



National Institute of Technology Delhi
Department of Electronics and Communication Engineering
First International Conference
Electronics, Communication and Signal Processing (ICECSP 2024)
August 08 – 10, 2024



Day- 1: August 08, 2024 (Thursday)

| Day- 1: August 08, 2024 (Thursday) | | | |
|------------------------------------|---|---|--|
| Timing | Venue | Programme | |
| 9:00 AM – 10:00 AM | Ground Floor, Administrative Building | Registration | |
| 10:00 AM – 11:30 AM | Main Auditorium, 5 th Floor, Administrative Building | Inauguration | |
| | | 10:00 AM -10:05 AM | Welcome Address |
| | | 10:05 AM – 10:10 AM | Lamp Lightning with Saraswati Vandana |
| | | 10:10 AM – 10:20 AM | Felicitation of Guests on the Dias |
| | | 10:20 AM – 10:25 AM | Introduction by the Conference Chair |
| | | 10:25 AM – 10:30 AM | Brief by the Head of the Department of ECE |
| | | 10:30 AM – 10:50 AM | Address by the Guest of Honors: 1. Dr. Sudesh K Yadav, Director, CSIR-IHBT, Palampur, HP 2. Prof. Manju Bala, Director cum Principal, KECT, Amritsar 3. Prof. Sashi K Dhiman, Vice-Chancellor, HPTU, HP 4. Prof. B. K. Kanaujia, Director, Dr. B. R. Ambedkar NIT Jalandhar. |
| | | 10: 50 AM – 10:55 AM | Address by the Conference General Chair and Director of NIT Delhi |
| | | 10:55 AM- 11:05 AM | Address by the Chief Guest |
| | | 11:05 AM- 11:10 AM | Release of Conference Proceeding |
| | | 11:10 AM –11:15 AM | Concluding Remarks with Vote of Thanks |
| | | 11:15 AM - 11:20AM | National Anthem |
| | | 11:20 AM – 11:30 Noon | Group Photograph |
| 11:30 AM – 12:00 Noon | 5 th Floor, Administrative Building | High Tea | |
| 12:00 Noon – 1:15 PM | Main Auditorium 5 th Floor, Administrative Building | Key Note Address 1 (Session Chair: Prof. Geeta Sikka and Dr. Manisha Bharti) Prof. Sudeb Dasgupta , Department of Electronics and Communication Engineering, IIT Roorkee | |
| 1:15 PM – 2:00 PM | Administrative Building | Lunch | |



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|-------------------|--|--|--|
| 2:00 PM – 5:00 PM | Technical Sessions (Afternoon Sessions) | | |
| | Main Auditorium 5 th Floor, Administrative Building | Communication Systems and Networks: Session I <i>Session Chairs:</i> 1. Dr Poonam Arora, NPL Delhi and Dr. Malti Puri, KCET, Amritsar 2. Dr. Nitin Singha, NIT Delhi | Offline Presentations: Paper IDs: 264, 288, 304, 363, 484 Online Presentations: Paper IDs: 31, 93, 102 Student Coordinators: Mr. Kamal Singh Ms. Seema Devi |
| | Committee Room 5 th Floor, Administrative Building | Signal Processing and Applications: Session I <i>Session Chairs:</i> 1. Prof. Amit Prakash Singh, USICT, GGSIPU, Dwarka, Delhi and Dr. Ripin Kohli, KCET, Amritsar 2. Dr. Sandeep Kumar, NIT Delhi | Offline Presentations: Paper IDs: 18, 59, 468 Online Presentations: Paper IDs: 40, 64, 99, 161, 169. Student Coordinators: Mr. Amit Kumar Ms. Arathy Rajeev |
| | Committee Room 4 th Floor, Administrative Building | VLSI Technology and Embedded Systems: Session I <i>Session Chairs:</i> 1. Prof R K Sharma, NSUT, Delhi 2. Dr. D. Vaithiyanathan, NIT Delhi | Offline Presentations: Paper IDs: 25, 183 Online Presentations: Paper IDs: 80, 81, 147, 160, 217 Student Coordinators: Mr. Anuraj V Ms. Archana |
| | T&P Committee Room 3 rd Floor, Administrative Building | Microelectronic Circuits and Systems: Session I <i>Session Chairs:</i> 1. Prof. Jasdeep Kaur Dhanoa, IGDTUW, Delhi and Dr. Atul Agnihotri, KCET, Amritsar 2. Dr. Baljit Kaur, NIT Delhi | Offline Presentations: Paper IDs: 450, 538, 651, 591, 592 Online Presentations: Paper IDs: 111, 230, 325, 329, 344 Student Coordinators: Mr. Vibhash Choudhary Ms. Nikita |
| 5:00 PM – 5:30 PM | Terrace, 5 th Floor, Administrative Building | Tea Break | |
| 5:30 PM – 6:15 PM | | Key Note Address 2 (Session Chair: Prof. Jyoteesh Malhotra and Dr. Rikmantra Basu) Prof. Guo En Chang , National Chung Cheng University, Taiwan | |



