NEWSLETTER

## January to March 2025

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
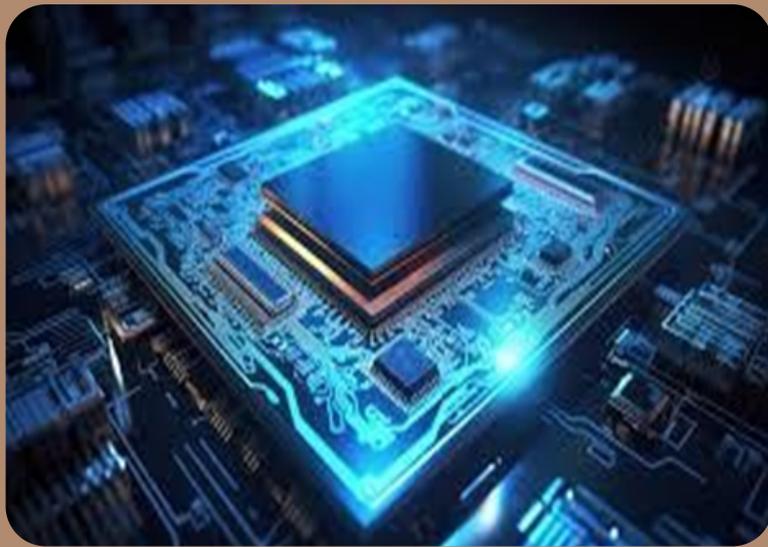
Vision

To create a center for imparting technical education of international standards and conduct research at the cutting edge of electronics & communication technology to meet the current and future challenges of technological development.

Mission

To create technical manpower for meeting the current and future demands of industry and academia: to recognize education and research in close interaction with electronics & communication & related industry with emphasis on the development of leadership qualities in the young men and women entering the portals of the institute with sensitivity to social development and eye for opportunities for growth in the international perspective.

Journal/Conference/Book Publications

Bhawna Kalra, Soumava Mukherjee, Ghanshyam Singh, and M.M. Sharma, "A Compact Dual Band Circularly Polarized Antenna Using Shared Aperture Technique for NavIC Receiver" , Sadhana Volume :1 / / 2025

Vikram Maurya, and S. Singhal, "Ultrathin Reflecting Wideband Terahertz Cross Polarization Converter as a Biosensor" , Materials Research Bulletin Volume :185 / 1-12 / 2025

Anjali Chharia, S. Singhal, Maniram Rawat, and P.K. Singhal, "TRAPEZOIDAL SLOT LOADED CIRCULAR RECTENNA FOR MULTIBAND RF ENERGY HARVESTING APPLICATIONS" , Telecommunications and Radio Engineering Volume :84 / 69-81 / 2025

S. Ranjan, R. Gupta, S. J. Nanda, "Threshold based constrained Theta-NSGA-III algorithm to solve many-objective optimization problems" , Information Sciences Volume :697 / 121751,1-18 / 2025 ISBN: 1872-6291

Mamta Devi Sharma, Ajay Yadav, Sarthak Singhal, and Ritu Sharma, "Thin profile UWB antenna with improved bandwidth for wearable applications" , Engineering Research Express Volume :7 / 1-13 / 2025

Vandana Singh Rajawat, Ajay Kumar, Bharat Choudhary, "TCAD simulation of sub-10 nm high-k SOI GaN FinFET by implementing fin optimization approach for high-performance applications" , Analog Integrated Circuits and Signal Processing Volume :122 / 1-12 / 2025

Atul Kumar Sharma, Anup Kumar Sharma and Ritu Sharma, "Synthesis and stud y o f r-GO/polyaniline composite and design estimation for THz applications" , Materials Science and Technology Volume :0 / 1-11 / 2025

A. Sharma, S. J. Nanda, "Spatial-temporal seismicity analysis using TSOM and variational density peak clustering" , Environmental and Ecological Statistics Volume :xx / 1-53 / 2025 ISBN: ISSN 1352-8505

Vikram Maurya, Shashank Kumar Yadav, and S. Singhal, "Solar Energy Harvester Based on Polarization Insensitive and Wide angle stable UWB Absorber For UV, Visible and IR Frequency Range" , Solar Energy Materials and Solar Cells Volume :280 / 1-12 / 2025

