaresh Chandra Mishra	BRNS	25.15	On-Going
15.	Scale effect approach to evaluate the erosion mechanism and performance features in micro abrasive water jet machining process: A study of new approach based on process parameters and materials microstructures	2020-22	Prof. Puneet Tandon	SERB- TARE	18.30	On-Going
16.	Design and Development of ADHAAR (Autonomous Drone for Himalayan region Analysis, Assessment and Rescue)	2021-24	Co-PI : Dr. Irshad Ahmad Ansari	JCBRO	0.88	On-Going
17.	Investigation of Computational Intelligence Capabilities for Digital Signal Protection	2021-24	PI : Dr. Irshad Ahmad Ansari	STEM Research Society	2.05	On-Going
18.	Low Profile Dielectric Resonator Antennas for Compact, Wideband and Conformal Applications	2021-24	PI : Dr. Biswajeet Mukherjee	SERB	26.07	On-Going



19.	Computer Aided Design For Development of Hardware Prototype for Diagnosis of Diabetes Using ECG Signals	2020-23	PI : Dr. Varun Bajaj	CSIR	6.97	On-Going
20.	Design and Prototyping of Deep Neural Network Enabled Innovative Conformal Exterior Stealth Tanker Drone	2021-22	PI : Dr. Ravi Panwar	ARTPARK, IISc Banagole	3.60	On-Going
21.	Development of Fresh Water Pearl Culture Unit Based On IoT-Data Analytics	2021-22	PI: Dr. Munesh Singh	SEED DST	8.89	On-Going
22.	Bot Prevention in Cyber Physical Systems	2021-22	PI : Dr. Neelam Dayal	IHUB- NTIHAC, IIT Kanpur	35.00	On-Going
23.	Discovery of Therapeutic Candidates for the Treatment of ZIKA Viral infection by using advanced computaional techniques	2021-22	PI : Dr. N. R. Jena	CSIR	7.75	On-Going
24.	Development of Li doped ZnO based electrolyte for low -temperature solid oxide fuel cell (SOFC)	2021-22	PI : Dr. Pankaj Sharma	SERB	32.86	On-Going
25.	Magnetron Sputtering Deposited Microwave Absorbing Thin Films for Stealth and Electromagnetic Shielding Applications	2021-22	PI Dr. Ravi Panwar	UGC DAE CSR	2.43	On-Going
26.	Design and Development of Novel High Strength Ultra- Light weight Metal Matrix Nanocomposite Material for Aerospace Application by Hybrid Manufacturing Process	2021-22	PI: Dr. R. Seethram	SERB	37.78	On-Going
27.	Study of Specific areas registering high failure rate of distribution transformers to analyze the cause of failure and suggest a solution to overcome this problem by applying IT technology and integrating it with metering solutions	2021-22	PI: Dr. V. K. Jain & Co-PI: Dr. S. K. Jain	DSIR	22.22	On-Going



28.	Development of the AI based Technique to Predict the Multiple Defects of the Two-stage Gearbox	2021-22	PI : Dr. V. K. Gupta	SERB	30.91	On-Going
29.	Prediction of Diseases through computer assisted diagnosis system using images captured by minimally-invasive and non- invasive modalitiees	2021-22	PI : Dr. Pankaj Shrama	UGC DAE CSR	2.43	On-Going
30.	Development of Adaptive Double Sided incremental Forming Process For dieless Manufacturing	2017-22	PI : Prof P.Tandon, Co PI's: Dr. P. K. Jain and Dr. P. K. Kankar	IMPRINT- India, MHRD	247.72	Completed
31.	Design, Simulation and development of conformal phased array antenna for airbone applications	2017-22	PI: Dr. Dinesh Kumar Vishwakarma, Co PI : Dr. Manoj Singh Parihar	DRDO	52.78	Completed
32.	Radiation effects in Gallium Oxide	2017-21	PI : Dr. Yashpal Singh Katharria	UGC	8.13	Completed
33.	Study of Resistive switching in gallium oxide thin films for non-volatile memory application	2018-21	PI : Dr. Yashpal Singh Katharria	UGC-DAE	1.35	Completed
34.	FPGA Prototype of non- recursive key based crypto system for secure transmission of real time privacy signal	2018-21	PI : Dr. Varun Bajaj CoPI: Dr. Sraban Kumar Mohanty	DST	24.98	Completed
35.	Mathematical modeling of biased swimming micro-organisms via bioconvection	2018-21	PI : Dr. Manoj Kumar Panda	SERB	6.60	Completed
36.	First principle investigations of 2-D nitrides as electrodes materials for alkali-ion batteries	2019-22	PI : Dr. NehaTyagi (Mentor: Dr. Neeraj Kumar Jaiswal)	DST-WOS-A)	26.98	Completed
37.	Development of Induction- conduction based material deposition system for metal additive manufacturing	2019-22	PI : Dr. Prashant Kumar Jain	SERB	42.34	Completed
38.	Numerical Modeling and development of New methods for hybrid metal forming of complex parts of ultra –high strength (UHS) materials	2019-21	PI : Prof. Puneet Tandon	DST-RFBR	19.64	Completed

• Projects •



39.	Empowering women	2019-21	PI : Dr. Tripti Singh	DST	13.65	Completed
	through visual			(SEED)		
	communication tools					
40.	Hybrid Scaffold	2019-21	Dr. Himansu Shekar	SERB	23.25	Completed
	Manufacturing using Surface		Nanda			
	Modification of 3D-Printed					
	Hydrophobic Scaffolds					

(III) Consultancy Projects

S.No.	Name of Consultancy work (Project Title)	Consultant (Name of Faculty)	Funded By (Name of Client)	Amount received (in Rupees)
1	Consultancy Services to develop Al Model	Dr. Anil Kumar & Dr. Amit Vishwakarma	Chambal Fertilisers and Chemicals Limited	1,45,000.00
2	Intent Inference based on Activity Templating (Attack Profile/trajectory) determination and Trend Estimation	Dr. M K Bajpai & Dr. KusumKumariBharti	BEL	5,86,460.00
3	Conceptual Design of Robotics glove for diabled Childer	Dr. Manu Srivastava	NIT Srinagar	10,000.00
4	AI and ML based data analytics algorithum for Medtech system	Dr. Navjeet Bagga and Dr. Varun Bajaj	Humors Tech Pvt. Ltd	20,000.00
5	Ergonomics for Rural Crafts and Artisans Development & Rural Industrialization and Entrepreneurship Development for the UBA	Dr. Prabir Mukhopdhyay	IIT Kanpur	50,000.00
6	Load forecasting for MP state	Dr. S. K. Jain & Dr. V. K. Jain	SLDC, MPPTCL, Jabalpur	15,57,600.00
7	Okuma Milling Machine	Prof. P K Jain	RAR Engineering Pvt. Ltd	5,196.00
8	Similarity Detection and Process Information Retrieval from Large Part-Drawing Database of Manufacturing Companies: A Mini Industry 4.0 Solution	Prof. A Ojha & Prof P Khanna	ALFA TKG	5,30,520.00
9	Implementation of signal and image processing algorithms and related application	PI Dr. Irshad Ahmed Ansari & Dr. Varun Bajaj	JCRBO	45,000.00
	Total			29,49,776.00

Faculty Achievements



S. No.	Name	Awards / Achievements	Details	Awarded By	Date
1.	Dr. Varun Bajaj	Award for Excellence in Research.	7th South Asian Education Awards-22	7th South Asian Education Awards-22	Jan-22
2.	Dr. Varun Bajaj	Top 2% researchers and Scientist in the world	NA	Stanford university	Jul-21
3.	Dr. Anil Kumar	Top 2% researchers and Scientist in the world	<u>NA</u>	Stanford university	Jul-21
4.	Dr. Rakesh Kumar Jha	Top 2% researchers and Scientist in the world	NA	Stanford university	Jul-21
5.	Dr. Biswajeet Mukherjee	Top 2% researchers and Scientist in the world	NA	Stanford university	Jul-21
6.	Dr. Pankaj Sharma	Visiting Scientist Fellowship at UGCDAE Indore		INSA	31 May 21
7.	Prof. Pritee Khanna	Honour	Member, Board of Studies, Artificial Intelligence and Data Science Department	Jabalpur Engineering College, RGPV Bhopal	Nov. 2021 onwards
8.	Dr. N.R. Jena	Most Downloaded article	Chemical Physics Impact Journal		2021
9.	Dr. J. Al Muzzamil Fareen	Innovation Ambassador 2020-21	Trained as an Innovation Ambassador (Advanced), MIC, AICTE	MIC, AICTE	10 July 2021
10.	Dr. Mamta Anand	IMHLS 32nd Istanbul Best Research Paper Award	Best Research Paper Award	IMHLS Istanbul	2021
11.	Dr. Mamta Anand	URUAE 41st Istanbul Best Research Paper Award	Best Research Paper Award	URUAE	March 2022
12.	Prof. Puneet Tandon	Achievement	Topic Chair, ASME International Mechanical Engineering Congress & Exposition (IMECE) 2022	ASME IMECE	30-11- 2021

• Faculty Achievements • - - -



13.	Prof. Puneet Tandon	Honour	Member, Board of Studies for Mechanical Engineering, G.H. Raisoni College of Engineering, Nagpur for 3 years (2021- 22 to 2023-24)	Rashtrasant Tukadoji Maharaj Nagpur University, Napgur	30-11- 2021
14.	Prof. Puneet Tandon	Achievement	Member, UCEED-CEED Formation of Syllabus and Structure Review and Revision Committee (Pan India Committee for admissions to undergraduate and graduate programs in Design	UCEED-CEED Implementation Committee	08-25- 2021
15.	Prof. Puneet Tandon	Honour	Honorary Rosalind Membership [Membership ID #RZ81700]	London Journal Press, UK	05-07- 2021
16.	Dr. Shivdayal Patel	1st Position in Hindi writing Essay Competition	1st Position in Hindi writing Essay Competition Hindi Pakhwada	IIITDM Jabalpur	1 Sep- 2021
17.	Mr. Amandeep Singh, Dr. Shivdayal Patel	Best Research Paper Award-IMRSE	"Fatigue Failure Analysis of Spur Gear" International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE– 2021)	NIT Jalandhar	27 Jun- 2021
18.	Mr. Vikrant Sen, Dr. Shivdayal Patel	Best Research Paper Award-IMRSE	"Low Velocity Impact Analysis of Corrugated Sandwich Structure" International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE– 2021)	NIT Jalandhar	27 Jun- 2021
19.	Mr. Kumar Maharashi, Dr. Shivdayal Patel	Best Research Paper Award-IMRSE	" Experimental Uncertainty Analysis of Failure Strains for Jute Fiber Composites" International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE– 2021)	NIT Jalandhar	27 Jun- 2021

• Faculty Achievements •



20.	Prof. Vijay Kumar Gupta	Member Advisry committee	CAMMP 2021	MNIT Jaipur	July 24- 25, 2021
21.	Prof. Vijay Kumar	Guest of Honor,	FDP on "Robotics and	SKIT Jaipur	15-11-
	Gupta	Inaugural Function	Mechatronics in		2021
			Manufacturing"		
22.	Prof. Vijay Kumar	Member, PhD selection	_	IIITDM Kurnool	15-12-
	Gupta	committee			2021
23.	Prof. Tanuja	Media coordinator and			June 22-
	Sheorey	coordinator for digital	-	-	24, 2021
		hackathon 2021			
24.	Prof. Tanuja	Innovation Ambassador		Ministry of	Jne
	Sheorey		-	Education,	2021
				Innovation Cell	
25.	Prof. Prashant K.	PhD student Mr. Ankit	_	IIITDM Jabalpur	April
	Jain	Nayak received The			08, 2021
		IIITD&M Proficiency			
		Gold Medal for Best			
		Cross Disciplinary			
		Project in the			
		graduating class of			
		Doctor of Philosophy,			
		for his PhD thesis titled			
		"Guided Endodontics			
		and Vibration Signature			
		Analysis of Root Canal			
		Shaping: Experimental			
		and Computational			
		Study" During 11 th			
		Convocation on April			
		08, 2021.			

Conference Organised.



- Dr. Kusum Kumari Bharti, Finance, 1. Chair, Track Chair, Publication Chair, MAI 2021, NIT Jamsedpur, March 4-6, 2022
- 2. Dr. Kusum Kumari Bharti, General Chair, ICCIS 2021, NIT Delhi (Online), Soft Computing Research Society, Dec 18-19, 2021
- Dr. Kusum Kumari Bharti, Conference 3. Chair, ICUS 2021, SCRS (Online), Soft Computing Research Society, Nov. 27-28,2021
- Prof. Pritee Khanna, Conference 4. Convener, Sixth IAPR international conference on Computer vision & image processing (CVIP 2021), IIT Ropar, IAPR, 03-12-2021 to 05-12-2021
- Prof. Pritee Khanna, Member, Advisory Committee, IEEE Mysore Sub Section Flagship International Conference (MysuruCon 2021), Novkis College of Engineering, Hassan, Karnataka, IEEE, 24-10-2021 to 25-10-2021
- Prof. Pritee Khanna, Member, 6. Technical Program Committee, International conference on Computer Vision, High-Performance Computing, Smart Devices and Networks (CHSN 2021), JNTU Kakinada, NABARD, 20-08-2021 to 21-08-2021
- 7. Prof. Pritee Khanna, Member, Technical Program Committee, First International Conference on Intelligent Cyber-Physical Systems (ICPS 2021), IIIT Kota, IIIT Kota, 24-06-2021 to 26-06-2021
- Prof. Pritee Khanna, Member, 8. Technical Program Committee, 5th International Conference on Advances in Computing and Data Sciences (ICACDS-2021), MVP's KBTCOE, Nashik, MVPS's KBTCOE, Nashik, 23-04-2021 to 24-03-2021