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| Day - 2: August 09, 2024 (Friday) | | | |
|-----------------------------------|---|--|--|
| Timing | Venue | Programme | |
| 9:00 AM – 10:00 AM | ECE Department, First Floor, Mini Campus Building | Registration | |
| 10:00 AM – 11:00 AM | Technical Sessions (Morning Sessions) | | |
| | Committee Room No. 126 (ECE), First Floor, Mini Campus Building | Communication Systems and Networks: Session II <i>Session Chairs:</i> 1. Prof Sandeep Kumar, JNU Delhi 2. Dr. Sachin Agrawal, NIT Delhi | Online Presentations: Paper IDs: 145, 162, 168, 203, 216 Student Coordinators: Ms. Arathy Rajeev Mr. Mohan K Paswan |
| | Lab Room No. 122 (ECE) First Floor, Mini Campus Building | Communication Systems and Networks: Session III <i>Session Chairs:</i> 1. Dr Arati Jain, NSUT, Delhi 2. Dr. Dharmendra Jhariya, NIT Delhi | Online Presentations: Paper IDs: 313, 328,342, 348, 349 Student Coordinators: Ms. Kritika Upadhyay Mr. Priyanshu Lakra |
| | Committee Room No. 101 (EE), First Floor, Mini Campus Building | Signal Processing and Applications: Session II <i>Session Chairs:</i> 1. Dr Ankur Kumar, IIIT Una/Dr. Anuradha Chug, USICT, GGSIPU, Delhi 2. Dr. Mahesh Singh, NIT Delhi | Online Presentations: Paper IDs: 171, 213, 234, 236 Student Coordinators: Mr. Hemant K Varshney Ms. Madhulika Verma |
| | Lab Room No. 206 (ECE) Second Floor, Mini Campus Building | Signal Processing and Applications: Session III <i>Session Chairs:</i> 1. Prof. Abdul Q Ansari, JMI 2. Prof Dinesh Kumar, DTU Delhi 3. Dr. Manish Verma, NIT Delhi | Online Presentations: Paper IDs: 299, 301, 312, 340, 361, 365 Student Coordinators: Mr. Abhishek Upadhyay Ms. Roopam |
| | Lab Room No. 125 (ECE), First Floor, Mini Campus Building | VLSI Technology and Embedded Systems: Session II <i>Session Chairs:</i> 1.Prof. Vandana Niranjan, IGDTUW, Delhi 2. Dr. Baljit Kaur, NIT Delhi | Online Presentations: Paper IDs: 218, 262, 277, 278, 282 Student Coordinators: Ms. Seema Devi Mr. Amit Kumar |
| | Committee Room No. 29 (AS), Ground Floor, Mini Campus Building | Microelectronic Circuits and Systems: Session II <i>Session Chairs:</i> 1. Prof. Akhilesh Mohan, IIT Roorkee and Prof. Suman Mann, GU, Greater Noida, U.P. | Online Presentations: Paper IDs: 341,474, 475 Student Coordinators: Ms. Nikita |



