

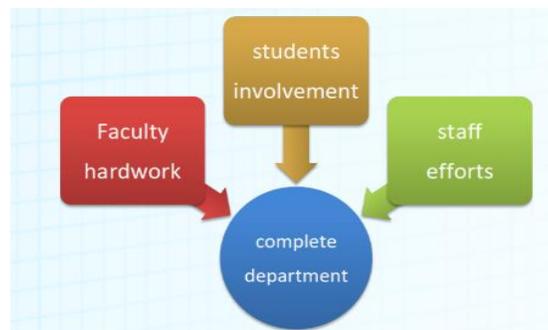
Newsletter October to December 2020

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.

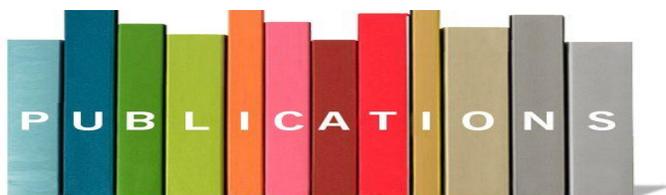


Seminar/Symposia/Workshop/Conference/STC Organized:



1. National Workshop on Online Training Program on Python for Engineers at MNIT, Jaipur, India from 20-12-2020 to 24-12-2020
2. National Short Term Course on Methodologies and Challenges in Digital IC and Memory Design at MNIT, Jaipur, India from 11-12-2020 to 15-12-2020
3. National Workshop on Emerging CMOS Technologies and Beyond: Trends and Challenges at MNIT Jaipur, Jaipur, India from 26-11-2020 to 30-11-2020
4. National Workshop on ATAL Academy sponsored 5 day Faculty Development Program on Quantum Computing at MNIT, Jaipur, India from 23-11-2020 to 27-11-2020
5. International Workshop on Quantum Computing at Malaviya National Institute of Technology, Jaipur, India from 23-11-2020 to 27-11-2020
6. National Symposia on Vigilance Awareness Week at MNIT Jaipur, Jaipur, INDIA from 27-10-2020 to 02-11-2020
7. National Workshop on Outcome-based education and NBA Accreditation Process at MNIT Jaipur & CTAE Udaipur, Jaipur, India from 19-10-2020 to 23-10-2020
8. National Workshop on Skill development workshop for Verilog /System Verilog at MNIT Jaipur, Jaipur, India from 15-10-2020 to 11-11-2020
9. National Workshop on Verilog/System Verilog skill development at MNIT, Jaipur, India from 12-10-2020 to 06-11-2020
10. National Workshop on Recent Trends in VLSI devices/circuits and applications at MNIT Jaipur, Jaipur, India from 01-10-2020 to 05-10-2020

Publications



- S. Singhal , "Four Arm Windmill Shaped Superwideband Terahertz MIMO Fractal Antenna" , Optik - International Journal for Light and Electron Optics (ACCEPTED) Volume :0 / 1-8 / 2020