- 9. Dr. Varun Bajaj, Publicity Chair, The 10th International Conference on Health Information. Melbourne Australia, Springer, 2021
- Dr. Varun Bajaj, Technical Programm 10. Chair, Science (HIS 2021), online, IEEE, 2021
- ICSC 2021, Member of the Advisory 11. Committee, 7th International Conference on Signal Processing and Communication (ICSC 2021), Jaypee Institute of Information Technology, Noida, IEEE, 25-27 Nov 2021
- 12. CAPS 2021, Technical Program Chair, International Conference on Control, Automation, Power and Signal processing (CAPS-2021), PDPM-IIITDM Jabalpur, IEEE, 10-12 Dec 2021
- 13. CAPS-2021, Conference Chair, CAPS-2021, IIITDM Jabalpur, 10-12-2021 to 12-12-2021
- Dr. Amit Vishwakarma, Publicity 14. Committee chair and Reviewer, IEEE International Conference on Control, Automation, Power and Signal Processing (CAPS), PDPM IIITDM Jabalpur, December 10-12 2021
- 15. Prof. Puneet Tandon, Member Advisory Committee, International Conference on Advances in Mechanical Engineering (ICAME-22), GH Raisoni College of Engineering, Nagpur & GH Raisoni Institute of Engineering & Technology, Nagpur. India, GH Raisoni Group, Nagpur, 25-26 March 2022
- Prof. Puneet Tandon, Co-Chair, 2nd 16. International Conference on Industry 4.0 and Advanced Manufacturing (I-4AM 2022), Indian Institute of Science, Bengaluru, IISc Bangalore, 10-11 January 2022

Conference Organised



- 17. Prof. Puneet Tandon, Member Advisory Committee, International Conference on Industrial Engineering and Management (ICIEM-2021), Malviya National Institute of Technology, Jaipur. India, MNIT Jaipur, 17-19 December 2021
- 18. Prof. Puneet Tandon, Co-Chair, iNaCoMM 2021: 5th International and 20th National Conference on Machines and Mechanisms, PDPM IIITDM Jabalpur, PDPM IIITDM Jabalpur and Association of Machines and Mechanisms (AMM), 9-11 December 2021
- 19. Prof. Puneet Tandon, Member Advisory Committee, 2nd International Conference on Industrial and Manufacturing Systems-(CIMS-2021) (https://pec.ac.in/cims-2021/), Punjab Engineering College, Chandigarh, PEC Chandigarh, 11-13 November 2021
- 20. Prof. Puneet Tandon, Panelist, 'Design, Form and Chaos' - Addressing the challenges of new courses, curriculum and pedagogies for a culture of innovation, antaaya 2021 – 2nd Design Education Symposium, Department of Design, IIT Guwahati, IIT Guwahati, 7-9 October 2021
- Prof. Puneet Tandon, Conference 21. Advisory Board, International Conference on Advanced Manufacturing and Materials Processing (CAMMP 2021), Malviya National Institute of Technology Jaipur, MNIT Jaipur, 24-25 July 2021
- Prof. Puneet Tandon, International 22. Organizing Committee – Asia, The 18th International CAD Conference, CAD'21, July 5-7, 2021 (www.cadconference.net), Polytechnic

- University of Catalonia, Barcelona, Spain, Nosov Magnitogorsk State Technical University, Magnitogorsk, Russia, 5-7 July 2021
- 23. Prof. Puneet Tandon, Member Program Committee, 5th Magnitogorsk Materials Week Conferencem(https://matweek.com/) , Nosov Magnitogorsk State Technical University, Magnitogorsk, Russia, Nosov Magnitogorsk State Technical University, Magnitogorsk, Russia, 5-7 April 2021
- Dr. Tushar Choudhary, Organising 24. Committee, iNaCoMM 2021, IIITDM JABALPUR, Indian Bank, Dec-9-11, 2021
- 25. Dr. Shivdayal Patel, Treasurer and Program Committee, iNaCoMM-2021, IIITDM Jabalpur, IIITDM Jabalpur, Dec-9-11, 2021
- 26. Prof. Vijay Kumar Gupta, Conference Chair, 5th Internationa and 20th National Conference on Machines and Mechanisms (iNaCoMM2021), PDPM IIITDM Jabalpur, In collaboration with AMM and IFToMM. Sponsored by PDPM IIITDM Jabalpur, CSIR, Indian Bank, Dec-9-11, 2021
- Dr. Mohd. Zahid Ansari, Secretary, 27. INaCoMM 2021, IIITDM Jabalpur, IIITDM, Dec-9-11, 2021
- Dr. J. Al Muzzamil Fareen, Principal 28. Coordinator, ATAL FDP Pesrsonal Effectiveness, Online PDPM IIITDM Jabalpur, AICTE ATAL Academy, 23-27 August 2021

Key Note:

1. Prof. Pritee Khanna, Computer Vision in Healthcare: Medical Image Processing, National Conference on Unprecedented and Advanced

Conference Organised



- Concepts of Computer Vision, Global Group of Institutions, Jabalpur, India, May 11-12, 2021
- Prof. S.N. Sharma, ATAL-AICTE FDP on 2. Internet of Things, ATAL-AICTE FDP on Internet of Things, Technocrats Institute of Technology, Bhopal, 08-12 Feb. 2022
- 3. Prof. Puneet Tandon, Hybrid Manufacturing, 5th Magnitogorsk Materials Week Conference (MMW) (in memory of Prof. Alexander Zhilyaev), Nosov Magnitogorsk State Technical University, Magnitogorsk, Russia, 5-7 April 2021 (https:// matweek.com/), 05.04.2021
- Prof. Prashant K. Jain, Additive 4. Manufacturing: Recent Research and Opportunities, Second International

- Conference on Mechanical and Energy Technologies (ICMET-2021), Department of Mechanical Engineering, Galgotias College of Engineering & Technology, Greater Noida, October 28-29, 2021
- 5. Prof. Prashant K. Jain, In-house experimental setups for technology development: Additive Manufacturing, AICTE-ATAL Sponsored Online Faculty Development Program (e-FDP) on "Enhancing Organizational Competitiveness in the Era of Globalization & Liberalization" (EOCGL-21), Department of Industrial & Production Engineering, National Institute of Technology, Jalandhar, December 6-10, 2021

• Events •



S. No.	Name	Event Type	Name of Event	Sponsoring Agency	Venue	Role	Start Date	End Date
1.	Prof. Aparajita Ojha	Workshop	Healthcare Innovations during COVID Outbreak	PDPM IIITDM Jabalpur	Online	Coordinator	25 June 2021	26 June 2021
2.	Prof. Aparajita Ojha	Awarness Programme	COVID-19 : Do's and Don'ts		Online	Coordinator	18 May 2021	18 May 2021
3.	Dr. Avinash Chandra Pandey	Conference special session	Special Session on Computationally Intelligent Algorithms for Emerging Computing Paradigms	Springer	NIT, Raipur	Dr. Avinash Chandra Pandey	12 March 2022	14 March 2022
4.	Dr. Atul Gupta	FDP	Data Science for all	ICT Academy, IIITDM Jabalpur	IIITDM Jabalpur Global	Joint Principal Coordinator	12 April 2021	23 April 2021
5.	Dr. Atul Gupta	FDP	Python Programming	ICT Academy, IIITDM Jabalpur	IIITDM Jabalpur Global	Principal Coordinator	26 July 2021	06 Aug. 21
6.	Dr. Kusum Kumari Bharti	FDP	Reinforcment Learning and It's Applications	ATAL Academy	Online	Organizer	07 June 2021	11 June 2021
7.	Dr. Kusum Kumari Bharti	FDP	Quantum Computing	E&ICT Academy	Online	Joint-PI	27 Sep. 2021	08 Oct. 2021
8.	Dr. Kusum Kumari Bharti	Certificate Program	Python Programming	E&ICT Academy	Online	PI	13 Dec. 2021	03 Jan. 2022
9.	Dr. Kusum Kumari Bharti, Dr. Manish Kumar Bajpai	FDP	Reinforcement Learning and Its Applications	ATAL	IIITDM jabalpur	Co- Coordinator	07 June 2021	11 June 2021
10.	Prof. Aparajita Ojha and Prof. Pritee Khanna	Workshop	Workshop on Healthcare innovations during COVID Outbreak	IIITDM Jabalpur	PDPM IIITDM Jabalpur	Coordinator	25 June 2021	26 June 2021
11.	Dr. Vinod Kumar Jain	FDP	Cybersecurity for IoT Networks	AICTE-ATAL Academy	PDPM- IIITDM Jabalpur	Co- Coordinator	21 June 2021	25 June 2021
12.	Dr. Neelam Dayal	FDP	IoT & Applications (Smart Systems)	E&ICT	Online	Joint Principal Coordinator	14 Feb. 2022	25 Feb. 2022





13.	Dr. Abhishek Verma	Conference special session	Special Session on Computationally Intelligent Algorithms for Emerging Computing Paradigms	Springer	NIT, Raipur	Session Co- Chair	12 March 2022	14 April 2022
14.	Dr. Neelam Dayal	FDP	Cybersecurity for IoT Networks	AICTE-ATAL Academy	PDPM- IIITDM Jabalpur	Coordinator	21 June 2021	25 June 2021
15.	Dr. Anil Kumar	FDP	Machine Learning Application in Signal Processing & Communication Engineering	-	IIT Guwahati	Principle Coordinator	03 Jan. 2022	08 Jan. 2022
16.	Dr. Dinesh Kumar V			STUTI/DST	PDPM IIITDM Jabalpur	Organizing Committee Member	24 Feb. 2022	28 Feb. 22
17.	Dr. Dinesh Kumar V Toycathon Toycathon 2021		МоЕ	Nodal center IIITDM Jabalpur	SPOC and converner	22 June 2021	24 June 2021	
18.	Prof. P.N. Kondekar	Workshop	Workshop International Design Workshop on leading edge theories and practices in design International Design IIITDM Committee Jabalpur Member		Committee	10 Oct. 2021		
19.	Dr. D.P. Samajdar	FDP	Introduction to Quantum computing and Information	AICTE	Online	Coordinator	05 July 2021	09 July 2021
20.	Dr. Manu Srivastava Workshop High end workshop on DOE, "Material characterization and advanced manufacturing		on DOE, "Material characterization and advanced	SERB	IIITDM Jabalpur	Co- Coordinator	20 Sep. 2021	26 Sep. 2021
21.	Dr. Manu Srivastava	Art Exhibition	Illustrated talk on the art of Madhubani by President awardee Ms. Manisha Jha	SPIC Macay Chapter	IIITDM Jabalpur	Coordinator	21 Jan. 2022	21 Jan. 2022
22.	Prof. Vijay Kumar Gupta	Short Term Program	FDP and Karyashala on "Social Robotics and AI"	SERB and ICT Academy IIITDM Jabalpur (joint Program)	Online	Principle Coordinator	28 June 2021	04 July 2021
23.	Prof. Vijay Kumar Gupta	Short Term Program	FDP on "Digital Tools for Writing, Authoring & Reviewing Manuscripts"	ICT Academy IIITDM Jabalpur (joint Program)	Online	Joint Principle Coordinator	12 July 2021	23 July 2021

• Events •



24.	Prof. Prashant K. Jain	FDP	Organized Two Week Global Online Summer FDP as Joint Principal Coordinator on "Advanced Optimization		Organizer	6 Sep. 2021	17 Sep. 2021
			Techniques and Hands on With MATLAB/SCILAB" Supported by Ministry of Electronics and Information Technology (MeitY), Govt. of India, Jointly organized by seven Electronics & ICT Academies, MNIT Jaipur, IIT Guwahati, IIT Roorkee, IIT Kanpur, IIITDM Jabalpur, NIT Patna and NIT Warangal, As principal organiser MNIT Jaipur, September 6-17, 2021.				
25.	Prof. Prashant K. Jain	Workshop	Organised DST SERB Sponsored High end workshop "Karyashala" under accelerate vigyan scheme on "High end workshop on DoE, Material characterization and advanced Manufacturing techniques" at Mechanical Engineering Department, PDPM Indian Institute of Information Technology, Design and Manufacturing Jabalpur, Jabalpur, September 20-26, 2021 (with Dr. Manu Srivastava).	Jabalpur	Organizer	20 Sep. 2021	26 Sep. 2021





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26.	Prof. Prashant K. Jain	FDP	Organized Two Week Global Online Summer FDP as Principal coordinator on "MATLAB Programming for Additive Manufacturing and 3D Printing (MPAM)", Supported by Ministry of Electronics and Information Technology (Meity), Govt. of India, Jointly organized by four Electronics & ICT Academies, MNIT Jaipur, IIT Guwahati, IIITDM Jabalpur and NIT Patna, September 20-October 1, 2021		Jabalpur	Organizer	20 Sep. 2021	01 Oct. 2021
27.	Dr. L. K. Balyan, Dr. Deepmala	Organizing committee member	National Symposium on Mathematical Sciences and Applications (NSMSA-2021)	PDPM IIITDM Jabalpur	PDPM IIITDM Jabalpur		22 Feb. 2021	
28.	Dr. Prabir Mukhopad hyay	Online Training and Skill Internship (VRITIKA)	Ergonomic Analysis and Design of Icons used in Multimedia Devices for the Indian Context	SERB, DST Under Accelerate Vigyan Scheme	Online	Coordinator	21 May 2021	21st June 2021
29.	Dr. J.A. Muzzamil Fareen	FDP	Personal Effectiveness	AICTE ATAL	Online	Coordinator	23 Aug. 2021	27 Aug. 2021



S. No.	Name	Presentation Type	Organzation Name	Title	Date
1.	Dr. Avinash Chandra Pandey	Expert Lecture	Kalindi College, University of Delhi, New Delhi	Computational Intelligence for Social Network Analysis	3 Feb. 2022
2.	Dr. Atul Gupta	Expert Lecture	AICTE Training And Learning (ATAL) Academy, AtalBihari Vajpayee University, Bilaspur CG	Python Programming	05 July 2021
3.	Dr. Atul Gupta	Expert Lecture	AICTE Training And Learning (ATAL) Academy, IIITNaya Raipur	Text Feature Extraction and Classification	03 Oct. 2021
4.	Dr. Abhishek Verma	ATAL Faculty Development Programme on "Research Confront and Document Preparation using LaTeX"	NIT Kurukshetra, Kurukshetra	Making Poster, Presentation in LaTeX	04 Aug. 2021
5.	Dr. Abhishek Verma	ATAL Faculty Development Programme on "Emergence of Reversible and Quantum Logic Circuits"	ABES Institute of Technology, Ghaziabad	Post-Quantum Cryptography	25 Nov. 2021
6.	Dr. Abhishek Verma	Research Methodologies and Scientific Research Writing using LaTeX (RMSRL-2022)	NIT Kurukshetra, Kurukshetra	Making Poster, Presentation in LaTeX	15 March 2022
7.	Dr. Manish Kumar Bajpai	ATALFDP	IIITDM Jabalpur, Online	Reinforcement Learning and It's Applications	07-11 June 2021
8.	Dr. Manish Kumar Bajpai	Expert Lecture	Poornima Institute of Engineering & Technology, Online	AICTE-ISTE Applications of Artificial Intelligence Using Machine Learning & Deep Learning	18-24 Dec 2021
9.	Dr. Manish Kumar Bajpai	Expert Lecture	PDPM-IIITDMJ with Sri Sankara Arts and Science College, Online	Cetificate Course on Python Programming	Dec 13, 2021 - Jan 03, 2022
10.	Dr. Manish Kumar Bajpai	Expert Lecture	Department of Computer Science, Kalindi College, University of Delhi, Online	pplications of AI - Machine Learning and Soft Computing Techniques	Jan 27 - Feb 03 2022