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| | | 2. Dr. Preeti Verma, NIT Delhi | Mr. Ankur Mittal |
| 11:00 AM – 11:30 AM | ECE Department, First Floor, Mini Campus Building | Tea Break | |
| | Committee Room No. 126 (ECE) First Floor, Mini Campus Building | Communication Systems and Networks: Session II Session Chairs: 1. Prof Sandeep Kumar, JNU Delhi 2. Dr. Sachin Agrawal, NIT Delhi | Online Presentations: Paper IDs: 251, 272, 275, 290, 291, 296 Student Coordinators: Ms. Arathy Rajeev Mr. Mohan K Paswan |
| | Lab Room No. 122 (ECE) First Floor, Mini Campus Building | Communication Systems and Networks: Session III Session Chairs: 1. Dr Arati Jain, NSUT, Delhi 2. Dr. Dharmendra Jhariya, NIT Delhi | Online Presentations: Paper IDs: 431, 441, 447, 510 Student Coordinators: Ms. Kritika Upadhyay Mr. Priyanshu Lakra |
| | Committee Room No. 101 (EE) First Floor, Mini Campus Building | Signal Processing and Applications: Session II Session Chairs: 1. Dr Ankur Kumar, IIIT Una/ Dr. Anuradha Chug, USICT, GGSIPU, Delhi 2. Dr. Mahesh Singh, NIT Delhi | Online Presentations: Paper IDs: 242, 259, 273, 295, 297, 515. Student Coordinators: Mr. Hemant K Varshney Ms. Madhulika Verma |
| | Lab Room No. 206 (ECE) Second Floor, Mini Campus Building | Signal Processing and Applications: Session III Session Chairs: 1. Prof. Abdul Q Ansari, JMI 2. Prof Dinesh Kumar, DTU Delhi 3. Dr. Manish Verma, NIT Delhi | Online Presentations: Paper IDs: 379, 408, 413, 429, 637, 644 Student Coordinators: Mr. Abhishek Upadhyay Ms. Roopam |
| | Lab Room No. 125 (ECE) First Floor, Mini Campus Building | VLSI Technology and Embedded Systems: Session II Session Chairs: 1. Prof. Vandana Niranjana, IGDUTW, New Delhi 2. Dr. Baljit Kaur, NIT Delhi | Online Presentations: Paper IDs: 309, 376, 416, 421, 451, 302 Student Coordinators: Ms. Seema Devi Mr. Amit Kumar |
| | Committee Room No. 29 (AS) Ground Floor, Mini Campus Building | Microelectronic Circuits and Systems: Session II Session Chairs: 1. Prof. Akhilesh Mohan, IIT Roorkee Uttarakhand, India, and Prof. Suman Mann, GU, Greater Noida, U.P. 2. Dr. Preeti Verma, NIT Delhi | Online Presentations: Paper IDs: 476, 506, 511, 495 Student Coordinators: Ms. Nikita Mr. Ankur Mittal |



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|-------------------|---|--|
| 1:30 PM – 2:30 PM | ECE Department, First Floor, Mini Campus Building | Lunch |
| | Technical Sessions (Evening Sessions) | |
| | Committee Room No. 126 (ECE) First Floor, Mini Campus Building | Communication Systems and Networks: Session IV <i>Session Chairs:</i> 1. Dr. Garima Shrivastava, NSUT Delhi 2. Dr. Dharmendra Jhariya, NIT Delhi Online Presentations: Paper IDs: 517, 525, 526, 529 Student Coordinators: Ms. Sakshi Mr. Hemant K Varshney |
| | Lab Room No. 122 (ECE) First Floor, Mini Campus Building | Communication Systems and Networks: Session V <i>Session Chairs:</i> 1. Dr. Abdul Q Ansari, JMI 2. Dr. Ashish Payal, USICT, GGSIPU 3. Dr. Sachin Agrawal, NIT Delhi Online Presentations: Paper IDs: 626, 294, 252 Student Coordinators: Mr. Amit Kumar Ms. Kritika Upadhyay |
| | Committee Room No. 101 (EE) First Floor, Mini Campus Building | Signal Processing and Applications: Session IV <i>Session Chairs:</i> 1. Prof. Rahul Katarya, DTU, Delhi 2. Dr. Mahesh Singh, NIT Delhi Online Presentations: Paper IDs: 433, 458, 479, 508, 536, 553 Student Coordinators: Mr. Mohan K Paswan Ms. Madhulika Verma |
| | Lab Room No. 206 (ECE) Second Floor, Mini Campus Building | VLSI Technology and Embedded Systems: Session III <i>Session Chairs:</i> 1. Prof. Poornima Mittal, DTU Delhi 2. Dr. Preeti Verma, NIT Delhi Online Presentations: Paper IDs: 483, 489, 490, 492, 494, 509 Student Coordinators: Mr. Abhishek Upadhyay Ms. Nidhi Yadav |
| | Lab Room No. 125 (ECE) First Floor, Mini Campus Building | VLSI Technology and Embedded Systems: Session IV <i>Session Chairs:</i> 1. Prof. Ujjwal K Kalla 2. Dr. Deva Nand, DTU Delhi 3. Dr. Manish Verma, NIT Delhi Online Presentations: Paper IDs: 547, 606, 615 Student Coordinators: Mr. Vibhash Choudhary Ms. Roopam |
| 4:00 PM – 4:30 PM | Corridor, ECE Department First Floor, Mini Campus Building | Tea Break |