- R. K. Garg , M.V. D. Nair , S. Singhal and R. Tomar ,"A New Type of Compact UWB Planar Fractal Antenna With WLAN Band Rejection" , MICROWAVE and OPTICAL TECHNOLOGY LETTERS(Accepted) Volume :0 / 1-8 / 2020
- Shruti Kalra, Sandeep Vyas, Yaseera Ismail, Manish Tiwari, Jalil Ali, Preecha Yupapin, Ghanshyam Singh ,"Investigation of As₂S₃-Borosilicate Chalcogenide glass based dispersion-engineered Photonic Crystal Fiber for Broadband Supercontinuum Generation in the Mid-IR Region" , Journal of Modern Optics (SCI, IF: 1.554) Volume :67 / 920-926 / 2020 ISBN: 1362-3044
- A. M. Joshi, U. P. Shukla and S. P. Mohanty ,"Smart Healthcare for Diabetes during COVID-19" , IEEE Consumer Electronics Magazine Volume :10 / 66-71 / 2020
- N Sajwan, I Sharma, A Kumar, LK Balyan ,"Performance of Multiplierless FIR Filter Based on Directed Minimal Spanning Tree: A Comparative Study" , CIRCUITS SYSTEMS AND SIGNAL PROCESSING Volume :39 / 1-25 / 2020
- Jaiverdhan, M. M. Sharma, R. P. Yadav, and R. Dhara ,"CHARACTERISTIC MODE ANALYSIS AND DESIGN OF BROADBAND CIRCULARLY POLARIZED CPW-FED COMPACT PRINTED SQUARE SLOT ANTENNA" , Progress In Electromagnetics Research M Volume :94 / 105-118 / 2020
- Arathy Varghese, Chinnamuthan Periasamy, Lava Bhargava, Surani Bin Dolmanan, and Sudhiranjan Tripathy ,"Fabrication and Modeling based Performance Analysis of Circular GaN MOSHEMT based Electrochemical Sensors (accepted for publication)" , IEEE Sensor Journal (IF: 3.076) Volume :3 / 1-8 / 2020
- Tau Raphael Rasethuntsa, Manpreet Kaur, Sandeep Kumar, Puspraj Singh Chauhan, Kuldeep Singh ,"On the performance of DF-based multi-hop system over $\alpha - \kappa - \mu$ and $\alpha - \kappa - \mu$ -extreme fading channels" , Digital Signal Processing Volume :109 / 1-11 / 2020
- N. Shafi, C. Sahu and C. Periasamy ,"Analytical Modeling of Surface Potential and Drain Current for Virtually Doped Symmetrical Dielectric Modulated BioFET" , IEEE Sensors Journal Volume :20 / 4749-4757 / 2020
- Ashish Kumar, Mahanth Prasad, Vijay Janyani, and R.P Yadav. ,". "Design, fabrication and reliability study of piezoelectric ZnO based structure for MEMS acoustic sensor" " , Microsystem Technologies Volume :10 / 04524 / 2020 ISBN: DOI10.1007/S00542
- S. K. Jain, A. M. Joshi and D. Bharti ,"Performance Investigation of Organic Thin Film Transistor on Varying Thickness of Semiconductor Material: An Experimentally Verified Simulation Study" , SEMICONDUCTORS Volume :54 / 1483-1489 / 2020
- V. Pathak, S. J. Nanda, A. M. Joshi, S. S. Sahu ,"VLSI Implementation of Anti-notch Lattice Structure for Identification of Exon Regions in Eukaryotic Genes" , IET Computers & Digital Techniques Volume :1 / 1-13 / 2020 ISBN: ISSN 1751-8601
- Hemant Sharma, K K Sharma ,"Sleep apnea detection from ECG using variational mode decomposition" , Biomedical Physics and Engineering Express Volume :00 / 4 / 2020

- Prem Kumar, Deepak Bansal, Anuroop, Khushbu Mehta, Amit Kumar, Kamaljit Rangra and Dharmendar Boolchandani , "Optimization of Titanium Nitride Film for High Power RF MEMS Applications" , Journal of Electronic Materials Volume :48 / 6431–643 / 2020
- Pathak, Vikas, Nanda , Satyasai Jagannath, Joshi, Amit, Sahu, Sitanshu Shekhar , "Hardware implementation of IIR anti-notch filter for Exon region identification in Eukaryotic genes" , International Journal of Circuit Theory and Applications Volume :00 / 11 / 2020
- A. Kumar, N. Agrawal, I. Sharma, S. Lee and H. N. Lee , "Hilbert Transform Design Based on Fractional Derivatives and Swarm Optimization" , IEEE transactions on cybernetics Volume :49 / 1-10 / 2020
- S. Singhal and A. K. Singh , "CPW FED STAR SHAPED UWB ANTENNA WITH AND WITHOUT BAND-NOTCH CHARACTERISTICS" , International Journal of Ultra Wideband Communications and Systems (IJUWBCS) Volume :0 / 1-10 / 2020 ISBN: 1758-7298
- AASIF MOHAMMAD BHAT Arathy Varghese, Nawaz Shafi, and C.Periasamy , "A Dielectrically Modulated GaN/AIN/AlGaN MOSHEMT with a Nanogap Embedded Cavity for Biosensing Applications" , IETE Journal of Research (Taylor and Francis) Volume :1 / 1-10 / 2020
- Usha Choudhary, Vijay Janyani , "Dual Frame OFDM with Optical Phase Conjugation for MIMO System in Multimode Fiber" , Optical and Quantum Electronics Volume :0 / 01-01 / 2020 ISBN: ACCEPTED
- Ashish Kumar, Arathy Varghese, Shriniwas Yadav, Mahanth Prasad, Vijay Janyani and R. P. Yadav , "Influence of Temperature on Graphene/ZnO Heterojunction Schottky Diode Characteristics" , Journal of Nanoscience and Nanotechnology Volume :21 / 1-6 / 2020
- Namrata Saxena , Varshali Sharma , Ritu Sharma, K K Sharma , Kapil Kumar Jain , Santosh Chaudhary , "Enhancement in structural, morphological and optical features of thermally annealed zinc oxide nanofilm " , Indian Journal of Pure and Applied Physics Volume :58 / 6 / 2020
- K. Vanlalawmpuia, R. Saha, B. Bhowmick , "Study of effect of oxide thickness variation on electrical parameters and high frequency characteristic induced by work-function variation for delta-doped Germanium source vertical TFET" , Semiconductor Science and Technology Volume :0 / -- / 2020
- Tangudu Bharat Kumar, Apurbaranjan Panda, Gaurav Kumar Sharma, Arun KishorJohar, Sougata Kumar Kar, Dharmendar Boolchandani , "Taguchi DoE and ANOVA: A systematic perspective for performance optimization of cross-coupled channel length modulation OTA" , AEU - International Journal of Electronics and Communications Volume :116 / 153070 / 2020 ISBN: 1434-8411
- Jaiverdhan Sarthak Singhal Mahendra M. Sharma Rajendra Prasad Yadav , "Epsilon-shaped circularly polarized strip and slot-loaded ultra-wideband antenna for