Vikram Maurya, and S. Singhal, "Polarization Insensitive Multiband Terahertz Absorber for Sensing Applications " , Materials Science & Engineering B Volume :317 / 1-13 / 2025

Narayan Krishan Vyas, Dr R P Yadav and Mohhamad Salim, "Passive 6G MIMO Antenna Design for High Gain Using CST Simulation Software" , CUESTIONES DE FISIOTERAPIA Volume :54 / 973-1003 / 2025

Reference Book" Proceedings of International Conference on Paradigms of Communication, Computing and Data Analytics : PCCDA 2024, Volume 2 ISBN:978-981-97-8668-8 published by - Algorithms for Intelligent Systems, Springer Singapore Year 2025 Authors- Himanshu Mittal, Satyasai Jagannath Nanda, Meng-Hiot Lim

Reference Book" Proceedings of International Conference on Paradigms of Communication, Computing and Data Analytics : PCCDA 2024, Volume 1 ISBN:978-981-97-7945-1 published by - Algorithms for Intelligent Systems, Springer Singapore Year 2025 Authors- Himanshu Mittal, Satyasai Jagannath Nanda, Meng-Hiot Lim

Reference Book" Data Science and Applications Proceedings of ICDSA 2024, Volume 6 ISBN:978-981-96-1187-4 published by - Lecture Notes in Networks and Systems (LNNS, volume 1239), Springer Singapore Year 2025 Authors- Satyasai Jagannath Nanda, Rajendra Prasad Yadav, Amir H. Gandomi, Mukesh Saraswat

Lab Facilities

- 5G Lab
- Advanced & Emerging Devices Lab
- Analog Circuit and Signals Lab
- Anechoic chamber
- Basic Electronics Lab
- Computing Lab
- Computing lab (E&ICT)
- Digital Electronics & Microprocessor Lab
- Digital Signal & Image processing Lab
- Drone Lab
- Electronics System Level design Lab
- Embedded System Lab
- EMI/EMC/Wireless Testing Lab
- IC/MEMS Fabrication Lab
- Optical Communication Lab
- Microwave, antenna and Communication Lab
- Photonics and THz Communication Lab
- Prototyping and Reconfigurable System Lab
- VLSI Design and Simulation Lab
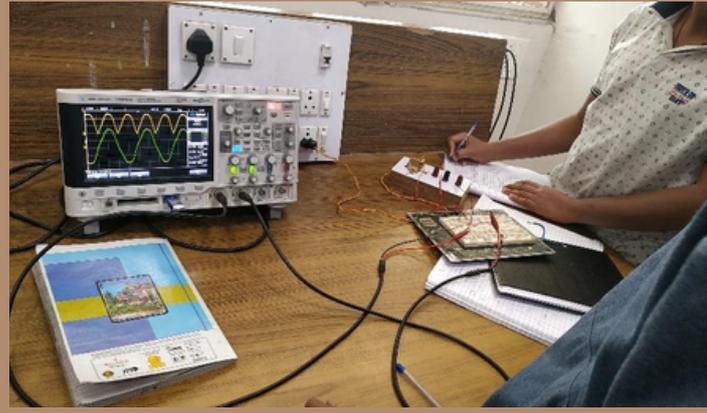
Patents

Patent Title:

Method for Fabricating Flexible Strain-Sensor for Respiration Rate Detection and a Flexible Strain-Sensor Device Thereof

Patentee:

Mr. Puneet Sharma, Mr. Atul Kumar Sharma, Dr Ritu Sharma, Dr. Vijay Janyani

Patent Title:

Method for Traffic Management by Scheduling Vehicular Traffic

Name of Inventors:

Dr. Amit Kumar Garg, Gauri Shankar Tak, Deepak Gurjar, Ayush Kumar Gupta, Prof. Vijay Janyani

Projects

Project Investigator:
Prof. Vineet Sahula

Title of Project:
Electronics and ICT Academy (Phase-2)

Funding Agency:
Ministry of Electronics and IT,
Govt. of India

Amount:
1005.58 Lakhs

Duration:
2024- 2029

Project Investigator:
Dr. Amit Mahesh Joshi

Title of Project:
Onboard spectral preprocessing for multispectral image compression using FPGA