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| 4:30 PM – 5:30 PM | Day - 2: August 09, 2024 (Friday) | | |
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| | Committee Room No. 126 (ECE) First Floor, Mini Campus Building | Communication Systems and Networks: Session IV Session Chairs: 1. Dr. Garima Shrivastava, NSUT Delhi 2. Dr. Dharmendra Jhariya, NIT Delhi | Online Presentations: Paper IDs: 559, 610, 611, 612 Student Coordinators: Ms. Sakshi Mr. Hemant K Varshney |
| | Lab Room No. 122 (ECE) First Floor, Mini Campus Building | Communication Systems and Networks: Session V Session Chairs: 1. Dr. Abdul Q Ansari, JMI 2. Dr. Ashish Payal, USICT, GGSIPU 3. Dr. Sachin Agrawal, NIT Delhi | Online Presentations: Paper IDs: 276, 293, 338 Student Coordinators: Mr. Amit Kumar Ms. Kritika Upadhyay |
| | Committee Room No. 101 (EE) First Floor, Mini Campus Building | Signal Processing and Applications: Session IV Session Chairs: 1. Prof. Rahul Katarya, DTU, Delhi 2. Dr. Mahesh Singh, NIT Delhi | Online Presentations: Paper IDs: 594, 604, 620, 621, 632, 240 Student Coordinators: Mr. Mohan K Paswan Ms. Madhulika Verma |
| | Lab Room No. 206 (ECE) Second Floor, Mini Campus Building | VLSI Technology and Embedded Systems: Session III Session Chairs: 1. Prof. Poornima Mittal, DTU Delhi 2. Dr. Preeti Verma, NIT Delhi | Online Presentations: Paper IDs: 521, 539, 543, 545, 79, 401 Student Coordinators: Mr. Abhishek Upadhyay Ms. Nidhi Yadav |
| | Lab Room No. 125 (ECE) First Floor, Mini Campus Building | VLSI Technology and Embedded Systems: Session IV Session Chairs: 1. Prof. Ujjwal K Kalla 2. Dr. Deva Nand, DTU Delhi 3. Dr. Manish Verma, NIT Delhi | Online Presentations: Paper IDs: 631, 398 Student Coordinators: Mr. Vibhash Choudhary Ms. Roopam |
| 7:00 PM onwards | Old Campus of NIT Delhi, Narela | Conference Dinner | |



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| Day - 3: August 10, 2024 (Saturday) | | | |
|-------------------------------------|---|--|---|
| Timing | Venue | Programme | |
| 9:30 AM – 10:00 AM | Terrace, 5 th Floor, Administrative Building | Registration | |
| 10:00 AM – 11:00 AM | Technical Sessions (Morning Sessions) | | |
| | Main Auditorium 5 th Floor, Administrative Building | Communication Systems and Networks: Session VI Session Chairs: 1. Prof. Rashmi Gupta, NSUT, Delhi 2. Dr. Nitin Singha, NIT Delhi | Offline Presentations: Paper IDs: 384, 435, 438, 544 Student Coordinators: Mr. Vibhash Choudhary Ms. Nikita |
| | Committee Room 5 th Floor, Administrative Building | Signal Processing and Applications: Session V Session Chairs: 1. Prof. Virendra Prasad Vishwakarma, USICT, GGSIPU, Delhi 2. Prof. R Rama Kishore, USICT, GGSIPU, Delhi 3. Dr. Sandeep Kumar, NIT Delhi | Offline Presentations: Paper IDs: 72, 170 Student Coordinators: Mr. Priyanshu Lakra Ms. Seema Devi |
| | Committee Room 4 th Floor, Administrative Building | VLSI Technology and Embedded Systems: Session V Session Chairs: 1. Prof. Manju Khare, JNU, Delhi. 2. Dr. D Vaithiyanathan, NIT Delhi | Offline Presentations: Paper IDs: 410, 605 Student Coordinators: Mr. Ankur Mittal Ms. Kritika Upadhyay |
| 11:00 AM – 11:30 AM | Terrace, 5 th Floor, Administrative Building | Tea Break | |