11.	Dr. Munesh Singh	Technology Innovation and Incubation Center (TIIC) - ABV-IIITM Gwalior	IIITM Gwalior, Gwalior	IoT Physical Platform Hardware& Software Prospective	12th Feb 2022
12.	Dr. Munesh Singh	AICTE-CSVTU Joint Teachers Training Program's	SSTC , Bhilai, Bhilai	SMART PERSPECTIVES OF IOT IN DIFFERENT APPLICATIONS	13 Dec. 2021
13.	Dr. Munesh Singh	E &ICTFDP on ML for IoT Services in Cloud	NIT Warangal, Warangal	ML for IoT Services in Cloud	30 Nov. 2021
14.	Dr. Munesh Singh	Four Days Online Workshop on "Artificial Intelligence and Assistive Technologies for Enhancing Learning and Inclusive Education: Concepts, Recent Trends and Research Challenges	IITbhubaneswar, Bhubaneswar	Probalistic Neutral Network	20 Nov. 2021
15.	Dr. Munesh Singh	ATALFDP	IIITDharwad, Karnataka	Smart Cities	8 – 9 Nov. 2021
16.	Dr. Munesh Singh	ATALFDP	IIITD&MKancheepuram, Chennai, Chennai	Cyber Security & Cryptography: Trends and Technologies	10 July 2021
17.	Dr. Munesh Singh	ATALFDP - ETAI 2021	VSSUT, Burla, Odisha, Odisha	Machine Learning for IoT Applications	08 Dec. 2021
18.	Dr. Munesh Singh	IEEE SB	IIITD&MKancheepuram, Chennai, IIITDM Chennai	Online National Workshop on Research Methodology	24 July 2021
19.	Dr. Munesh Singh	Workshop	Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai	Machine Learning in IoT	11-12 June 2021
20.	Dr. Munesh Singh	AICTE Sponsored Online FDP	ChaitanyaBharathi Institute of Technology, Hyderabad	Research Methodologies and Statistical Data Analysis	28 Nov. 2021
21.	Dr. Munesh Singh	Two Week International online FDP	KL University, Vijyawada, TS	Latest Technological Developments	05 Oct. 2021
22.	Dr. Munesh Singh	ATAL online FDP	NIT Meghalaya, Meghalaya	Introduction to Artificial Intelligence and Recent Developments	06 Nov. 2021
23.	Dr. Neelam Dayal	ATALFDP on Cybersecurity for Internet of Things	IIITDM Jabalpur, Online	Introduction to IoT Security	21 June 2021



24.	Prof. Pritee Khanna	Expert Lecture	Indian Institute of Information Technology, Allahabad, IEEE Signal Processing Society Winter School on Advances in Biometrics	Biometric Template Protection	23-28 Oct. 2021
25.	Prof. Pritee Khanna	Expert Lecture	National Institute of Technology, Hamirpur, e-Workshop on Recent Advancements in Artificial Intelligence and Internet of Things (RAAI-2021)	CNN Architectures for Computer Vision	25-29 Sep. 2021
26.	Prof. Pritee Khanna	Expert Lecture	Application of machine Learning for Computer Vision	Shri Vishnu Engineering College for Women, AP, India	15-19 June 2021
27.	Prof. Pritee Khanna	Expert Lecture	Autoencoders	NIT Silchar	14-18 Mar. 2022
28.	Prof. Pritee Khanna	Expert Lecture	AI for Biomedical Image Analysis	Banasthali Vidyapith, Rajasthan	21-26 Feb. 2022
29.	Prof. S.N. Sharma	Refresher Course	UGC-HRDC, Northeastern Hill University	Refresher Course in Biomedical	16 Feb. – 1 March 2022
30.	Prof. S.N. Sharma	FDP	MepcoSchlenk Engineering College, Sivakasi	Frontiers in Al Based Multimedia Signal Processing	17-21 Jan. 2022
31.	Dr.Dinesh Kumar V.	Expert Lecture	ATALFDP on Devices for Modern Wireless Communication Systems	Nano Photonics	22 Sep. 2021
32.	Dr. Varun Bajaj	Expert Talk	EICT, IIT Guwahati	"Machine Learning in Biomedical Signals" Winter FDP on "Machine Learning Application in Signal Processing and Communication Engineering"	06 Jan. 2022
33.	Dr. Varun Bajaj	Expert Talk	Manipal University	"Signal processing and machine learning applications in healthcare system,", AICTE Training and Learning (ATAL) FDP on "Deep Learning and Computer Vision"	05 Jan. 2022
34.	Dr. Varun Bajaj	Expert Talk	Manipal University	Deep Learning Model Application in healthcare system	06 Jan. 2022
35.	Dr. Varun Bajaj	Expert talk	Indian Institute of Information Technology, Nagpur	Role of signal processing in IOT based healthcare systems ATALFDP on "IoT in Healthcare"	15 Dec. 2021



36.	Dr. Varun Bajaj	Expert talk	Delhi Technical University Delhi	Signal Processing and Machine learning application in healthcare 1 week workshop "Machine learning for signal processing and wireless networking"	24 Dec 2021
37.	Dr. Varun Bajaj	Expert talk	Adani Institute of Infrastructure Engineering, Ahmedabad	Advances in Electrical and Electronics Engineering for Healthcare System Development	28 Aug. 2021
38.	Dr. Matadeen Bansal	Expert Talk	ABVIIITM Gwalior	Energy Efficient Precoder Design for Non- Regenerative MIMO-CRN: A Case Study	22 June 2021
39.	Dr. Matadeen Bansal	Expert Talk	ABVIIITM Gwalior	"Beyond 5G/ 6G communications: An "Introduction"	25 June 2021
40.	Dr. Sachin Kumar Jain	Expert Lecture	GGITS Jabalpur	Role of Data Analytics in Smart Grid	13 July 2021
41.	Dr. Sachin Kumar Jain	Expert Lecture	M.H. SABOOSIDDIK POLYTECHNIC, Mumbai	"Smart energy system – A"future of sustainable"Energy solutions"	22 Dec. 2021
42.	Dr. Ravi Panwar	Keynote talk	SVNITSurat	Electronic waste-derived advanced microwave absorbing structures: an effort towards Swachh Bharat Mission of Government of India	18 Dec. 2021
43.	Dr. Ravi Panwar	Invited talk	MNIT Jaipur	Recent advancement in metamaterial microwave absorbing structures and techniques	9 Oct. 2021
44.	Dr. Ravi Panwar	Expert talk	Swami Keshvanand Institute of Technology, Management &Gramothan, Jaipur	Artificial intelligence- enabled design and manufacturing of advanced stealth structures	11 June 2021
45.	Dr. Koushik Dutta	National Level Faculty Development Program on "GenNext Trends on Nano-scale Devices towards Industrial Revolution 5.0"	Gurunanak Institute Of Technology, Panihati, Kolkata	Electronic Measurements to Address Selectivity Issue of Nanostructured Gas Sensors	16 Feb. 2022
46.	Dr. Koushik Dutta	Expert Lecture in One Day Seminer	University of Engineering & Management (UEM) Kolkata	Nanoengineering for Efficient Gas Sensors	10 March 2022



47.	Dr. D. P. Samajdar	Invited Talk	NIT Durgapur	Nanostructured Solar Cells	27 Nov. 2021
48.	Dr. Amit Vishwakarma	Online	Pranveer Singh Institute of Technology, Kanpur	Online Faculty Development Programme on IOT and Cloud based Sensors and Networks	13-17 Sep. 2021
49.	Dr. Amit Vishwakarma	Online	EICTIIT Guwahati	Online Joint FDP on Machine Learning Application in Signal Processing and Communication Engineering	3-8 January 2022
50.	Dr. Atul Kumar	Expert Lecture	IIIT Ranchi	Visible Light Communications: Introduction and Recent Developments	22 Sep. 2021
51.	Dr. Navjeet Bagga	Speaker in a Technical Session	Oriental College of Engineering Bhopal	Futuristics Semiconductor Devices	6 January 2022
52.	Prof. Puneet Tandon	Expert Lecture	Research and Innovation – Challenges	J.C. Bose University of Science and Technology, Faridabad	09 Feb. 2022
53.	Prof. Puneet Tandon	Expert Lecture	National Education Policy 2020: Institutional Restructuring and Consolidation – Role of Technology in Education	PDPM Indian Institute of Information Technology, Design and Manufacturing, Jabalpur	04 Feb. 2022
54.	Prof. Puneet Tandon	Expert Lecture	Design and Materials	J.C. Bose University of Science and Technology, Faridabad	29-Jan- 22
55.	Prof. Puneet Tandon	Expert Lecture	Enhancing Competitiveness in Design and Manufacturing Organizations	Dr. B R Ambedkar National Institute of Technology, Jalandhar	06 Dec. 2021
56.	Prof. Puneet Tandon	Expert Lecture	Biomedical Applications of Additive Manufacturing	Hyderabad Institute of Technology and Management, Hyderabad	23 Oct. 2021
57.	Prof. Puneet Tandon	Expert Lecture	Developments of some Variants of Incremental Sheet Forming and Challenges ahead	PDPM Indian Institute of Information Technology, Design and Manufacturing, Jabalpur	22 Sep. 2021
58.	Prof. Puneet Tandon	Expert Lecture	Additive Manufacturing: Recent Research and Future Scope	Madhav Institute of Technology Gwalior	24 Sep. 2021
59.	Prof. Puneet Tandon	Expert Lecture	Research and Professional Ethics	JC Bose University of Science and Technology, YMCA Faridabad	10 Sep. 2021
60.	Prof. Puneet Tandon	Expert Lecture	Use of Technology in Education	Maulana Azad National Institute of Technology, Bhopal	10 Aug. 2021



61.	Prof. Puneet Tandon	Expert Lecture	Design Thinking	Department of Mechanical Engineering, Maulana Azad National Institute of Technology, Bhopal, June 21, 2021	
62.	Prof. Puneet Tandon	Expert Lecture	Research Scope in 3D Printing and AM	Department of Mechanical Engineering, Jaypee University of Engineering and Technology, Guna, MP	17-Apr- 21
63.	Dr. Ponappa K	Offline	Understanding Research	Kongu Arts and Science College	12 Oct. 2021
64.	Dr. Manu Srivastava	Expert speaker for STC	Friction based solid state hybrid manufacturing processes	Additive manufacturing and characterisation	Feb. 2022
65.	Dr. Tushar Choudhary	Online	Fuel cell and Hybrid Power	Amity University	21-Jun. 2021
66.	Dr. Tushar Choudhary	Online	Significance of Robots in Industry 4.0	UITRGPV, Bhopal	28-Jul. 2021
67.	Dr. Tushar Choudhary	Online	Hybrid Gas Power cycle and Renewwable Energy Sources	Gandhi Institute for Technology (GIFT) , Bhubaneshwar	04 Sep. 2021
68.	Dr. Tushar Choudhary	Online	Significance of Robots in Fourth industrial revolution (4IR)	SGT University, Gurgaon	08 Oct. 2021
69.	Dr. Shivdayal Patel	Keynote Lecture	Finite Element Analysis of Structural Dynamics	"M.B.M. Engineering College, Jodhpur"	21 Aug. 2021
70.	Prof. Vijay Kumar Gupta	Expert Lecture	Regression and Interpolation	SATI Vidisha	25 Aug. 2021
71.	Prof. Vijay Kumar Gupta	Expert Lecture	Determination of material properties using scanning vibrometer	PDPMIIITDM Jabalpur	21 Sep. 2021
72.	Prof. Vijay Kumar Gupta	Expert Lecture	Robotics: Introduction	Arya Institute of Engineering Technology and Management Jaipur	02 Oct. 2021
73.	Prof. Vijay Kumar Gupta	Expert Lecture	"Rotary Energy Harvester" presented in workshop on "Energy Harvesting from Vibrating Structures: Applications and Advances"	SRM Institute of Science and Technology, Kattankulathur	26 Oct. 2021
74.	Prof. Vijay Kumar Gupta	Expert Lecture	"Role of Mechatronics and Robotics in Manufacturing presented in FDP on ""Robotics and Mechatronics in Manufacturing""	SKIT Jaipur	15 Nov. 2021
75.	Prof. Vijay Kumar Gupta	Expert Lecture	Robotics: Industry 4.0 Applications	Arya Institute of Engineering Technology and Management Jaipur	02 Nov. 2021



76.	Prof. Vijay Kumar Gupta	Expert Lecture	Industry 4.0: Applications, Trends and Future Technologies	ShriSantGajananMaharaj College of Engineering (SSGMCE) Shegaon	22 Feb. 2022
77.	Prof. Vijay Kumar Gupta	Expert Lecture	Introduction to Smart Structures and Applications in Industry 4.0	ShriSantGajananMaharaj College of Engineering (SSGMCE) Shegaon	28 Feb. 2022
78.	Prof. Vijay Kumar Gupta	Expert Lecture	Project Guidance in Mechanical Engineering	AICTE	26-Mar- 22
79.	Prof. Tanuja Sheorey	Invited Talk	Innovation: Idea to product	JEC, Jabalpur	19-Jun- 21
80.	Prof. Prashant K. Jain	Expert talk	Additive Manufacturing and it's Applications in product design	Department of Mechanical Engineering, Maharishi Markandeshwar Engineering College, MullanaAmbala, Haryana	12-17 April 2021
81.	Prof. Prashant K. Jain	Expert talk	Additive Manufacturing: Future Perspectives and Challenges	Department of Mechanical Engineering, RustamJi Institute of Technology (RJIT)	14-18 June 2021
82.	Prof. Prashant K. Jain	Expert talk	Additive Manufacturing: Future Perspectives and Challenges	Department of Mechanical Engineering, Institute of Road and Transport Technology Erode	21-25 June 2021
83.	Prof. Prashant K. Jain	Expert talk	Additive Manufacturing: Future Perspectives and Challenges	Prestige Institute of Engineering Management & Research	21-26 June 2021
84.	Prof. Prashant K. Jain	Expert talk	Additive Manufacturing: Recent Research	Department of Mechanical Engineering, Madhav Institute of Technology and Science	25-30 June 2021
85.	Prof. Prashant K. Jain	Expert talk	Additive Manufacturing and 3D Printing for Rapid Product Development	Centre for Industrial Design and Ergonomics, Department of Design, Delhi Technological University, Delhi	05-09 July 2021
86.	Prof. Prashant K. Jain	Expert talk	Introduction to MATLAB for Optimization Techniques	Jointly organized by seven Electronics &ICT Academies, MNIT Jaipur, IIT Guwahati, IITRoorkee, IIT Kanpur, IIITDM Jabalpur, NIT Patna and NIT Warangal, As principal organizer MNIT Jaipur	6-17 Sep. 2021