Funding Agency:
ISRO

Amount:
18.62 Lakhs

Duration:
2023- 2025

Project Investigator:
Dr. Kuldeep Singh

Title of Project:
Development of techniques for data traffic based analysis of smart systems

Funding Agency:
Defense Research and Development Organization (DRDO), Ministry of Defense , Govt. of India

Amount:
113.97 Lakhs

Duration:
2023- 2025

Events Organized

National FDP on EICT Academies Joint Online FDP on Advanced Optimization Techniques with MATLAB (AOT 2025) at Malaviya National Institute of Technology, Jaipur, India from 17-02-2025 to 28-02-2025

For Reading

Drones in Agriculture

An agricultural drone is an unmanned aerial vehicle applied to farming in order to help increase crop production and monitor crop growth. Sensors and digital imaging capabilities can give farmers a richer picture of their fields.

Agricultural drones let farmers see their fields from the sky. This birds,-eye view can reveal many issues such as irrigation problems, soil variation, and pest and fungal infestations. Multispectral images show a near-infrared view as well as a visual spectrum view the combination shows the farmer the differences between healthy and unhealthy plants, a difference not always clearly visible to the naked eye. Thus, these views can assist in assessing crop growth and production.. Agricultural drones can also be used as pesticide spray which is as such harmful for human beings but crops need it many times.

~ Dr. Menka Yadav

STUDENTS CORNER

PLACEMENT STATISTICS

UG Students:

Total students placed - 64
Placement percentage - 53.3%
Highest package - 56 LPA
Average package - 16.58 LPA

PG Students:

VLSI : Highest package - 34 LPA
Embedded : Highest package - 37.8 LPA
**ECE** : Highest package - 12.5 LPA

Achievements:

- **Tushar Jain**
  AIR-105 in GATE 2025
- **Priyanshu Prajapati**
  AIR-207 in GATE 2025
- **Sajal Kumar Singh**
  AIR-710 in GATE 2025
- **Aryan**
  Qualified UPSC Combined Defence Services Examination 2024

Our Prominent Recruiters
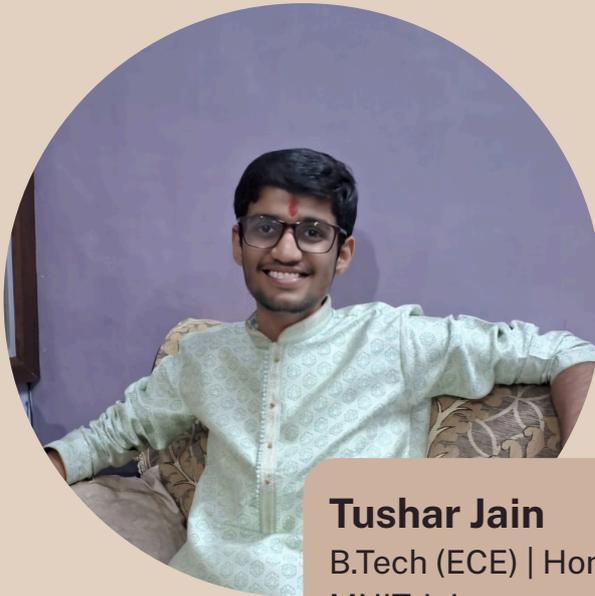
Tushar Jain
B.Tech (ECE) | Honors in VLSI Design
MNIT Jaipur

I am grateful to MNIT Jaipur for shaping my academic and professional journey with world-class education and opportunities. The unwavering support of the MNIT administration, ECE faculty, my parents, and friends has been the driving force behind my achievements during my B.Tech journey (2022-2026).

I secured AIR 105 in GATE EC, 2025, a testament to the strong foundation built at MNIT. I was honored to be part of the first cohort of the Indo-US Workforce Development Program and visited Purdue University, Indianapolis USA (July-August 2024) under SPARC, gaining invaluable global exposure. I have consistently maintained a CGPA above 9.5 since my first semester. Additionally, I secured a prestigious summer internship at Texas Instruments India as an Analog Intern (May-July 2025) through campus selection.