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Day - 3: August 10, 2024 (Saturday)

| | | | |
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| 11:30 AM – 12:30 PM | Main Auditorium 5 th Floor, Administrative Building | Communication Systems and Networks: Session VI <i>Session Chairs:</i> 1. Prof. Rashmi Gupta, NSUT, Delhi 2. Dr. Nitin Singha, NIT Delhi | Offline Presentations: Paper IDs: 552, 597, 638, 641 Student Coordinators: Mr. Vibhash Choudhary Ms. Nikita |
| | Committee Room 5 th Floor, Administrative Building | Signal Processing and Applications: Session V <i>Session Chairs:</i> 1. Prof. Virendra Prasad Vishwakarma, USICT, GGSIPU, Delhi 2. Prof. R Rama Kishore, USICT, GGSIPU, Delhi 3. Dr. Sandeep Kumar, NIT Delhi | Offline Presentations: Paper IDs: 389, 647 Student Coordinators: Mr. Priyanshu Lakra Ms. Seema Devi |
| | Committee Room 4 th Floor, Administrative Building | VLSI Technology and Embedded Systems: Session V <i>Session Chairs:</i> 1. Prof. Manju Khare, JNU, Delhi 2. Dr. D Vaithiyanathan, NIT Delhi | Offline Presentations: Paper IDs: 410, 605 Student Coordinators: Mr. Ankur Mittal Ms. Kritika Upadhyay |
| 12:30 PM – 1:30 PM | Main Auditorium 5 th Floor, Administrative Building | Valedictory Session: | |
| | | 12:30 PM – 12:35 PM | Welcome Address |
| | | 12:35 PM – 12:45 PM | Felicitation of Guests on the Dias |
| | | 12:45 PM – 12:50 PM | Concluding Remarks of the Conference by the Conference Chair |
| | | 12:50 PM – 1:00 PM | Address by the Guest of Honour of the Valedictory Session |
| | | 1:00 PM – 1:10 PM | Address by the Conference General Chair and Director of NIT Delhi |
| | | 1:10 PM – 1:20 PM | Address by the Chief Guest of the Valedictory Session |
| | | 1:20 PM – 1:25 PM | Vote of Thanks |
| | | 1:25 PM – 1:30 PM | Group Photograph |
| 1:30 PM – 2:30 PM | 5 th Floor, Administrative Building | Lunch | |



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Detailed List of Papers for the Presentation

Communication Systems and Networks: Session I: (August 08, 2024; 2:30 PM – 5:00 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|--|---|
| 1. | 31 | Comprehensive Study on Cyber Security and Cyber Attacks | Shafeyeen Almass, Sunil Kumar Chowdhary, Amity University |
| 2. | 93 | A Node MCU-based programmable Reconfigurable Intelligent Surface for mm-Wave 5G Applications | Badisa Anil Babu (Institute for Plasma Research); Meghamala Y (Institute of Aeronautical Engineering); Yogesh Misra, Bhogyam Venkata Sai Koushik, Inapakurthi Reshma (GMR Institute of Technology). |
| 3. | 102 | Enhanced LEACH for improving Lifespan of Hierarchical Wireless Sensor Networks | Punith Bekal, Pramod Kumar, Pallavi R Mane MANIPAL INSTITUTE OF TECHNOLOGY |
| 4. | 264 | Driver Drowsiness Detection System and Techniques: Critical Analysis | Harsh Magarde, Khan Anas Shokat, Rachit Jain, Deepak Batham (Madhav Institute of Technology & Science Gwalior) |
| 5. | 288 | A Ladybug Beetle Coati Optimized Joint Energy and Spectral Efficiency Maximization in Cooperative Cognitive Radio Networks | Chandra Mohan Dharmapuri (G B Pant), B.V.R. Reddy (NIT Kurukshetra) |
| 6. | 304 | Study of Performance of Hybrid Satellite Terrestrial Cooperative Communication System: A Review | Varun Jain; B. V. R. Reddy; Ashish Payal (USICT GGSIPU) |
| 7. | 363 | Ground Station based Point Ahead Angle Derivation & Variability for Spacecraft in Highly Elliptical Orbits | Shivam Bhutiani (SRM University Guntur). |
| 8. | 484 | Priority-Based Resource Allocation in Vehicular Communication Using Q-Learning | Divyanshu Pandey (NIT Warangal); K. L. V. Sai Prakash Sakuru (NIT Warangal) |



