

JULY TO SEPTEMBER 2023

DEPARTMENT OF ELECTRONICS AND COMMUNICATION



Newsletter



VISION

To create a centre 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.



Khan Abdulkarim Abdulquyyaam, Shreyas Tiwari, Rajesh Saha, Shandiul Hoque, "Sensitivity extraction of step shape double gate (SSDG) TFET biosensor considering non-ideal scenario", Engineering Research Express Volume :5 / 035049 / 2023

Poonam Devi, M. Ravi Kumar, "1 Gbps visible light communication system utilizing Mach-Zehnder Modulator", Journal of Optics - India Volume :52 / 406-416 / 2023

Basudha Dewan, Shalini Chaudhary and Menka Yadav, "A Label-Free Dielectric-Modulated Biosensor Using SiGe-Heterojunction Dual cavity Dual Metal Electrically Doped TFET", Engineering Research Express Volume :1 / - / 2023 ISBN: -

Geetanjali Sharma, Amit M Joshi, Deepshikha Yadav, Saraju P. Mohanty, "A Smart Healthcare Framework for Accurate Detection of Schizophrenia using Multi-Channel EEG", IEEE Transactions on Instrumentation and Measurement. Volume :XX // 2023

D. Lodhi and S. Singhal, "CPW Fed Shovel Shaped Super wideband MIMO Antenna for 5G applications", AEU - International Journal of Electronics and Communications Volume :0 / 1-15 / 2023

Puneet Sharma, Ritu Sharma, Vijay Janyani, Deepak Verma, "Development of a multi-modal graphene nanoparticles (GNP)- Polydimethylsiloxane (PDMS) flexible sensor for human activity monitoring and health assessment", International Journal of Electrochemical Science Volume :18 / 9 / 2023

Ajay Kumar, Neha Gupta, Aditya Jain, Rajeev Gupta, Bharat Choudhary, Kaushal Kumar, Amit Kumar Goyal, Yehia Massoud, "Digital-logic assessment of junctionless twin gate trench channel (JL-TGTC) MOSFET for memory circuit applications", Memories-Materials, Devices, Circuits and Systems Volume :6(2023) / 1-6 / 2023

Shobha Sharma, Tarun Varma, "Discrete combined fractional Fourier transform and its application to image enhancement", Multimedia Tools and Applications Volume :11111 / 222222 / 2023 ISBN: ISSN 1573-7721

Ravindra Kumar Maurya, Vivek Kumar, Rajesh Saha, and Brinda Bhowmick, "Effect of curie temperature on electrical parameters of NC-FinFET and digital switching application of NC-FinFET", Microelectronics Journal Volume :139 // 2023

Jain, Sushil Kumar and Joshi, Amit Mahesh and Bharti, Deepak, "Effect of Temperature on Performance Characteristics with Varying Defect States Parameters in TIPS-pentacene Based OTFTs on n++ Silicon Substrate", Silicon Volume :XX / 1-10 / 2023

Chaudhary, Shalini, Basudha Dewan, Devederpal Singh, Chitrakant Sahu, and Menka Yadav, "Exploration of Temperature Stability of linearity and RF Performance Metrics for PGP Negative Capacitance FET", Semiconductor Science and Technology Volume :1 / / 2023

Vikram Maurya and S. Singhal, "Graphene-based Polarization Insensitive Ultrathin Broadband Terahertz Absorber for Material Sensing Applications", Photonics and Nanostructures - Fundamentals and Applications Volume :0 / 1-10 / 2023 ISBN: 1569-4429

Dimpal Janu, Kuldeep Singh, Sandeep Kumar, and Sandeep Mandia, "Hierarchical Cooperative LSTM-based Spectrum Sensing", IEEE Communication Letters Volume :27-3 // 2023

Vandana Singh Rajawat, Ajay Kumar, Bharat Choudhary, "Impact on DC and analog/RF performances of SOI based GaN FinFET considering high-k gate oxide", Memories-Materials, Devices, Circuits and Systems Volume :5 (2023) / 1-9 / 2023

Rajesh Saha, Rupam Goswami, and Shanidul Hoque, "Investigation on Effect of Interface Trap Charges and Temperature in Gate Overlap Graphene Source Step Shape Double Gate Tunnel FET", ECS Journal of Solid State Science and Technology Volume : 12 / 083004 / 2023

A. Sharma, S. J. Nanda, "Memory guided Aquila optimization algorithm with controlled search mechanism for seismicity analysis of earthquake prone regions", Applied Soft Computing, Elsevier Volume :110894 / 1-38 / 2023 ISBN: ISSN: 1568-4946

Vandana Pandya, Urvashi P. Shukla, Amit M Joshi, "Novel Features Extraction from EEG Signals for Epilepsy Detection using Machine Learning Model", IEEE Sensors Letters Volume :XX // 2023

Ashish Kumar, Arathy Varghese, Girraj Sharma, Manish Kumar, Gaurav K Sharma, Mahanth Prasad, Vijay Janyani, R.P.Yadav and Khaled Elgaid, "Optimization and fabrication of MEMS based piezoelectric acoustic sensor for wide frequency range and high SPL acoustic application", Micro and Nanostructures (Elsevier) Volume :179 / 1-9 / 2023.