87.	Prof. Prashant K. Jain	Expert talk	Additive Manufacturing: Future Perspectives and Challenges	Central Institute of Petrochemicals Engineering & Technology, Korba	23-27 Aug. 2021
88.	Prof. Prashant K. Jain	Expert talk	Additive Manufacturing: A Tool for Rapid Design of Electric Vehicles	Oriental Institute of Science & Technology, Bhopal M.P.	20-24 Sep. 2021
89.	Prof. Prashant K. Jain	Expert talk	Software Solutions for Additive Manufacturing	Mechanical Engineering Department National Institute of Technology, Jalandhar	20-24 Sep. 2021
90.	Prof. Prashant K. Jain	Expert talk	Additive Manufacturing, MATLAB Programming and CNC Machining	Mechanical Engineering Department, PDPM Indian Institute of Information Technology, Design and Manufacturing Jabalpur, Jabalpur	20-26 Sep. 2021
91.	Prof. Prashant K. Jain	Expert talk	Additive Manufacturing, MATLAB Programming for AM and Computational intelligence for CNC Machining	Mechanical Engineering Department, PDPM Indian Institute of Information Technology, Design and Manufacturing Jabalpur, Jabalpur	20 Sep 01 Oct. 2021
92.	Prof. Prashant K. Jain	Expert talk	MATLAB Applications in Data Analysis and Visualization	Department of Commerce, Dr. H. S. Gour University	14-27 Dec. 2021
93.	Dr. Deepmala	Expert Lecture	UGC-HRDC, D.A.V.V., Indore	Refresher course in Computer and Mathematics	7 - 20 Dec. 2021
94.	Dr. Amrita Bhattacharjee	Invited Talk	SRMEaswari Engineering College	Perception-based Lighting Design	02July 2021
95.	Dr. Prabir Mukhopadhyay	Expert Lecture	HSS Design Programme, IIT Kanpur	Introduction to Ergonomics in Design	15 Nov. 2021
96.	Dr. J. Al Muzzamil Fareen	Online	SRM Institute of Science and Technology, NCR Campus, Ghaziabad	Essentials of Teaching and Learning Technical English for Specific Purposes	11 Dec. 2021
97.	Dr. Mamta Anand	Faculty Development Program- Resource Person	PSIT Kanpur	Human Values For Brain and Mind Development	15 Sep. 2021
98.	Dr. Mamta Anand	National Workshop- Speaker	Govt. Science College Jabalpur	Salient Features of Nep 2020	5 Oct. 2021

Patents



Patent / Design Filing Data (FY - 2021-22)

S. No.	Name of Inventor	Application No.	Title	Date of Filing	Year of Filing
1	Mr. Yogesh Kumar Bhanu Prof. Puneet Tandon	202121025733	Easy Electric Plug for Elderly/Patients	09-06-21	2021
2	Mr. Yoha Ashuthosh K Dr. Sangeeta Pandit	202121026201	A Concept design of an affordable groundnut stripper for agricultural sector	11-06-21	2021
3	1. Mr. Rajat Kamble 2. Dr. Sangeeta Pandit	202121030901	Design intervention in the attachment of hand block print tool to reduce impact force on the hand for Bagh hand block print of Madhya Pradesh	09-07-21	2021
4	Mr. Kailas P Dr. Sangeeta Pandit	202121017755	A new concept design of a marking gauge for wood-working industry	16-04-21	2021
5	Dr. Amrita Bhattacharjee	202221001817	Portable Coconut Grater	12-01-22	2022
6	Prof. Puneet Tandon	202221009512	Sustainable Cushioning Solution From Waste	23-02-22	2022
7	Dr. Prabir Mukhopadhyay	202221004009	Modified Multifunctional Crutch	24-01-22	2022
8	Dr. Amrita Bhattacharjee	355522-001 (Design)	Efficient Solar Installation for Urban Street Lights	25-12-21	2021
9	Prof. Puneet Tandon	354533-001 (Design)	An efficient embodiment of Citrus squeezer to help extract maximum juice with the least effort	08-12-21	2021
10	Dr. Amrita Bhattacharjee	355228-001 (Design)	Bathing Fixture For Indian Context (Bath Pod)	21-12-21	2021

• Patents •



Patent Published Data (FY - 2021-22)

S. No.	Title	Name of Inventor	Application No.	Date of Filing	Year of Filing	Date of Published	Year of Published
1	GM Band	1. Prof. Tanuja Sheorey 2. Prof. Vijay Kumar Gupta 3. Mr. Rakesh Kumar Haldkar	202021016334	15-04-20	2020	22-10-21	2021
2	Graded Plasmonic Cavity Empowered Thin-Film Solar Cell	 Dr. Dinesh Kumar V. Dr. Manoj Singh Parihar Mr. Abhishek Pahuja 	202021024822	24-12-21	2020	17-12-21	2021
3	Indirect-PID-Fine- Tuner	1. Dr. Prabin Kumar Padhy 2. Mr. Bharat Verma	202021015342	24-12-21	2020	15-10-21	2021
4	An Efficent Use of Discarded Cylindrical Zinc Carbon and Lithium Ion Batteries Based Electronic Waste for Development of Cost Effective Microwave Absorbing Material for Stealth Applications	1. Dr. Ravi Panwar 2. Mr. Ravi Yadav	202021026301	22-06-20	2020	24-12-21	2021
5	Design of a Frugal Laundry Solution	1. Prof. Puneet Tandon 2. Mr. Soumil Singh Panwar 3. Ms. Ayushi Gupta 4. Mr. Mohammad Abdul Ahad 5. Mr. Tanai Mathur 6. Mr. Sahil Kolgaonkar	202021030820	20-07-20	2020	21-01-22	2022
6	Design intervention for vegetable vendors & hawkers	Mr. Nimit Nitinbhai Shah Dr. Prabir Mukhopadhyay	202021041252	23-09-20	2020	30-03-22	2022

Session Chaired •



- 1. Dr. Anil Kumar, Session Chair, International Conference TRIBES - 2021, 2021
- 2. Dr. Anil Kumar, Technical Program Chair, International Conference on Control, Automation, Power and Signal processing (CAPS-2021), 2021
- 3. Dr. Anil Kumar, Technical Program Committee, 6th International Conference on Image Information Processing (ICIIP 2021), 2021
- 4. Dr. Anil Kumar, Technical Program Committee, 7th International Conference on Signal Processing and Communication (ICSC 2021), 2021
- 5. Dr. Varun Bajaj, Covid 19, 10th International Conference on Health Information Science (HIS 2021) Melbourne, Australia, 2021
- 6. Dr. S.K. Jain, ICSTACE2021, SVNIT, Surat, Gujarat, 2021
- 7. Dr. Manoj Singh Parihar, Passive RFMC-1, IEEE MTT-S International Microwave and RF Conference (IMaRC 2021), 2021
- 8. Dr. Manoj Singh Parihar, Electronics & Communication -III, ICRTEECI-2021, Hyderabad, 2021
- 9. Dr. Amit Vishwakarma, Signal Processing and Miscellaneous, CAPS 2021 PDPM IIITDM, Jabalpur, 2021
- 10. Dr. Amit Vishwakarma, Image and signal processing, MISP 2022 NIT RAIPUR, 2022
- 11. Dr. Koushik Dutta, Artificial Intelligence & Machine Learning, International Conference on Industrial Instrumentation & Control (ici2c-2021), 2021
- 12. Dr. Koushik Dutta, Signal Processing, International Conference on Control, Automation and Signal Processing (CAPS-2021), 2021
- 13. Dr. Pushpa Raikwal, Session-I, Track A1, International Conference on Control, Automation, Power and Signal processing (CAPS-2021), 2021.

- 14. Dr. Avinash Chandra Pandey, TS 09: Intelligent System: Algorithms and Applications, 4th International Conference on Communication and Computational Technologies, 2022
- 15. Dr. Avinash Chandra Pandey, TS03: Communication and Control Systems, 4th International Conference on Communication and Computational Technologies, 2022
- 16. Dr. Avinash Chandra Pandey, Technical Aspects of Wireless Networks, Internation Conference on Machine Learning and Signal Processing, 2022
- 17. Dr. Avinash Chandra Pandey, TS-04:Emerging Technologies, International Conference on Data Science and Applications, 2022
- 18. Dr. Avinash Chandra Pandey, TS 12: Intelligent Data Analytics and Computing, International Conference on Computing, Communication, and Intelligent Systems, 2021
- 19. Dr. Avinash Chandra Pandey, TS 07: Intelligent Data Analytics and Computing, International Conference on Computing, Communication, and Intelligent Systems, 2021
- 20. Dr. Avinash Chandra Pandey, Emerging Technology, International Conference on Data Science and Applications, 2021
- 21. Dr. Abhishek Verma, Social Information Retrieval Systems, Fourth International Conference on Machine Intelligence and Signal processing (MISP2022), 2022
- 22. Dr. Manish Kumar Bajpai, Medical Tomography Devices, IST 2021 @ Newyork, 2021
- 23. Prof. Pritee Khanna, CVIP-03 (Biometrics), 6th IAPR international conference on Computer vision & image processing (CVIP 2021), at IIT Ropar, India, 2021
- 24. Dr. Vinod Kumar Jain, Keynote Lecture Session, Healthcare Innovation during COVID Outbreak (HICO), 2021

Session Chaired •



- 25. Dr. Manu Srivastava, Session 6, "Recent Advances in Manufacturing" (RAM-2021) International conference, 2021
- 26. Dr. Tushar Choudhary, Thermal Management of Electronic Devices and Components, Online International Symposium on Fluid and Thermal Engineering (FLUTE 2021) on 22nd July 2021, Amity University, Noida, 2021
- 27. Dr. Shivdayal Patel, Session 4B: Gears Box Modeling, Conference IIITDM Jabalpur, 2021
- 28. Prof. Vijay Kumar Gupta, B-8, Misc, International Conference on Control, Automation, Power and Signal Processing (CAPS - 2021), 2021
- 29. Prof. Vijay Kumar Gupta, Session 2: Mechanism for Space Applications, 5th International and 20th International

- Conference on Machines and Mechanisms (iNaCoMM 2021), 2021
- 30. Prof. Prashant K. Jain, IEEE Sponsored First International Conference on Emerging Trends in Industry 4.0 (2021 ETI 4.0) organized by the OP Jindal University (OPJU), Raigarh, India., International conference, 2021
- 31. Prof. Prashant K. Jain, 1st International Conference on Materials and Manufacturing Engineering - 2021, HMR Institute of Technology and Management, Delhi, India, October 22-23, 2021, International conference, 2021
- 32. Prof. Prashant K. Jain, 2nd International Conference on Industrial & Manufacturing Systems (CIMS-2021), jointly organized by PEC Chandigarh & NIT Jalandhar, November 11-13, 2021, International conference, 2021

Workshop and Events •



- Prof. Aparajita Ojha, Workshop, Healthcare Innovations during COVID Outbreak, PDPM IIITDM Jabalpur, Online, Coordinator, 25-6-2021, 26-6-2021
- Prof. Aparajita Ojha, Awarness Programme, COVID-19: Do's and Don'ts, Online, Coordinator, 18-5-2021, 18-5-2021
- Dr. Avinash Chandra Pandey, Conference special session, Special Session on Computationally Intelligent Algorithms for Emerging Computing Paradigms, Springer, NIT, Raipur, Dr. Avinash Chandra Pandey, 12-03-22, 14-03-22
- Dr. Atul Gupta, FDP, Data Science for all, ICT Academy, IIITDM Jabalpur, IIITDM Jabalpur Global, Joint Principal Coordinator, 12-4-2021, 23-4-2021
- Dr. Atul Gupta, FDP, Python Programming, ICT Academy, IIITDM Jabalpur, IIITDM Jabalpur Global, Principal Coordinator, 26-07-2021, 06-08-2021
- Dr. Kusum Kumari Bharti, FDP, Reinforcment Learning and It's Applications, ATAL Academy, Online, Organizer, 07-06-2021, 11-06-2021
- Dr. Kusum Kumari Bharti, FDP, Quantum Computing, E&ICT Academy, Online, Joint-PI, 27/09/2021, 08-10-2021
- Dr. Kusum Kumari Bharti, Certificate Program, Python Programming, E&ICT Academy, Online, PI, 13/12/2021, 03-01-2022
- Dr. Kusum Kumari Bharti, Dr Manish Kumar Bajpai, FDP, Reinforcement Learning and Its Applications, ATAL, IIITDM Jabalpur, Co-Coordinator, 07-06-2021, 11-06-2021
- 10. Prof. Aparajita Ojha and Pritee Khanna, Workshop, Workshop on Healthcare innovations during COVID Outbreak, IIITDM Jabalpur, PDPM IIITDM Jabalpur, Coordinator, 25-06-2021, 26-06-2021
- 11. Dr. Vinod Kumar Jain, FDP, Cybersecurity for IoT Networks, AICTE-ATAL Academy, PDPM-IIITDM Jabalpur, Co-Coordinator, June 21, 2021, June 25, 2021
- 12. Dr. Neelam Dayal, FDP, IoT & Applications