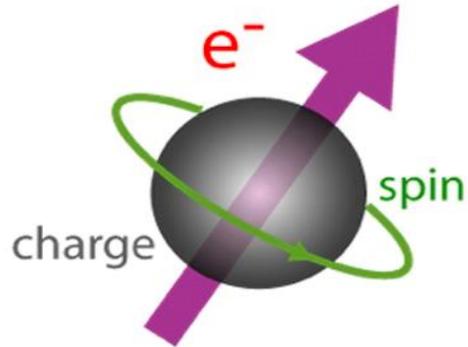
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- S. Singhal , "CPW Fed Koch Snowflake Superwideband Terahertz Spatial Diversity Antenna" , Optik - International Journal for Light and Electron Optics (ACCEPTED) Volume :0 / 1-8 / 2020
- Yazusha Sharma, Rukhsar Zafar, Shruti Kalra, Ghanshyam Singh , "Toluene-Filled Photonic Crystal Fiber Sensor with Flat Dispersion" , Materials Today: Proceedings Volume :38 / 1-5 / 2020 ISBN: 2214-7853
- K.Singh, JK Deegwal, M M sharma, S Yadav , "Performance Comparison of Schottky Diode models for RF Energy Harvesting" , International Journal of Engineering Research and Application Volume :10 / 51-57 / 2020
- Jain, Prateek, Amit M. Joshi, Navneet Agrawal, and Saraju Mohanty , "iGLU 2.0: A new non-invasive, accurate serum glucometer for smart healthcare" , arXiv preprint Volume :00 / 11 / 2020

- **Placement Data**

1. 54 UG students got placed in reputed companies like Nokia, Walmart, Apple, Goldman, Deloitte, Airtel, Texas Instruments, Paytm.
2. Highest package of 43 Lacs is offered to Suryaprakash Agrawal
3. Average package for UG students is 15 lacs.
4. 10 UG students got internship in companies like Amazon, Deshaw, Goldman, RCCM.
5. 17 PG students got placed in companies like Nokia, Micro, AMD.
6. Maximum package of 25 lacs is offered by Analog Devices.
7. 11 PG students got internship in companies like Qualcomm, Texas, Mentor graphics, Xilinx, Microchip.

- **ARTICLE: Spintronics**



Spintronics (or spin electronics) refers to the intrinsic spin of the electron and its associated magnetic moment in solid-state physics. It is far different than conventional electronics: along with charge state, electron spins are used in order to increase the degree of freedom.

Spintronic systems can be used for efficiently storing and transferring data. These devices are of particular interest in the field of neuromorphic computing and quantum computing.

The technology is also being used in the medical field (to identify cancer) and holds great promises for digital electronics.