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Communication Systems and Networks: Session II: (August 09, 2024; 10:00 AM – 1:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|--|---|
| 1. | 145 | Design of Triangular shaped Graphene patch antenna for Terahertz applications | Purnima Sharma (GLA University, Mathura); Dinesh Yadav (Manipal University Jaipur) |
| 2. | 162 | Enhancing Anatomical Landmark Detection in Brain Images through Multiagent Deep Reinforcement Learning | Kanugula Bhargavi; Burra Shree Sharvani; G. Jaya Lakshmi (Velagapudi Ramakrishna Siddhartha Engineering College). |
| 3. | 168 | Spectrum Assignment in 5G and Beyond Ultra-Dense Networks Utilizing Deep Neural Network Framework | Saksham Katwal; Nidhi Sharma; Sh. Krishan Kumar Rathod (NIT Hamirpur) |
| 4. | 203 | Evaluation of the Novel Technique's Performance in Terms of Energy Consumption, Security and Reliability using Simulations or Real-World Experiments | Avneesh Gour (Shobhit Institute of Engineering & Technology), Nishant Kumar Pathak (Ajay Kumar Garg Engineering College). |
| 5. | 216 | Security Assessment of IoT Devices: A Contemporary Survey | Ishita Pathak, Indu Sreedevi (DTU Delhi); Gurjit Singh Walia (DRDO Delhi) |
| 6. | 251 | Capacity Analysis of OTFS-based Cooperative UAV Network | Amrita Kaul (JIIT Noida); Juhi Gupta (JIIT Noida) |
| | 272 | Detection of bacteria on food using deep learning | Sai Deepthi Challamalla (Velagapudi Ramakrishna Siddhartha Engineering College) |
| 7. | 275 | Wireless Interference Classification in Satellite Communications with the Standardized Variable Distances Learning algorithm and Adaptive Spectral domain segmentation | Gianmarco Baldini (European Commission) |
| 8. | 290 | A Deep Q-Learning based Architecture for 2 and 4 Users to Optimize Power Allocation and Signal Detection in NOMA Cognitive Radio Networks. | Sahil Sharma (NIT Hamirpur), Krishan Kumar Rathod (NIT Hamirpur) |
| 9. | 291 | Design and Analysis of 38GHz mm Wave Modified MIMO Antenna on Low Permittivity Substrate for 5G Ka Band Applications | Vaishali Kikan (IGDTUW); Ashwni Kumar (IGDTUW) |
| 19 | 296 | Antenna Bandwidth enhancement using meta surface for wireless applications | Mohammed Hussain Abbas, Shamsheer Singh (Maharshi Dayanand University Rohtak) |



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Communication Systems and Networks: Session III: (August 09, 2024; 10:00 AM – 1:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|--|---|
| 1. | 313 | Performance Improvement of Meandered Line RFID Reader Antennas for UHF Near Field Applications | Sanket Sarangi, Naresh Chandra Naik, Nibash Kumar Sahu (OUTR Bhubaneswar) |
| 2. | 328 | Spectrally efficient approach of Wavelength Conversion employing Non-linearity and Polarized Multiplexing | Parashuram; Anushka Mishra; Harsh; Sanchit Choudhary (Bharati Vidyapeeth College of Engineering, Delhi). |
| 3. | 342 | Manifestation And Suppression of Nonlinearity Using Optical Phase Conjugation in Long Haul Optical Communication | Amaan Alam; Aditya Tomar; Aryan Sethi; Dev Pruthi; Parashuram (Bharati Vidyapeeth's College of Engineering, New Delhi) |
| 4. | 348 | Distributed Denial of Service Attack Mitigation Using Reinforcement Learning | Gracious Eluvathingal; Saurabh Dipte; Anushka Yogesh Gaat; Chris Abraham; Amroz Kamal Siddiqui (Fr. C. Rodrigues Institute of Technology) |
| 5. | 349 | Hair Loss Stage Prediction Using different CNN models | Rupashi Behal, Pallavi Priya, Yuvraj, Anjali Kapoor, Vivek Kumar Jangra (Amity University, Noida), Anju Mishra (Ajay Kumar Garg Engineering College). |
| 6. | 362 | Efficient Relay Selection in NOMA-Based Cooperative Networks: A Supervised Learning Approach with Random Forest | Nishant Gaurav; Sh. Krishan Kumar Rathod; Abhishek Dhiman (NIT Hamirpur) |
| 7. | 431 | Dynamic Power Allocation with Energy Harvesting in Cooperative Non-Orthogonal Multiple Access Communication | Bhumika Amit Neole; Khushi Sahu; Gauri Vyas; Ankita H Harkare (R.C.O.E.M. NAGPUR); Manish Chawhan (YCCE); Dr Sanjay B Pokle (R.C.O.E.M. NAGPUR) |
| 8. | 441 | Cooperative Deep Learning Strategy for Green Traffic Offloading in Heterogeneous Ultra Dense Networks | Nidhi Sharma; Sh. Krishan Kumar Rathod (NIT Hamirpur) |
| 9. | 447 | Deep Learning and Heuristic Approach Assisted Dynamic Spectrum Assignment with Fragmentation Minimization in EON-SDM | Vasundhara (SVNIT); Abhilash Mandloi (SVNIT Surat) |
| 10. | 510 | Reinforcement Learning based Path Selection in Multi-hop Device to Device Communication | Rashmita Routray (Odisha University of Technology and Research); Tapas K Patra (Odisha University of Technology and Research) |