- (Smart Systems), E&ICT, Online, Joint Principal Coordinator, 14 February 2022, 25 February 2022
- 13. Dr. Abhishek Verma, Conference special session, Special Session on Computationally Intelligent Algorithms for Emerging Computing Paradigms, Springer, NIT, Raipur, Session Co-Chair, 12-03-22, 14-03-22
- 14. Dr. Neelam Dayal, FDP, Cybersecurity for IoT Networks, AICTE-ATAL Academy, PDPM-IIITDM Jabalpur, Coordinator, June 21, 2021, June 25, 2021
- 15. Dr. Anil Kumar, FDP, Machine Learning Application in Signal Processing & Communication Engineering, IIT Guwahati, Principle Coordinator, 03-01-22, 08-01-22
- 16. Dr. Dinesh Kumar V, Institute Event under STUTI, "Science Week" under "Aazadi ka Amrit Mahotsav" by GOI, STUTI/DST, PDPM IIITDM Jabalpur, Organizing Committee Member, 24-02-22, 28-02-22
- 17. Dr. Dinesh Kumar V, Toycathon, Toycathon 2021, MoE, Nodal center IIITDM Jabalpur, SPOC and converner, 22-06-21, 24-06-21
- 18. Prof. P.N. Kondekar, Workshop, "International Design Workshop on" leading edge theories and practices in "design", PDPM IIITDM Jabalpur, "Steering Committee Member", 10-10-21
- 19. Dr. D.P. Samajdar, FDP, Introduction to Quantum Computing and Information, AICTE, Online, Coordinator, 05.07.2021, 09.07.2021
- 20. Dr. Manu Srivastava, Workshop, High end workshop on DOE, "Material characterization and advanced manufacturing techniques, SERB, IIITDM Jabalpur, Co-Coordinator, 20/09/2021, 26/09/2021
- 21. Dr. Manu Srivastava, Art Exhibition, Illustrated talk on the art of Madhubani by President awardee Ms. Manisha Jha, SPIC Macay Chapter, IIITDM Jabalpur, Coordinator, 21/1/2022, 21/1/2022

Workshop and Events •



- 22. Prof. Vijay Kumar Gupta, Short Term Program, FDP and Karyashala on "Social Robotics and AI", SERB and ICT Academy IIITDM Jabalpur (joint Program), Online, Principle Coordinator, 28/06/2021, 04-07-2021
- 23. Prof. Vijay Kumar Gupta, Short Term Program, FDP on "Digital Tools for Writing, Authoring & Reviewing Manuscripts", ICT Academy IIITDM Jabalpur (joint Program), Online, Joint Principle Coordinator, 12-07-2021, 23/07/2021
- 24. Prof. Prashant K. Jain, FDP, Organized Two Week Global Online Summer FDP as Joint Principal Coordinator on "Advanced Optimization Techniques and Hands on With MATLAB/SCILAB" Supported by Ministry of Electronics and Information Technology (MeitY), Govt. of India, Jointly organized by seven Electronics & ICT Academies, MNIT Jaipur, IIT Guwahati, IIT Roorkee, IIT Kanpur, IIITDM Jabalpur, NIT Patna and NIT Warangal, As principal organiser MNIT Jaipur, September 6-17, 2021., Organizer, September 6, 2021, September 17, 2021
- 25. Prof. Prashant K. Jain, Workshop, Organised DST SERB Sponsored High end workshop

- "Karyashala" under accelerate vigyan scheme on "High end workshop on DoE, Material characterization and advanced Manufacturing techniques" at Mechanical Engineering Department, PDPM Indian Institute of Information Technology, Design and Manufacturing Jabalpur, Jabalpur, September 20-26, 2021 (with Dr. Manu Srivastava)., Jabalpur, Organizer, September 20, 2021, September 26, 2021
- 26. Prof. Prashant K. Jain, FDP, Organized Two Week Global Online Summer FDP as Principal coordinator on "MATLAB Programming for Additive Manufacturing and 3D Printing (MPAM)", Supported by Ministry of Electronics and Information Technology (MeitY), Govt. of India, Jointly organized by four Electronics & ICT Academies, MNIT Jaipur, IIT Guwahati, IIITDM Jabalpur and NIT Patna, September 20-October 1, 2021, Jabalpur, Organizer, September 20, 2021, October 1, 2021
- 27. Dr. Prabir Mukhopadhyay, Online Training and Skill Internship (VRITIKA), Ergonomic Analysis and Design of Icons used in Multimedia Devices for the Indian Context, SERB, DST Under Accelerate Vigyan Scheme, Online, Coordinator, 21st May 2021, 21st June 2021.

Scholarship, Freeships & Financial Assistance



Academic year of students starts from the month of August & ends in the month of July.

Therefore, expenses have been made of MCM & Tuition Waiver are mentioned as follows:

- From Aug 2020 to March 2021- for financial year 2020-21 1.
- 2. From Aug 2021 to March 2022 for financial year 2021-22

1) Expenses incurred from August 2020 to March 2020 (in the year 2020-21 for the year 2020-21)

S. No.	B.Tech batch	Total no. of students eligible to get MCM for F.Y. 2020-21	Total Amount paid @Rs. 1000/- per month (Batch 2020 for 7 months 8 days & Batch 2017, 2018, 2019 for 7 months)	Tuition Waiver not applicable as it has already paid during the year (2020-21)	Total Amount Paid
1	2017	71	7,000.00	7,000.00 0	
2	2018	70	7,000.00	0	4,90,000.00
3	2019	89	7,000.00	0	6,23,000.00
4	2020	66	7,764.00	0	5,12,424.00
				Total	21,22,424.00

Scholarship, Freeships & .___ Financial Assistance



2. Expenses incurred from August 2021 to March 2022 for (F.Y. 2021-22)

S. No.	B. Tech. batch	Total no. of students eligible to get MCM for F.Y. 2021-22	Total Amount paid @Rs. 1000/- per month (Batch 2018 for 9 months & 2019, 2020, 2021 for 12 months)		Batch 2018 Tuition Waiver Rs.1,07,800/- (Sem-I & II) Batch 2019 Tuition Waiver Rs. 1,18,580/- (Sem-I & II) Batch 2020 Tuition Waiver Rs. 1,18,580/- (Sem-I & II) Batch 2021 Tuition Waiver Rs.1,30,440/- (Sem-I & II)		Total Amount Paid
			(A)			(B)	(A+B)
1	2018	74	9000x74	6,66,000.00	74×107800	79,77,200.00	86,43,200.00
2	2019	94	12000x94	11,28,000.00	94x118580	1,11,46,520.00	1,22,74,520.00
3	2020	92	12000x92	11,04,000.00	92x118580	1,09,09,360.00	1,20,13,360.00
4	2021	79	12000x79	9,48,000.00	0 79x130440 1,03,04,760.00		1,12,52,760.00
						Total	4,41,83,840.00

Total amount paid towards MCM Scholarship including Tuition Waiver is Rs. 2,122,424 + Rs. 4,41,83,840/-=(4,63,06,264.00).

Madhya Pradesh State Scholarship M.P. Portal Online 2.0 under the Scheme: Mukhyamantri Medhavi Vidharthi Yojna 2021-22

S.No.	S.No. No. of Students		Year
1	82	1,19,78,560.00	2021-22

Ministry of Social Justice and Empowerment, New Delhi (Payments of Students Scholarship Year 2021-22)

S.No.	Batch	No. of Students	Amount (in Rs.)
1	2021	13	13,80,000.00
2	2020	10	10,90,000.00
3	2019	10	8,70,000.00
4	2018	10	8,50,000.00

Students' Festivals and Events • • •



Apart from concentrating on academic activities, the Institute also places emphasis on an allround development of its students. The Institute has, therefore, created excellent infrastructure for a variety of co-curricular and extra-curricular activities such as sports, student publications, Robotics as well as cultural and welfare programmes.

There are three areas of Students Gymkhana viz. Cultural, Science and Technology, and Sports. At present twenty three clubs of students gymkhana have been functioning and being administered by students under the guidance of faculty counsellors of respective area.

STUDENTS' GYMKHANA

Students' Gymkhana is constituted to evolve a disciplined self-governance for carrying out various extracurricular in-campus activities and to establish a responsible and accountable student body. Students' Gymkhana is governed by Student Senate which is constituted in a democratic way through elections among each discipline and batch of the students. Student Senate members are elected through direct ballot voting.

Student gymkhana is headed by Dean (Students). Dean (Students) chairs all the meetings of the Student Senate and guides student representatives in organizing gymkhana activities throughout the year. Apart from this, three faculty members designated as Sports, Cultural and Technical Counselors, look after sports, cultural and technical activities respectively and respective major festivals organized by the students' gymkhana.

CULTURAL CLUBS:

Following events are conducted online and offline under cultural sector by various clubs

JAZBAAT - The Dramatics society has history of giving some breathtaking Performances and the EVE of 15 August 2021 was destined to witness and add a few more to the list of feathers in its cap. The Independence day was organized with full enthusiasm this year virtually through zoom on 15th of August, 2021.

SAAZ - The Music Club: "THE BAND WARS" event was conducted by K.J. Somaiya College of Engineering, Mumbai on 10th of July, 2021, the



participating colleges were IIT Bombay, VJTI Mumbai, VIT, and NMIMS, The event was widely appreciated by audience and the popular instagram celebrity judges (Mihika Sansare).

Students' Festivals and Events •—





SAAZ: Under the initiative of Ek Bharat Shreshtha Bharat by the Government of India, Saaz was

asked to collaborate with the musicians at IIIT Dharwad for a performance under the theme of Independence Day.

Musicians from both institutes showcased their showmanship on 9th of August, 2021.



SAAZ X SAMVAAD:

Saaz collaborated with Samvaad for one of the events in the Independence Day celebration of year 2021. The musicians played and sang melodies upon the original orations by writers from Samvaad.

In the spirit of the Independence Day of year 2021, Saaz organised a patriotic song competition titled Swarnim Bharat during which it called upon participants to send in their recorded patriotic songs.



Students' Festivals and Events •—



SCIENCE AND TECHNOLOGY

Following science and technology events were conducted by various clubs through both online and offline mode:

CAD and 3D Printing Club

Conducted INTER COLLEGE EVENT on Independence Day celebrations of year 2021 targeting to strengthen India through the CAD models that participants will design. Participants had full creative freedom on the type of models to be created ensuring it how their model is going help India grow stronger.

Winner of the event: Ankit Basak

PROGRAMMING CLUB:

Good-To-Go 1.0 on 29th of December, 2021

A coding contest that emphasizes creating awareness in our Institute about world-class coding competitions like Google Kickstart, Google Codejam, Facebook Hackercup

Winner Takes It All 4.0 on 26th of March, 2022

The contest incentivized the habit of competitive programming and has enabled a culture of coding.

Newbie 1.0 on 30th of January, 2022

A freshers-only coding contest series to familiarize them with competitive programming.

Newbie 2.0 on 26th of March, 2022

A freshers-only coding contest series to familiarize them with competitive programming

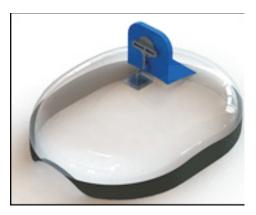
Automotive And Fabrication Club

Aerodynamics Quiz: A quiz was organized on 1 August 2021 for the members joining in the session 2020. Rajeev Ranjan (20BME044) is the winner of this quiz.

Student Mechanism Design Contest: Four teams participated in SMDC competition organized by Association of Machines and Mechanisms (AMM). The objective of the AMM is to promote innovation among the students. . 1 team of 3 students got first runner up position in the competition.

Aerothon 2022: A team of 10 students participated in the AEROTHON competition organized by the Society of Automotive engineers. The competition focused on assessing the ability of the team to design and fabricate an Unmanned Aircraft System, designated to perform a specific task. We start working on this project from feb 2021.

Aakrti- The Film Making & Photography Club (Shutter box)





Students' Festivals and Events • [



Photowalk: January, 2022





IITDMJ Racing Club

SUPRA SAE 2022:



A team of 20 members participated in SUPRA SAE 2022, organized by society of automotive engineers, to design a student formula-1 racing car, Students started working passionately on design and analysis part from November of 2021, many online sessions were conducted during lockdown to collaborate between students to create a functional and competitive racing car.

ASTRONOMY AND PHYSICS SOCIETY:

- July, 2021 Ancient Astronomy discussion session
- August, 2021 GIGA
- September, 2021 Machine Learning Session
- October, 2021 Quant Quantum Computing session
- January, 2022 Nightwatch
- March, 2022 Astronomy quiz



Students' Festivals and Events •—



Electronics and Robotics Society:

RDC (Robot Design Challenge) - 1st of July, 2021

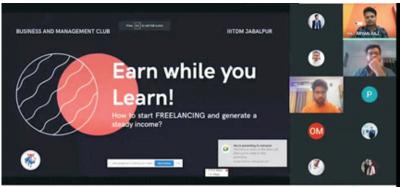


The contest's theme was to design a robot that can move on a flat surface, pick up a box and climb using a rope, a total of 16 teams participated and various models were submitted.

BUSINESS AND MANAGEMENT CLUB:

Inside Investigation on February 15, 2022

LET'S TALK MONEY - 23rd of October, 2021





Final Round

Business and Management club conducted series of talks and discussions based on

topics from various domains including Finance, Startup and Entrepreneurship, Marketing, Sales, Management, and many more.

Sports Club:

Following events are conducted online and offline under Sports sector by various clubs.

CHESS Club: IIITDMJ Chess Club team has won the International Chess Competition against Georgia Institute of Technology, in which a total of 160 universities around the globe participated, In the playoff stage, the team faced Purdue University in the quarterfinal, Carnegie Mellon University in the semifinal, and had their final match with Georgia Institute of Technology.

Current Standings

Rank	Team	Wins	Losses	Ties	Points
ı	IIITDMJ POPM Indian Institute of Information Technology Design and Manufacturing, Jabalpur	7	0	0	14MP - 748P
2	CMU B Camegie Mellon University	5	1	1	11MP - 66BP (incl. 3 Penalties)
3	Duke D	5	2	0	10MP - 60.5 (incl. 2 Penalties)
4	Purdue University D Purdue University	4	3	0	8MP - 58.5BP
5	Georgia Institute of Technology B Team Georgia Institute of Technology B	3	4	0	6MP - 65.5BP
6	University of Konstanz Team University of Konstanz	2	4	1	5MP - 52.5BP (incl. 4 Penalties)
7	ASA MIT C	1	6	0	2MP - 44.5BP (incl. 2 Penalties)
8	Rutgers B Team	0	7	0	OMP - 13.5PBP (incl. 2 Penalties)

Students' Festivals and Events •— []





ATHLETIC CLUB:



Students' Festivals and Events •—



BASKETBALL CLUB:



FOOTBALL CLUB:



FIT INDIA MOVEMENT:

In order to promote the culture of physical fitness and good health among the teaching and nonteaching employees and the large volume of students in our Institute, FIT INDIA MOVEMENT, Run for Unity Marathon, Badminton, Cricket, Volleyball and Football tournaments were conducted.







CYCLOTHON:



Library



Introduction

Institute Library is the knowledge hub of the PDPM IIITDM Jabalpur. Library extends support to academic & research activities of the Institute by procuring various types of reading materials, subscribing to electronic resources and providing various type of information services. The library provides all latest collection of books, articles, journals, etc. either in the form of online or



offline to its users. The said materials are available in the form of CD, DVD, on-line databases,

e-journals and print materials related to engineering and technology, applied science, management, humanities, design and other new emerging areas.

