

OCTOBER TO DECEMBER 2024

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



D. Singh, S. Chaudhary, B. Dewan, and M. Yadav, "Performance investigation of different low power SRAM cell topologies using stacked-channel tri-gate junctionless FinFET" , Microelectronics Journal Volume :145 / 106122 / 2024 ISBN: 0026-2692

Ritu Poonia, C Periasamy, Aasif Mohammad Bhat, Lava Bhargava, Chitrakant Sahu, "Performance Assessment of AlGaIn/GaN HEMT for Human Serum Albumin Detection using Charge Deduction Methodology" , IEEE Sensors Journal Volume :- // 2024

Shreyas Tiwari, Tarun Varma, Rajesh Saha, "Optical Assessment of Vertical TFET based on heterojunction of GaSb-Si" , Micro and Nanostructures Volume :1111 / 1111 / 2024 ISBN: ISSN 2773-0123

Prateek Jain, Amit M Joshi, Saraju Mohanty, linga reddy ceneramaddi, "Non-invasive Glucose Measurement Technologies: Recent Advancements and Future Challenges" , IEEE Access Volume :XX // 2024

Uday Chandra Akuthota, Lava Bhargava, "Network intrusion classification for IoT networks using an extreme learning machine" , Engineering Research Express Volume :6 / 025217 / 2024

V. Kumar, S. J. Nanda, "Urdu and MNIST Datasets Digit Recognition Using CNN Encoder With K-Means Clustering" , 2024 IEEE International Conference on Electronics, Computing and Communication Technologies IEEE-CONECCT-2024 by :IEEE at Indian Institute of Science, Bengaluru / 1-6 / 2024 ISBN: 979-8-3503-8592-2

A. Agarwal, S. J. Nanda, "Dynamic NSGA-III With KRR-ANOVA Kernel Predictor for in-Motion Sonar Image Segmentation" , IEEE World Congress on Computational Intelligence, IEEE-WCCI-2024 by :IEEE at Yokohama, Japan / 1-8 / 2024 ISBN: 979-8-3503-0836-5

Nidhi Vashistha, Ritu Sharma, "Empowering Autonomous Travel With Way Genius: Designing a Fully Autonomous Car Using Raspberry Pi" , Recent Trends in Space Technology-2024 by :ISRO-Racs at MNIT Jaipur / 6 / 2024

Sonu Jain, Mamta Devi Sharma, Ritu Sharma, "Metasurface Based RF Energy Harvesting System: Device Hardware and Practical Issues" , Recent Trends in Space Technology by :National at MNIT Jaipur / 6 / 2024

Mamta Devi Sharma, Sonu jain, Namrata Saxena, Sarthak Singal, Ritu Sharma, "Design and Performance Analysis of Flexible Wearable Antenna for OFF-on Body Communication" , Recent Trends in Space Technology by :National at MNIT Jaipur / 6 / 2024

Yashaswini Sharma,, Ritu Sharma,, K.K. Sharma and Vijay Nath, " Optimized Cluster-Based Cooperative Spectrum Sensing Over Weibull, Nakagami, Rician, and Rayleigh Fading Channels" , IETE Journal of Research Volume :10 / 17 / 2024

Geetha, P., S. J. Nanda, and R. P. Yadav, , " □DOA Estimation in Presence of Doppler Shifts using Quantum Inspired Swarm Intelligence Algorithms□" , SN Computer Science Volume :5 / 1-10 / 2024

Ritu Poonia, C Periasamy, Aasif Mohammad Bhat, Lava Bhargava, Chitrakant Sahu, "A comprehensive simulation study on dual segment AlGaIn/GaN HEMT for mercury ion detection: Addressing steric hindrance and interfering ions" , Materials Science and Engineering: B Volume :301 / 117204 / 2024

Pankaj Binda, Raghvendra Kumar Singh, Rajendra Mitharwal, "A highly sensitive terahertz temperature sensor based on polarization insensitive perfect metamaterial absorber with tunable characteristics" , Optical Materials Volume :148 // 2024

Book Chapter" Charge Plasma TFET-Based Label-Free Biosensor for Healthcare Application ISBN:978-981-99-6649-3 published by - Springer nature Year 2024 Authors- Basudha Dewan, Shalini Chaudhary, Menka Yadav

PROJECTS

Project Investigator:

Prof. Vineet Sahula

Title of the Project:

**Electronics and ICT Academy
(Phase-2)**

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

Amount: **1005.58 Lakhs**

Duration: **2024-29**

Project Investigator:

Dr Amit Mahesh Joshi

Title of the Project:

**Onboard spectral preprocessing for
multispectral image compression
using FPGA**

Funding Agency: **ISRO**

Amount: **18.62 lakhs**

Duration: **2023-2025**

Project Investigator:

Dr. Satyasai Jagannath Nanda

Title of the Project:

**5G Use Case Laboratory at MNIT
Jaipur (One of the 100 5G Use
Case Laboratory for Higher
Educational Institutions)**

Funding Agency: **Department of
Telecommunication, Ministry of
Communications, Govt. of India**

Amount: **71.25 lakhs**

Duration: **2023-2029**

Project Investigator:

Dr. Kuldeep Singh

Title of the Project:

**Prototype Development of
Artificial Intelligence based
Portable Computer Aided
Diagnosis System for Silicosis**

Funding Agency: **Directorate of specially-
abled people, Govt. of Rajasthan**

Amount: **22.59 lakhs**

Duration: **2022-2024**

PATENTS

**"SMART GREEN TENT FOR WATER AND
CROP CARE", Dr. Menka Yadav, Dr. Sarthak
Singhal, Dr. Bharat Choudhary , Reg.No.
442361-001 [Office of the Controller General of
Patents, Designs & Trade Marks (CGPDTM)]
(FILED)**

**"SOLAR HEATPAN", Dr. Menka Yadav, Dr.
Sarthak Singhal, Dr. Bharat Choudhary ,
Reg.No. 442457-001 [Intellectual Properties of
India] (FILED)**

**"Method for Fabricating Flexible Strain Sensor
for Respiration Rate Detection and Flexible
Strain Sensor Device Thereof", Puneet
Sharma, Atul Sharma, Dr, Ritu Sharma. Dr.
Vijay Janyani, Jyoti Sharma , Reg.No.
202411056347A [Intellectual property Right
India] (FILED)**

Modern Technology

Device uses wind to create ammonia out of thin air

Ammonia has long been a key component of fertilizer for agricultural crops, but it recently has taken on increased importance as a sustainable fuel. Ammonia can be cracked to yield hydrogen for fuel cells and internal combustion engines, and which only produces water with no carbon emissions when burned. Ammonia can store much more energy in a given volume than hydrogen at a much lower cost per kilowatt hour.

The system is based on a micromesh that is coated with catalysts. Water vapor (H₂O) combines with atmospheric nitrogen (N₂) to create ammonia (NH₃) and oxygen (O₂). The ammonia ends up in a water solution which can be enriched through the use of a zeolite filter to absorb and concentrate the ammonia. (Zeolite is commonly used to remove ammonia in wastewater treatment.)



*Source: IEEE Spectrum

STUDENTS CORNER

UG Students Placed-

Highest LPA-37.5

Average LPA-14.75

PG Students

VLSI: Highest LPA-33.06

Average LPA-25.97

ECE: Highest LPA-12.5

Average LPA-10.86

WOC: Highest LPA-15.38

Average LPA-9.42

EMBEDDED: Highest LPA-33.06

Average LPA-18.08

MAJOR RECRUITERS