S. Khare, A. K. Garg, V. Janyani, A. Phophaliya and G. Singh, "Ring-Based Hybrid GPON Network With Inter ONU Capabilities", 2023 International Conference on Intelligent Systems and Networks ICISN 2023 by Springer at Hanoi, Vietnam // 2023

Devederpal Singh, Shalini Chaudhary, Basudha Dewan, Menka Yadav, "Performance Optimization of Tri-Gate Junctionless FinFET using Channel Stack Engineering for Digital and Analog/RF Design", Journal of Semiconductors Volume :- / - / 2023 ISBN: -

S. Tiwari and R. Saha, "Photo sensing Analysis of T-shape TFET sensor under visible range of spectrum", Physica Scripta Volume :0 // 2023

Sandeep Mandia, Kuldeep Singh, Rajendra Mitharwal, "Recognition of student engagement in classroom from affective states", International Journal of Multimedia Information Retrieval Volume :12 // 2023

Lakshmi Nivas Teja, Rashi Chaudhary, Shreyas Tiwari, Rajesh Saha, "Reliability study of nano ribbon FET with temperature variation including interface trap charges", Materials Science and Engineering: B Volume :298 / / 2023

Shreyas Tiwari and Rajesh Saha , "Sensitivity analysis of Horizontal pocket N-TFET based biosensor considering repulsive steric effects" , Materials Science and Engineering: B Volume :296 / / 2023

Shreyas Tiwari and Rajesh Saha, "Sensitivity Analysis of I-shape TFET Biosensor Considering Repulsive Steric and Trap Effects" , IEEE Transactions on Nanotechnology Volume :NA / / 2023

Rajesh Saha, Rupam Goswami, Brinda Bhowmick, Srimanta Baishya, "Simulation study of n+ pocket step shape heterodielectric double gate tunnel FET for switching and biosensing applications" , Materials Science and Engineering: B Volume :293 / 116491 / 2023

S. Tiwari and R. Saha, "Switching and photosensitive analysis of dopingless tunnel field effect transistor based on cladding layer concept" , Micro and Nanostructures (Elsevier) Volume :184 / / 2023

R. Sharma, A. M. Joshi, C. Sahu, S. J. Nanda, "Temporal and consumer driven cluster analysis for identification of FDI attacks in smart grid" , International Journal of Numerical Modelling: Electronic Networks, Devices and Fields Volume :e3145 / 1-15 / 2023 ISBN: ISSN:1099-1204.

Krishna Chauhan, Kamalesh Kumar Sharma, Tarun Varma, "MNITJ-SEHSD: A Hindi Emotional Speech Database" , 4th IEEE International Conference on Communication, Circuits, and Systems by :IEEE at Bhubneshwar / 1-6 / 2023

Book Chapter" "Role of photonics for the realization of future 6G communication systems Chapter 10, Book: 5G Wireless Communication System in Healthcare Informatics, 1st Edition ISBN:9781032312194 published by - CRC Press (Routledge, Taylor & Francis Group) Year 2023 Authors- Kamal Kishor Choure, Manisha Prajapat, Ankur Saharia, Nitesh Mudgal, Manish Tiwari, Puspa Devi Pukhrambam, Ghanshyam Singh

Book Chapter" A High-Speed Architecture for Lung Cancer Diagnosis ISBN:ISBN 978-166-84-6525-7 published by - Book-Structural and Functional Aspects of Biocomputing Systems for Data Processing, IGI Global Year 2023 Authors- R. Ratnakumar, Shilpa K., S. J. Nanda

EVENTS ORGANISED

International Conference on 4th International Conference on Data Science and Applications [ICDSA 2023] at Malaviya National Institute of Technology , Jaipur, India from 14-07-2023 to 15-07-2023

PATENTS

- "SILICO-AI: An AI-Based Portable Computer-Aided Diagnostic System for Silicosis Disease", Kuldeep Singh, Faisal Mushtaq, Satyendra S Chouhan, Sandeep Mandia, Rajesh Kumar, Priyanka Harjule , Reg.No. 202311063986 [Controller General of Patents, Designs & Trade Marks, Govt. of India] **Filed Dt.23-09-2023**
- "A Device for Detection and Prediction of Epilepsy Reoccurrence ", Urvashi P. Shukla, Amit M. Joshi , Reg.No. 202311051949 [Svaarogyam Medical Device Pvt. Ltd. (Startup)] **Filed Dt.02-08-2023**

AWARDS & HONOURS

"Dr. Rajesh Saha", Enlisted in top 2% Scientist in the world list for given by Stanford University and Elsevier

"Dr. Sarthak Singhal", Enlisted in top 2% Scientist in the world list for given by Stanford University and Elsevier

"Dr. Satyasai Jagannath Nanda", Second Shanghai Cooperation Organisation (SCO) Nations Young Scientist for Second SCO-YSC Young Scientist in the field of Artificial Intelligence and Big Data Analysis given by Department of Science and Technology, Govt. of India and JNCASR, Bengaluru, Karnataka

PROJECTS



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. Ritu Sharma

Title of the Project:

Design , Fabrication and performance Evaluation of Flexible Piezoelectric Biomechanical Energy Harvester

Funding Agency: SERB-Power Grant

Amount: 59.97 lakhs

Duration: 2022-2025

Project Investigator:

Dr. Kuldeep Singh

Title of the Project:

Development of techniques for data traffic based analysis of smart systems

Funding Agency: DRDO, Ministry of Defense , Govt. of India

Amount: 103.49 lakhs

Duration: 2023-2025

PLACEMENTS 2023

UG Students Placed-89.09 %

Highest LPA-64

Average LPA-17.19

PG Students

VLSI : Highest LPA-37.49

Average LPA-18.49

ECE : Highest LPA-32.46

Average LPA-14.04

WOC : Highest LPA-30

Average LPA-13.99

Embedded : Highest LPA-30

Average LPA-17.23

Our Top Recruiters