During the year library continued its mission of facilitating the creation of new knowledge skill through the acquisition, organisation and dissemination of library materials. The Library team is highly motivated, knowledgeable and always extends support to provide better service to the users.



Statistical Representation of Library Collection

Collection development is one of the important functions of the library and plays a vital role in supporting the academic curriculum and research activities of the users. The collection of books, journals, theses, reports, and other reading materials are the best and biggest asset of the Institute library. The total collection of the library from 1st April 2021 to 31st March 2022 are as follows.

Library



Section A										
SI. No.	Medium	Collection	In Stock as on 31st March 2020	In Stock as on 31st March 2021	In Stock as on 31st March 2022					
1	Documentary Sources (Print)	Books	15001	15001	15130					
		Gratis Books	908	923	1094					
		Subscribed Print Journals	11	11	11					
		Project Reports/Theses	449	497	676					
		Gratis Project Reports / Theses	131	131	131					
		Annual Reports	72	80	81					
		Conference Reports	28	28	57					
2	Non Documentary Sources (Non Print)	CDs/DVDs/Floppy (Received with Project Reports, Books & Magazines)	2069 Books = 1369 Gratis Books = 17 Floppy= 02 Gratis Conference = 02 Project Theses = 405 Magazine = 274 Total = 2069	2112 Books = 1369 Gratis Books = 17 Gratis Floppy= 02 Gratis Conference = 02 Project Theses = 427 Project Theses through email= 14 Magazine = 281 Total = 2112	2243 Purchased Books CD = 1371 E-Book = 04 Gratis Books CD = 17 Gratis Books Floppy= 02 Project /Theses CD = 497 Project/ Theses received through email= 68 Gratis Project / Theses CD = 0 Annual Report = 0 Conference Report CD = 03 Subscribed Magazine CD = 281 Total = 2243					
3	Archives (old)	Bound Volumes of Journals	93	175	175					
5		Bound Volumes of Magazines	341	341	341					

Section B									
SI. No.	Medium	Collection	Procured In 2019-20	Procured In 2020-21	Procured In 2021-22				
1	Print	Subscribed News Papers	19 (E-7, H-12)		06 (E-3, H-3)				
2	Materials	Subscribed Magazines	27		09				
3	Non-Print Materials	Subscribed Online E- Resources (E-Journal)	39,523	48,871	49,741				

^{*}Institute library has 11 nos. subject collection/databases (Total 49,741 nos. journals are available under subject collection/databases and individual journals).



Hindi Collection

Besides the regular procurement of course books, Institute library has procured the Hindi books like: Novels, Inspiration books, Story books, Famous Autobiography books, Hindi awarded books etc. The total collection of Hindi books is 451.

Section C			
	Hindi Books	384	451
Hindi Collection	Gratis Hindi Books	67	451
	Hindi CDs	32	32

Book Bank

Institute Library is maintaining the Book Bank Section for SC/ST students. This section contains approximately 978 nos. of books, especially recommended as the text books and these books can be issued to SC/ST students only.



Circulation Desk and Reservation Counter

The circulation desk provides check-in and check-out services of reading materials to the users and also providing personal assistance for general enquires about the library. The library provides advance reservation facility for the users who utilize the learning resources which are already issued to the other users. The library issues the books to the users as per their designations. Details of number of books and their validity are given below.

Loan Criteria for Library Users			
SI. No.	Member Category of the Institute Library	No. of books issue at a time	Loan duration
1.	Faculty Member	20	180 days
2.	Research Engineer	20	180 days
3.	All Non- Teaching Member	05	30 days
4.	Post graduate student (PG and PhD.)	07	30 days
5.	Under Graduate Student (UG)	07 (Including Semester books)	15 days



Reference Service

Various types of collections have been maintained by the Institute library in the reference section like, Encyclopaedias, Handbooks, Dictionaries, Theses, Reports and Rare Books etc.

Reference section continues to help the library users to make full utilization of library resources and services. It renders necessary assistance to the users for searching the documents of their choice.



Digital Library

- e-Resources in Institute Library: e-Shodh Sindhu (e-SS) established by Ministry of 1. Human Resource Development (MHRD), now known as Ministry of Education, and supported by INFLIBNET Centre, Gandhinagar, Gujarat. The consortia provided various e-resources to our Institute like ACM Digital Library, ASME Journals Online, Springer, JSTOR, JGate Plus (JCCC), etc. Apart from this, Institute subscribes various e-resources from the publishers directly. The individual titles under the collections are approximately 49,741.
- Electronic Theses and Dissertation: Institute 2. Library has preserved theses and project report submitted by the postgraduate and doctoral students in electronic format as well as print format. These reading materials has maintained and preserved a fulltext database since 2008 on Intranet. Library users can access and download this facility 24x7.
- National Digital Library (NDL) Resources: 3. Ministry of Human Resource Development (MHRD), now known as Ministry of Education, under its National



Mission on Education through Information and Communication Technology has initiated the National Digital Library of India (NDL, India). It is being developed at IIT Kharagpur. During the year, library users actively access the resources provided by the NDL.

List of NDL India e-Resources				
SI. No.	No. Name of Resources/ Journal Mode of Resources/ Journal			
1.	World e-Book Library	Online		
2.	South Asia Archive (SAA)	Online		



- WEB-OPAC: The WEB OPAC is one of the most heavily used databases of the library and 4. is accessible 24x7 through library web page. Besides listing all the documents available in the library, it allows online reservation, status of books, user details, overdue details, etc. Institute library is providing download facility of e-resources, CD-ROM of study materials on single platform.
- 5. Plagiarism Detection Software (PDS): The Ministry of Education, Govt. of India initiated a programme "Shodh Shuddhi" and provides a web based plagiarism detection software system "URKUND" for academic integrity and improving the quality of research in India. The Institute Library is availing the facility and has subsequently provided login facility to all the faculty members. In view of the importance of the research and seriousness of plagiarism in the research, Institute has subscribed another plagiarism detection software for the users named by "TURNITIN" for the users.
- Reprography: Institute library provides photocopy facility to the users on nominal 6. charges.
- **7**. **CCTV Camera**: Institute library has installed CCTV Camera for surveillance.
- 8. Wi-Fi: Institute library provides the Wi-Fi facility to the users in the library premises.

List of e-Resources

SI. No.	Name of e-Resource	Titles/Collection
1.	ACM Digital Library	1162
2.	ASME Journals Online	33
3.	Institute for Studies in Industrial Development (ISID) Database	The Institute for Studies in Industrial Development (ISID) has created On-line Indexes of Indian Social Science Journals (OLI) and Press Clippings on diverse social science subjects. It provides access to Indexes of 125 Indian Social Science journals and major newspaper articles, editorials and news features.
4.	JGate Plus (JCCC)	J-Gate Custom Content for Consortium (JCCC) is a virtual library of journal literature created as a customized e-journals access gateway and database solution. It acts as a one point access to 7900+ journals subscribed currently under UGC INFONET Digital library consortium as well as university libraries designated as Inter Library Loan (ILL) Centers besides index to open access journals. JCCC has facility to trigger e-mail request for article to inter library loan centers as well as to INFLIBNET Centre.
5.	JSTOR	3165
6.	Math SciNet	Provides database of reviews, abstracts and bibliographic information for much of the mathematical sciences literature

Library



7.	Oxford University Press	262
8.	Springer Link	1725
9.	Nature Journal	Nature the leading international weekly journal of science.
10.	Web of Science	Provides access to the world's leading citation databases which includes Science Citation Index Expanded (SCI-EXPANDED), Social Sciences Citation Index (SSCI) and Arts & Humanities Citation Index (A&HCI) with 20 year back-files on lease basis. Its Analyze Tool also helps in finding hidden trends and patterns, gain insight into emerging fields of research, identify leading researchers, institutions, and journals, and trace the history of a particular field of study.
11.	IEEE: IEL Level II	42,530
12.	Science Direct	664
13.	IOP	72

Library Services for Users

Library Opening and Closing Hours: Institute library opens on Institute holidays for providing best facility to the users and timings are as follows:

Library Timing			
Opening and Closing		Issue/re-issue/return timing	
Monday to Sunday (Including Institute Holiday)	09:00 am to 10:00 pm	09:00 AM to 05:30 PM (Monday to Saturday)	

- Study Room: The library has a "Study Room Facility" with more than 100 seating capacity for the uses which are open 24 X 7 throughout the year.
- Online Payment System: Library users can make the library related payment through internet banking system on library bank account.

Provides Other Services

- **Book Locate Service :** Institute Library also helps library users who are unable to find the books. Staff of the library provides full support to the users for searching the required reading materials, if available.
- **Book Disk Service :** Institute library is in receipt of various requests related to







books reservation through mail/telephone and the circulation desk duly store the same and provide to the respective user.

Information Alert Services: Time to time library alerts to users regarding latest information through e-mail and same has been displayed on notice board. The under mentioned alerts are provide to all the library users:

a)	New Arrival Books.	b) New Subscribe e-Resources.
c)	News Arrival other items.	d) Faculty and Student publications.
e)	Forthcoming conferences, seminar, workshop, other national and international events.	f) Scholarship and fellowship information.
g)	Workshop/lectures for e-resources usage.	h) Trail/free access resources
i)	Remote access facility for online resources	

- Newspaper Clipping Services: Institute library has also preserved Institute related news published in subscribed newspapers and it will be very useful for future reference. Institute library is planning to newspaper clipping alert service on monthly basis through email.
- Users Orientation/Conferences/Workshop Services: Institute has organized orientation program for new library users about collections, databases and services of the library. Library conducted the short training programs, workshop, etc. for "How to Use" electronic resources like IEEE, Elsevier etc. for faculty members, research scholars and students. This programme is useful to library user for their research purposes.

Future Plan

- Digital Library Section: 10 15 numbers of computers will be setup for digital library and users can easily access e-resources, e-journals, Institutional repositories, etc. during library timing.
- Library Trainees: In order to augment the services 2 nos. of library trainees shall be inducted in future.

	Details of Expenditure				
SI.	Items	Expenditure	Expenditure	Expenditure	
No.		2019-20	2020-21	2021-22	
1.	Newspapers	Rs. 24,386.00	Rs. 3,595.00	Rs. 7,754.50	
2.	Books	Rs. 5,71,391.68	Rs. 0.00	Rs. 4,25,592.00	
3.	Journals and Magazines	Rs. 2,02,68,601.96	Rs. 1,30,32,839.00	Rs. 1,50,24,194.50	
	Total	Rs. 2,08,64,379.00	Rs. 1,30,36,434.00	Rs. 1,54,57,541.00	
		(Approx.)	(Approx.)	(Approx.)	



Campus Placements Report 2021-22

Training & Placement Cell are committed to provide best opportunities to our students. Like last year, we had provided various Hackathon, Internship opportunities to our students. Apart from this workshop, training sessions by Alumni & Corporate resource persons were also organized. Under the PDC training, sessions on Personal Empowerment, Aptitude, Resume Writing and Interview preparation was organized for all the students. We have also seen positive increments in terms of number of companies visited for campus hiring process along with significant hike in highest & average package offered to our students.

Major recruiter for the session

A total 110 companies visited the institute in the session 2021-22 and rolled out 476 offers to the students. Highest package offered in the session to UG students is 45 LPA (CTC) and overall package is 14.70 LPA (CTC). Highest package offered to PG students is 20.40 LPA (CTC) and overall average package remains 10.18 LPA (CTC) There was 100% placement in CSE, 95% in ECE, 90% for Design and above 85% for other streams. Top recruiters for the sessions are Amazon, Browser stack, media.net, Samsung R & D, American Express, NVIDIA, LinkedIn, Oracle, Samsung SDS, Yuj Design, Cognizant, Dialpad, Commvault, Capgemini, Synopsys, SLICE, CRED, Infoedge, Morphle, Moengage, Ugam Solutions, Adani, JSW, IBM, TCS, Infosys, Deloitte,

Cloudlex, Ericsson, LAVA, StateStreet, Chalo, Mathworks, Gameskraft, Tokopedia, TATA Power etc. Most Organization offered 6 months long Project Based Internship (PBI) to the final year students. Some of the candidates also opted for higher studies and joined reputed Institutes in India and abroad as well.



Hindi Pakhwada 2021 •—



Hindi Pakhwada- 2021 was celebrated from September 14-28, 2021 and concluded on September 28, 2021. The day of September 14 is observed as Hindi Diwas as on this auspicious day the language Hindi was adopted as an official language of the nation by the constituent assembly in the year 1949.

During this period various competitions including essay writing, Hindi speaking, Hindi noting and drafting, etc. were organized for the employees and students. Everyone enthusiastically participated in these competitions in which prizes were awarded to the winners of various competitions.













Buildings & Infrastructure •—



The Institute is situated at a beautiful location full of flora and fauna. It is close to the Dumna Nature Reserve, on the road approaching to the Airport (Dumna Airport) of Jabalpur city. The Institute campus spreads over 100 hectare (250 acres) of land having a combination of Plain and Hilly terrain. A complete infrastructure having dedicated buildings to each sort of activities at the Institute is available in the campus. The greenery is available all around the campus. The presence of beautiful birds, peacocks, deer etc can be witnessed in the campus, which keeps the habitant in touch with the nature. Being away from the crowded area and having green areas at surroundings, the campus comprehends a complete healthy environment. The untiring efforts of the occupants in the campus make it Clean and Green.

The Campus has been divided into three separate Zones viz. Academic cum Administrative Zone, Hostel Zone & Residential Zone in accordance with the different kind of activities performed in these zones.

The **Academic cum Administrative Zone** is at the centre part of the Campus, which is connected to the main road. All the Administrative and Academic buildings: Administrative Block cum Technology Incubation Centre, Lecture Hall and Tutorial Complex, Library com Computer Centre, Core Lab Complex, Primary Health Centre, and Open Air Theatre etc. are located in this Zone. A ring road starting from the Institute main entry of the campus connects different buildings. Another ring road (inner ring road) connects the other buildings of the zone.

The Residential Zone and the Hostel Zone are situated at two different extreme ends of the campus. All the residential quarters and the visitors' hostel are located in the Residential Zone and all hostel buildings including the student activities areas are

located in the Hostel Zone.

All the places within the Institute campus are well connected with roads and pathways. The Primary Health Centre (PHC) is located at the middle of the campus having easy connectivity from all parts of the campus. The nursing staff and ambulance facility is available at PHC for all the times. Bus facility at scheduled timings is available for occupants in the campus for visiting different places in the Jabalpur city, including the City Bus Stop and Railway Station. In addition to it, e-Rickshaw is available for movements within the campus.