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Communication Systems and Networks: Session IV: (August 09, 2024; 2:30 PM – 5:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|---|---|
| 1. | 517 | Sensitivity Enhancement of Fractal-Based Surface Plasmon Resonance Sensors with Copper Metal | Rajeev Kumar (Department of Electronics and Communication Engineering, Graphic Era, Dehradun, Uttarakhand); Shivam Singh (ABES Engineering College); Vimal Kant Pandey (Dept. Failure Analysis Engineering Section) |
| 2. | 525 | Early Intervention in Cardiology Using SVM for Heart Failure Detection | Jatin Sharma, Kanwarpartap Singh Gill (Chitkara University, Punjab), Deepak Upadhyay, Swati Devliyal (Graphic Era Hill University, Dehradun). |
| 3. | 526 | The Role of Deep Learning in Transforming Cassava Leaf Disease Diagnosis | Vishnu Kant, Kanwarpartap Singh Gill (Chitkara University, Punjab), Sonal Malhotra, Swati Devliyal (Graphic Era Hill University, Dehradun). |
| 4. | 529 | Smart Solutions for Utilizing Advanced Machine Learning for Robust Credit Card Fraud Detection | Shanvi Chauhan, Kanwarpartap Singh Gill, Rahul Chauhan, Hemant Singh Pokhariya (Chitkara University). |
| 5. | 559 | Development and Simulation of Sierpinski triangle antenna for ISM frequencies. | Chetana Gadgil (Goa College of Engineering) |
| 6. | 610 | Machine Learning Based Denoising Anomaly detection and localisation using BiGRU in optical fiber monitoring | Srividhya Ganesan; Prakash P; Kasthuri P; Charumathi M Venkatesan; Sneha V (Madras Institute of Technology). |
| 7. | 611 | Machine learning-based link adaptation on an underwater communication network | Prakash P; Kasthuri P; Charumathi M Venkatesan; Srividhya Ganesan; Sneha V (Madras Institute of Technology) |
| 8. | 612 | Triple band Microstrip planar antenna with DGS for WiMAX (3.5 GHz / 6.5 GHz) and C band applications | Parul (Meerut institute of engineering and technology, Meerut); Praveen Kumar Chakravarti (Meerut Institute of Engineering and Technology, Meerut) |



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Communication Systems and Networks: Session V: (August 09, 2024; 2:30 PM – 5:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|---|--|
| 1. | 252 | Performance of Deep Embedded Clustering and Low-Complexity Greedy Algorithm for Power Allocation in NOMA-based 5G Communication | Prasheel Thakre, Sanjay, B. Pokle, Roshni Patel, Nehul Shrimankar, Madhav Dubey (Shri Ramdeobaba College of Engineering and Management, Nagpur, India) |
| 2. | 293 | FPGA Implementation of Stochastic Approximate Multipliers for Neural Networks | V.Saravanan, R.Dayana, M.Thillai Rani, M.Sudha, M.Varun, A Rosi Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences |
| 3. | 294 | A Single Band Modified Rectangular Microstrip Antenna with Rectangular and square slots in Patch and Ground for 39GHz Application Frequency | Vaishali Kikan (IGDTUW); Hrishita Gupta (Indira Gandhi Delhi Technical University for Women) |
| 4. | 626 | Design of Combined Temperature and Humidity Chipless RFID Sensors | Monisha S (K. Ramakrishnan College of Technology); Ramya Vijay (Sastra Deemed University); Putta Bulli Venkata Ajay (Sastra Deemed University); Harita Gayathri V C (Sastra Deemed to Be University) |
| 5. | 276 | Circularly polarized microstrip patch antenna with tilted patch and DGS for ambient RF energy harvesting | Parul Saini, Shivani Malhotra, Lipika Gupta (Chitkara University) |
| 6. | 338 | Implementation of an Efficient Randomized Lightweight Stream Cipher Rrsc 128-Aead | Jitendra Yadav, Dheeraj Kumar Sharma (NIT Kurukshetra) |