The details of buildings and infrastructure facilities available in different Zones are as under:

Academic cum Administrative Zone

All academic and administrative activities are performed in this zone. The buildings and infrastructure in the zone have been provided accordingly. The locations of different buildings in the zone are such that providing ease in access from one building to another as per the required usage. The shaded parking places are available nearby to all the important buildings for the comfort of visitors and employees. The Power House located in this zone provides uninterrupted power supply to the whole campus. The power supply to the campus is through a dedicated 33 KV H.T. connection from MPPKVV Co Ltd. Two numbers of Diesel Generators one of 250 KVA and another of 1000 KVA provide the power back-up. The following are the important buildings in this zone:

Administrative Block cum Technology and Business Incubation Centre: All the important offices like the Directorate, Deans' offices, Registrar office Placement Cell, Institute Works Department, Purchase and Store Section, Account Section etc are

Buildings & Infrastructure •—





Administrative Block cum Technology and **Business Incubation Centre**

located in this building, which is situated next to the Institute Main Entrance.

The office of Start-up Cell and different offices with the supporting infrastructure are available in Technology and Business Incubation Centre, which is located on the Second floor of the building.

Library cum Computer Centre: The Computer Centre including offices of Faculties & Staff, Labs, Seminar Halls, and Lecture Rooms etc pertaining to the Computer Science discipline are located in one part of the building. The Central Library, Journal section, Reading rooms with 24x7 service etc are located in the another part of the building. The office and Lecture Halls for the Electronics and ICT Academy are also located in this building.



Library cum Computer Centre

Primary Health Centre (PHC) : The Primary Health Centre (PHC) building is located at the centre of the campus facilitating the occupants of the campus for their wellness. The nursing staffs are available at PHC, round



Primary Health Centre

the clock. The specialist doctors are available on shift basis. In addition to the routine Allopathic treatment, Ayurvedic and Homeopathic treatment is also available in the PHC. One number male ward, one number female ward and five numbers of private wards have been provided in the building. Camps for routine health check-ups and blood donation are regularly organised in the PHC.

Lecture Hall & Tutorial Complex: All the teaching activities are performed in this building. Well-equipped Class rooms, Lecture halls, Seminar halls etc are available in the building for performing different academic activities. In addition to it, in the Design Studio, located in the building, activities related to B.Des, and M.Des programmes are performed. A Design Arena



Lecture Hall and Tutorial Complex

is available in the building for display of Design projects. The Yoga sessions are also performed in this area. A well-equipped Auditorium is available in the building.

Core Lab Complex: All the laboratories have been accommodated in this building for performing experimental works by the

Buildings & Infrastructure •





Core Lab Complex

students. The Ground Floor of the building is being used by the Mechanical Engineering discipline and the First Floor is in use by the **Electronics and Communication Engineering** discipline. Workshop Annexe and some other adjacent sheds complement the Core Lab Complex for fulfilling the requirement of Professional Labs.

Visitors' Hostel: The Visitors' Hostel building is used to provide accommodation to the visiting faculties, newly joined faculties and other guests to the Institute. The building is located at a beautiful situation giving feelings of a hilly region. Single seated rooms and suites are available in the building. In addition, some Meeting rooms, Seminar rooms are also available. A connected building provides the facility of kitchen and dining.



Visitors' Hostel

Residential Zone:

The Residential quarters for the Faculty members and Staff are located in this zone. The residential towers in the zone have been named in different names of holy river 'Narmada' which is the life line of Jabalpur city. This zone is located at the rear side of the campus. The zone is well connected with the Academic zone through cement concrete roads having footpath on both the sides. The residential towers within the zone are also connected with Cement Concrete Roads having footpath on both the sides. Park and Play fields are available for amusement of residents. Water supply and Power supply is available in residential flats for 24 Hrs. The following are the important buildings in this zone:

Narmada Residency-II: It is a five storeyed tower with stilt parking, providing Residential flats to the staff and junior faculty members. The building comprises 55 Nos. of flats having two Bedrooms, Drawing cum Dining room and a Kitchen. Children play areas have been developed nearby to the building. Solar water heating systems have been installed on the terrace of the building.



Narmada Residency II

Narmada Residency-III: It is also a five storeyed tower with stilt parking, providing Residential flats to the senior faculty members. The building comprises 60 Nos. of



Narmada Residency III

Buildings & Infrastructure •



flats having two Bedrooms, Drawing cum Dining room and a Kitchen. Children play areas have been developed nearby to the building. Solar water heating systems have been installed on the terrace of the building.

Rewa Residency-2: It has two towers with stilt parking, providing Residential flats to the staff members. The 36 numbers of flats having two Bedrooms, Drawing cum Dining room and a Kitchen are available in each tower. Family accommodation to some research scholars have also been provided in this building. Children play areas have been developed nearby to the building.



Rewa Residency II A and B

Hostel Zone

The Hostel buildings and Student Activity areas are located in this zone. One number central Mess and Dining Hall, in the zone, facilitates the students for their meals. In addition, Canteen facility is also available in different Hostel buildings. All the buildings are connected through cement concrete roads and pathways. A sewerage treatment plant situated at an isolated location is being used for treatment of sewerage generated in the area. The following buildings and infrastructure is available in this zone:

Hall of Residence I (Vasishtha Hostel): The building comprehends 404 single seated rooms divided in six wings. The senior UG students are provided accommodation in this hostel. The recreational facilities like Reading Room, TV viewing room and Canteen, etc. for the students are available in the facility block which is located at the entrance of the building. The building is well connected with roads and pathways with the other functional areas. The building has recently been renamed as 'Vasishtha Hostel'.



Hall of Residence I

Hall of Residence III (Aryabhatta Hostel):

The building contains triple seated rooms. A total of 498 students can be accommodated in these rooms. The facility block located at the centre of the building provides recreational facilities like TV viewing room, Dance and Drama room, Gymnasium, Canteen etc. to the students. The building is connected with roads and pathways with the other functional areas. An indoor Badminton Court has been developed inside the building. Lush Green lawns and plants are available all-around the building. The building has recently been renamed as 'Aryabhatta Hostel'.



Hall of Residence III

Hall of Residence IV (Vivekananda Hostel):

This building is a mirror image of the Hall of residence III having same capacity to accommodate 498 students. The building is connected with roads and pathways with the

Buildings & Infrastructure •



other functional areas. The facility block located at the centre of the building provides facility of Canteen, TV viewing room, Reading Room, Dance and Drama room etc. to the students. Lush Green lawns and plants are available all-around the building. The building has recently been renamed as Vivekananda Hostel.



Hall of Residence IV

Mess and Dining Hall: It is a double storeyed building providing dining facility to the students. Roads and pathways are available from all the hostels to reach the building. Beautiful plants and greenery is available allround the building.



Mess and Dining Hall

Type V Quarters-2 Nos. (Nalanda): A residential facility for two numbers of faculties / officers associated with students



2 Nos Type V Qtrs.

has been provided in the hostel area for the convenience of the students. This residential unit comprises two numbers of Duplex style Type-V quarters, each having a Drawing cum Dining room, two numbers of Bed rooms, a Kitchen and a Garage. This Residential unit has recently been renamed as 'Nalanda'.

Hall of Residence VII: It is a PG hostel building having two units.

PG Married Accommodation-Phase I (Nagarjuna Hostel): A total of 98 flats, each having one Bed room, one Hall and a Kitchen are available in the building. The married students of PG courses are accommodated in this building. The building has recently been renamed as 'Nagarjuna Hostel'.



PG Hostel Phase I (Married Accommodation)

PG Bachelor Accommodation -Phase II (Panini Hostel): The building contains two numbers of blocks each having 202 single seated rooms meant to accommodate the bachelor PG students. There is a facility block, well connected with the hostel blocks, providing canteen facility to the students. The building has recently been renamed as 'Panini Hostel'.



PG Hostel Phase II (Bachelor Accommodation)



Hall of Residence VIII (Maa Saraswati Girls Hostel): The building is completely in use now. It has singe seated and triple seated rooms to accommodate 250 girls students. The Canteen/ Mess facility and the Caretaker's residence have been provided inside the building. The building has been renamed as Maa Saraswati Girls Hostel since it is occupied.



Hall of Residence VIII (Maa Saraswati Girls Hostel)

Students Activity Centre (SAC): The Student Activity Centre has been situated at such location that it has entry from Hostel zone as well as from the Academic zone. The Indoor Basketball Court and the Open Air Theatre buildings are operational. Presently, 3 numbers of Badminton courts have been developed in the Indoor Basketball Court building. The other rooms in the building are in use for different activities of Student Clubs. Table tennis and Gymnasium facility is



Student Activity Centre

also available in the building.

Two numbers of play fields are available in the Hostel area for Outdoor games like Cricket, Football, Kho-kho, Track and field events etc. In addition, Outdoor Basketball Court, Volleyball Courts are available adjacent to the playground.

Security Barrack: The building is located at the extreme end of the campus providing temporary shelter to the security staff that are inside the campus but are off the duty. The Kitchen and Dining facility is available inside the building.



Security Barrack

Plantation and Swachhata Drives: The Institute is fully determined to maintain greenery in the campus. Accordingly, the plantation drives are observed in the campus throughout the year. All the plantation works are carried out in accordance with the Plantation Plan provided by the Tropical Forest Research Institute (TFRI). The recycled water from the Sewerage Treatment Plants and the waste water from the Water Purifiers, installed in different buildings, is used for maintaining plants and lawns. The existing plants and lawns are maintained by the Horticulture team. The cleaning and sanitation drives are also observed in the campus, throughout the year under Swachh Bharat Mission.

Annual Account (FY 2021-22) •



Fund Available and Expenditure incurred during FY 2021-22

(I) Grant in Aid received during FY 2021-22

Particulars	GIA (Rs in Lakhs)
Salary	2281.00
General Expenditure	1596.00
Capital Expenditure	1050.00
Total Amount	4927.00

(II) Expenditure for FY 2021-22

Particulars	GIA (Rs in Lakhs)
Salary	2299.17
General Expenditure	2111.81
Capital Expenditure	1172.03
Total Amount	5583.01

(A) Salary Expenditure for FY 2021-22

Particulars	GIA (Rs in Lakhs)
Academic	1351.48
Non Academic	416.72
Other component of Salary	530.97
Total Amount	2299.17

(B) General Expenditure for FY 2021-22

Particulars	GIA (Rs in Lakhs)
Outsourced Manpower	824.93
Electricity	202.81
Assistantship/Scholarship	710.53
Repair & Maintenance	99.97
Travelling Allowance	10.55
Transportation Expenses	9.22
Honorarium	10.98
Student Support Service	27.77
Other Expenses	215.05
Total Amount	2111.81

(C) Capital Expenditure for FY 2021-22

Particulars	GIA (Rs in Lakhs)
Civil & Electrical	597.53
Furniture & Fixture	235.11
Lab and Office Equipment	24.03
Computer hardware and Software	122.86
Books and Journals	160.63
Electrical Installation	31.87
Total Amount	1172.03

(S.D. Gadekar) Acting Registrar

(Pravin N Kondekar) Director In-charge

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Annual Account (FY 2021-22) •



PANDIT DWARKA PRASAD MISHRA INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING, JABALPUR

BALANCE SHEET AS AT 31st, MARCH 2022

AMOUNT IN ₹

SOURCES OF FUNDS	SCHEDUL ES	CURRENT YEAR (FY 2021-22)	PREVIOUS YEAR (FY 2020-21)
CORPUS/ CAPITAL FUND	1	3,664,427,887	3,527,778,083
DESIGNATED/ EARMARKED/ ENDOWMENT FUNDS	2	-	-
CURRENT LIABILITIES & PROVISIONS	3	347,949,353	729,953,798
TOTAL		4,012,377,240	4,257,731,881
APPLICATION OF FUNDS			
FIXED ASSETS	4		
TANGIBLE ASSETS		3,082,595,113	3,065,108,777
INTANGIBLE ASSETS		2,118,612	4,079,766
CAPITAL WORK-IN-PROGRESS		10,074,150	26,905,394
INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS	5		
LONG TERM		-	-
SHORT TERM		-	-
INVESTMENTS- OTHERS	6	-	-
CURRENT ASSETS	7	821,771,946	614,221,739
LOANS, ADVANCES & DEPOSITS	8	95,817,419	547,416,205
TOTAL		4,012,377,240	4,257,731,881
SIGNIFICANT ACCOUNTING POLICIES	23		
CONTINGENT LIABILITIES AND NOTES TO ACCOUNTS	24		

(S.D. Gadekar) Deputy Registrar (F&A)

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(S.D. Gadekar) Acting Registrar

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(Pravin N Kondekar) Director In-charge

• Annual Account (FY 2021-22) •



INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD 01.04.2021 TO 31.03.2022

AMOUNT IN ₹

PART	CULARS	SCHEDULE	CURRENT YEAR (FY 2021-22)	PREVIOUS YEAR (FY 2020-21)
A INCO	ME_		,	,
ACAD	DEMIC RECEIPTS	9	17,02,88,616	12,79,65,645
	NTS/ SUBSIDIES	10	38,82,65,851	37,53,23,011
GRAN	IT TAKEN FROM INTERNAL CORPUS		0	2,05,55,289
	ME FROM INVESTMENTS	11	0	0
INTER	REST EARNED	12	3,01,46,471	2,43,03,327
OTHE	R INCOMES	13	24,02,593	26,00,852
PRIO	R PERIOD INCOME	14	0	0
TOTA	L (A)		59,11,03,530	55,07,48,125
в ЕХРЕ	NDITURE			
STAF	F PAYMENTS & BENEFITS (ESTABLISHMENT			
EXPE	NSES)	15	22,99,16,168	20,11,53,627
ACAD	DEMIC EXPENSES	16	8,08,14,623	8,01,37,279
ADMII	NISTRATIVE AND GENERALEXPENSES	17	11,94,35,244	10,64,90,931
TRAN	ISPORTATION EXPENSES	18	9,22,601	11,23,660
REPA	IRS & MAINTENANCE	19	99,97,489	69,63,012
FINAN	NCE COSTS	20	11,708	9,791
DEPR	RECIATION	4	12,89,85,698	11,18,32,132
OTHE	R EXPENSES	21	0	0
PRIO	R PERIOD EXPENSES	22	0	42,85,990
TOTA	L (B)		57,00,83,531	51,19,96,422
BALA	NCE BEING EXCESS OF INCOME OVER			
EXPE	NDITURE (A- B)		21,020,000	38,751,703
TRAN	ISFER TO INSTITUTE CAPITAL FUND			
		9		
		11		
		12		
INTER	RNAL INCOME	13	15,00,05,697	15,48,69,824
BUILD	DING FUND		0	0
	NCE BEING SURPLUS (DEFICIT) CARRIED TO			
GENE	ERAL FUND		15,00,05,697	15,48,69,824
BALA	NCE BEING SURPLUS (DEFICIT) CARRIED TO	1	, , , , , , , , , , , , , , , , , , , ,	, , ,===
	PUS FUND		(128,985,698)	(116,118,122)
SIGNII	FICANT ACCOUNTING POLICIES	23	(1,111,111)	, , , , , , , , , , , , , , , , , , , ,
	INGENT LIABILITIES AND NOTE TO ACCOUNTS	24		

(S.D. Gadekar) Deputy Registrar (F&A)

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(S.D. Gadekar) Acting Registrar

Aceleren

(Pravin N Kondekar) Director In-charge

• Annual Account (FY 2021-22) •



PANDIT DWARKA PRASAD MISHRA INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING, JABALPUR RECEIPTS & PAYMENT ACCOUNT FOR THE FINANCIAL YEAR 2021-2022

		•					AMOUNT IN ₹
S.No.	RECEIPTS	CURRENT YEAR (FY 2021-2022)	PREVIOUS YEAR (FY 2020-2021)	S.No.	PAYMENTS	CURRENT YEAR (FY 2021-2022)	PREVIOUS YEAR (FY 2020-2021)
	I OPENING BALANCES			-	EXPENSES		
∢`	A) CASH BALANCE		0	¥	STAFF PAYMENTS & BENEFITS	92,55,789	90,59,735
В	B) BANK BALANCES			B)	ACADEMIC EXPENSES	7,64,92,542	6,29,42,470
	i) SBI GRANT A/C	2,37,967	2,38,616	(C)	C) ADMINISTRATIVE AND GENERAL EXPENSES	3,18,07,051	2,85,80,229
	ii) ALLAHABAD BANK STUDENT FEE A/C	1,07,37,975	3,14,634	(O	TRANSPORTATION EXPENSES	5,68,767	1,42,820
	iii) ALLAHABAD BANK STUDENT FEE A/C	44,200	8,094	E)	REPAIRS & MAINTENANCE	55,62,172	23,14,848
	iv) ALLAHABAD BANK GRANT CURRENT A/C	3,58,752	2,94,278	F)	FINANCE COSTS	20,370	9,875
	v) PROJECT A/C						
	a) ALLAHABAD BANK SERB PROJECT A/C	44,59,885	37,07,410	=	PAYMENTS AGAINST EARMARKED/ENDOWMENT FUNDS	72,11,728	47,96,822
	b) ALLAHABAD PROJECT A/C	2,96,38,291	2,74,39,470	=	PAYMENTS AGAINST SPONSORED PROJECTS/SCHEMES	1,08,63,274	1,48,65,820
	c) E&ICT ACADEMY A/C	9,34,232	85,48,817	≥	PAYMENTS AGAINST SPONSORED FELLOWSHIPS AND SCHOLARSHIPS		
	d) STARTUP A/C	5,632	5,450	¥	A) CENTRAL SECTOR SCHOLARSHIP	4,17,000	4,03,436
	e) QIP AICTE	31,57,919	43,20,786	B)	EXTERNAL SCHOLARSHIP	1,06,51,720	87,96,540
	vi) ALLAHABAD GRANT SAVING BANK A/C	6,63,08,901	3,23,92,990	^	INVESTMENTS AND DEPOSITS MADE		
	vii) SBI TICKET A/C	0	303	₹	A) OUT OF EARMARKED/ENDOWMENTS FUNDS		
	viii) AXIS BANK	1,51,22,253	2,73,32,669	B)	OUT OF OWN FUNDS (INVESTMENTS- OTHERS)		
				N	VI TERM DEPOSITS WITH SCHEDULED BANKS		
	II GRANTS RECEIVED			A	A) INVESTMENTS AND DEPOSITS MADE	14,84,14,000	15,96,99,995
∢	A) GENERAL	15,96,00,000	18,92,00,000	B	B) (SUBSIDIARY ACCOUNTS)		
m	B) FROM GOVT. OF INDIA (MHRD) (PLAN) - FOR CREATION OF CAPITAL ASSETS	10,50,00,000	8,49,00,000	M	EXPENDITURE ON FIXED ASSETS & CAPITAL WORK-IN-PROGRESS		
O	C) SALARY	22,81,00,000	18,47,00,000	æ	PURCHASE OF FIXED ASSETS	4,22,38,271	95,44,261
				B)	EXPENDITURE ON CAPITAL WORK-IN- PROGRESS		
	III ACADEMIC FEE			I			
A	A) ACADEMIC FEES	19,55,72,021	19,44,97,941	¥	ASSOCIATION FEE (OTHER INSTITUTION)		
В	B) ADVANCE FEES RECEIVED			B)	GIS (OTHER INSTITUTES)	009'9	7,800
O	C)STUDENT CAUTION MONEY			(C)	C) GPF (OTHER INSTITUTES)	55,000	65,000
D	D) ALUMNI ASSOCIATION SUB.			(D	D) GSLIS	2,03,868	3,18,666
Ш	E) STUDENT WELFARE FUND			E	E) PROFESSIONAL TAX PAID	0	0
ц (F) EXCESS DEPOSIT FEE	200 00 00 1	00 00 00	ΘĆ	F) WCT PAID	c	
ב פ	G) HALL MANAGEMEN ACCOUN H) STIDENT BENEFIT ACCOUNT	1,68,68,903	74,81,973	ī Ē	G) LABOUR WELFARE CESS H) NEW PENSION CONT	3 73 88 283	3 17 59 685
					I)TDS PAID	3,41,48,269	2,60,12,121
_	IV RECEIPTS AGAINST EARMARKED/ENDOWMENT FUNDS	1,67,79,695	1,48,79,506	(L	GST PAID	55,40,323	4,914,191.00

Annual Account (FY 2021-22) •



PANDIT DWARKA PRASAD MISHRA INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING, JABALPUR RECEIPTS & PAYMENT ACCOUNT FOR THE FINANCIAL YEAR 2021-2022

							AMOUNT IN ₹
S.No.	RECEIPTS	CURRENT YEAR (FY 2021-2022)	PREVIOUS YEAR (FY 2020-2021)	S.No.	PAYMENTS	CURRENT YEAR (FY 2021-2022)	PREVIOUS YEAR (FY 2020-2021)
	V RECEIPTS AGAINST SPONSORED PROJECTS/SCHEMES	2,82,77,884	11,81,898		VAT PAID		
5				Ŝ	FLAG DAY CONTRIBUTION		
∢	A) CENTRAL SECTOR SCHOLARSHIP RECEIVED	41,13,480	42,52,981	×	X REFUNDS OF GRANTS/PROJECT A/C CORPUS		
В	B) EXTERNAL SCHOLARSHIP	1,15,64,180	1,04,39,630	×	X DEPOSITS & ADVANCES		
				(A	CPWD, BHOPAL	1,00,00,000	0
>	VII INCOME ON INVESTMENTS FROM			B)	Digital Web World		1,27,553
∢	A) EARMARKED/ENDOWMENT FUNDS (E&ICT ACADEMY)		0	()	P.H.E. MECHANICAL ADVANCE PAYMENT	6,21,127	10,65,623
В	B) OTHER INVESTMENTS	7,33,80,467	0	D)	D) ADVANCE FOR EXP STAFF & OTHER		
ပ်	OTHER INVESTMENTS (SUBSIDIARY)	0	0	E	D B CROP LTD	0	2,50,594
>	VIII INTEREST RECEIVED/ACCRUED			Ð	STARTUP		
⋖	A) INTEREST RECEIVED	53,39,433	89,32,682	(B)	G) ADVANCE TO NICSI		
В	B)INTEREST ACCRUED ON FIXED DEPOSIT	0	15,73,356	H)	SECURITY DEPOSIT	27,67,460	7,92,900
^	IX INVESTMENTS ENCASHED			l)	EMD AND PBG	25,94,346	36,00,900
	X TERM DEPOSITS WITH SCHEDULED BANKS XENCASHED			ر.	SECURITY DEPOSIT-MPPKVVCL		0
Ϋ́	INVESTMENTS AND DEPOSITS MATURED INSTITUTE		5,70,00,000	Ŷ	ADVANCE TO DAVP		0
М	B) INVESTMENTS AND DEPOSITS MATURED E& ICT ACADEMY			()	ADVANCE TO OPTIMIZATION WORKSHOP		0
	OTHER INCOME (INCLUDING PRIOR PERIOD						
₹	I INCOME)			Σ	M) ADVANCE TO TFRI		0
<	A) OTHER INCOMES	12,70,722	18,13,817	î	N) ADVANCE TO INNOVATION PROJECT	0	0
				ΙΧ	OTHER PAYMENT		
≭	XII DEPOSITS AND ADVANCES			¥	A) HALL MANAGEMENT ACCOUNT	2,52,12,633	9,320
∢	A) SECURITY DEPOSIT	2,15,235	25,000	B)	STUDENT BENEFIT ACCOUNT		
Δ.	B) EMD AND PBG	39,72,256	28,25,180	ပ်	STUDENT CAUTION MONEY	9,82,691	51,000
O	C) ADVANCE TO CSAB 2013			۵	EXCESS DEPOSIT FEE PAID	1,18,28,283	3,46,18,126
0	SECURITY DEPOSIT-MPPKVVCL	12,38,364		E	ALUMNI ASSOCIATION SUB.PAID		
Ш	E) REFUND BY DGS&D			F)	F) PM CARES FUND	0	3,02,892

Annual Account (FY 2021-22)



PANDIT DWARKA PRASAD MISHRA INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING, JABALPUR RECEIPTS & PAYMENT ACCOUNT FOR THE FINANCIAL YEAR 2021-2022

90,61,96,535	105,66,88,496	TOTAL	1	90,61,96,535	105,66,88,496	TOTAL	
14,33,695	25,91,430	c) EXPENSES PAYABLE					
41,165		b) INTEREST ON PROJECT A/C PAID					
15,82,742		a) FEE RECIEVABLE STUDENT					
		XIII ANY OTHER PAYMENTS	IIIX			F) PROJECT CONSULTANCY PAYABLE	F) I
						E) RECEIVED AGAINST PAYMENT OF COMPUTER	E)
	234,960,363	ix) SWAP FACILITY				D) A/C RECIEVABLE) (
1,51,22,253	29,058,332	viii) AXIS BANK		11,98,974	0	C)RECIEVABLE TO STUDENT	(C)
		vii) SBI TICKET A/C		286'88'28	658'68'68'5	в) отнек reciepts	B) (
8,99,17,804	(21,440,118)	vi) ALLAHABAD GRANT SAVING BANK A/C				A) NPS INTEREST & OTHER	(A
31,57,919	3,091,726	e) QIP AICTE				XIV ANY OTHER RECEIPTS	/NX
5,632	262'9	d) STARTUP A/C				M) FINANCIAL SOFTWARE	(W
9,34,232	18,414,870	c) E&ICT ACADEMY A/C		2,51,451	13,81,943	L) GST	()
2,96,38,291		b) ALLAHABAD PROJECT A/C				K) FLAG DAY CONTRIBUTION	Κ
4,459,885	(2,882,706)	a) ALLAHABAD BANK SERB PROJECT A/C		4,83,236	6,20,014	J) SUNDRY CREDITORS	<u>(</u>
	66,523	v) INACOMM 2021 A/C		19,53,156	24,73,382	I)TDS RECOVERED	. (
3,58,752	181,774	iv) ALLAHABAD BANK GRANT CURRENT A/C				H) NEW PENSION CONT.	H)
44,200	12,894,631	iii) ALLAHABAD BANK STUDENT FEE A/C		698'86	43,163	LABOUR WELFARE CESS	1(9
10737974,63	(37,714,638)	ii) ALLAHABAD BANK STUDENT FEE A/C				F) WCT	F) \
2,37,967	237,318	i) SBI GRANT A/C				PROFESSIONAL TAX	Ē
		BANK BALANCE	B)	2,390	0	D) GSLIS	0)(
0		CASH BALANCE	(A			GPF (OTHER INSTITUTES)	(၁
		CLOSING BALANCES	IIΧ			B) GIS (OTHER INSTITUTES)	B) (
20,02,36,447	16,20,47,535	CREDITORS PAID	Ŷ			A) ASSOCIATION FEE (OTHER INSTITUION)	Ŷ
12,91,51,887	14,00,86,354	J) PROVISIONS PAID	€			MISCELLANEOUS RECEIPTS INCLUDING XIII STATUTORY RECEIPTS	×
73,92,949	4,02,37,740	I)OTHER EXPENSES	(26,62,008	1,08,81,490	H) ADVANCE FROM EXPENSES OF STAFF & OTHE	Ĥ
48,65,488	0	H) ONLINE PUBLICATIONS	Ŧ	2,75,00,000	0	G) CPWD, BHOPAL	(S)
8,90,428		G) INCOME TAX PAYABLE	(9)			RECEIPTS FROM AMEC/NWSG WORKSHOP	F)
PREVIOUS YEAR (FY 2020-2021)	CURRENT YEAR (FY 2021-2022)	PAYMENTS	S.No.	PREVIOUS YEAR (FY 2020-2021)	CURRENT YEAR (FY 2021-2022)	RECEIPTS	S.No.
AMOUNT IN ₹							

(Pravin N Kondekar)
Director In-charge

(S.D. Gadekar) Acting Registrar

(S.D. Gadekar)
Deputy Registrar (F&A)





RIGHT TO INFORMATION ACT 2005

Report (01-04-2021 to 31-03-2022)

The Institute paid emphasis on the implementation of Right to Information Act 2005. Institute has been taking initiatives to make the system transparent and trying to upload maximum information on the website suo-moto for the citizens of India. The implementation of RTI Act 2005 is ensured by the officials designated for the purpose, who are as follows:

Shri Santosh Mahobia Smt. Swapnali D Gadekar Prof. P N Kondekar Professor Assistant Registrar **Acting Registrar** Central Public Information Officer First Appellate Authority Transparency Officer

Other details are given below:

No. of RTI application received in the Institute 58

No. of RTI application replied by the Institute 58

No. of first appeals received by the Institute 14

No. of decisions passed by the FAA of the Institute 14

Amount collected as RTI fee and additional fee 2,522/-