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Communication Systems and Networks: Session VI: (August 10, 2024; 10:00 AM – 12:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|---|--|
| 1. | 435 | Bandwidth and Gain Enhancement of a Rectangular Metasurface Microstrip Patch Antenna | Tarun Kumar, Vikas Nehra (DCRUST) |
| 2. | 384 | Performance Enhancement of Mixed FSO/RF based HAPS Relaying Communication Network using MP-PPM Modulation. | Khushboo Panchal, Sujata Sengar (Netaji Subhas University of Technology), Shree Prakash Singh (Deenbandhu Chotu Ram University of Science and Technology) |
| 3. | 438 | An assessment of the operation of hybrid FSO/RF DF relayed satellite communication network using Pulse Position Modulation | Snigdha Jain (NSIT Delhi); Sujata Sengar (NSIT Delhi), Shree Prakash Singh (DCRUST) |
| 4. | 544 | A Comparative Analysis for EEG-Based Motor Imagery Classification Across Diverse Datasets | Seema Devi (NIT Delhi), Kamal Singh (NIT Delhi), Nitin Singha (NIT Delhi), Mahesh K. Singh (NIT Delhi). |
| 5. | 597 | Blockchain enabled Federated Learning-based Medical Cyber-Physical System | Santanu Basak (National Institute of Technology Patna), Ashish Kumar (National Institute of Technology Patna), Kakali Chatterjee (National Institute of Technology Patna). |
| 6. | 552 | Compact Planar Antenna Loaded with H And S Slots For 5G And Advanced Wireless Communication System. | Varnika Singhal (Meerut Institute of Engineering and Technology); Praveen Kumar Chakravarti (Meerut Institute of Engineering and Technology, Meerut). |
| 7. | 638 | Incremental Hybrid Decode-Amplify-Forward Source Retransmission Protocol for Outage Analysis of Relay-Assisted NOMA in PLC | Shambhavi Tiwari; Kanchan Sharma (IGDTUW) |
| 8. | 641 | Performance Analysis of Wireless Communication System with Dynamic Node Positioning over Fisher Snedecor F Fading Channel | Narendra Mohan Misra; S. K. Soni; Rajan Mishra (M. M. M. University of Technology, Gorakhpur) |



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Microelectronic Circuits and Systems: Session I: (August 08, 2024; 2:30 PM – 5:00 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|---|--|
| 1. | 111 | Tech Harvest: Transforming Food Management with Intelligent Container | Authors: Vishesh Verma; Varsha Singh; Prachi Ranjan; Vivek Jangra; Sunil Kumar Chowdhary (Amity University) |
| 2. | 230 | Computational study on the effect of CdS buffer layer in an environmentally safe CuSCN based perovskite solar cell | Paramita Sarkar (B V Raju Institute of Technology); Ashutosh Srivastava (Bennett University); Arpit Bhardwaj (Bennett University); Madhushi Verma (Bennett University) |
| 3. | 325 | Design and Optimization on Accurate Trajectory of Robotic Manipulator | Apurva Singh (Indira Gandhi Delhi Technical University for Women); Aayushi Singh (Indira Gandhi Delhi Technical University for Women); Jasdeep Kaur Dhanoa (IGDTUW) |
| 4. | 329 | Performance Evaluation of Ge-Source Dielectrically Modulated TFET | Pooja Raghav (NIT Delhi), Manisha Bharti (NIT Delhi), Neha Paras (Jawaharlal Nehru University Delhi) |
| 5. | 344 | Vanadium Dioxide (VO ₂) Based Wideband Tunable Terahertz Metamaterial Polarization-Insensitive Absorber | S Avinash Naik (Jawaharlal Nehru University); Shatish K Gautam (University of Delhi South Campus); Ashwani Kumar (Jawaharlal Nehru University) |
| 6. | 450 | Implementation and Experimental Analysis of Anti-Theft Alarm System | Vaithiyanathan Dhandapani; Dhruvil; Preeti Verma; Baljit Kaur (NIT Delhi) |
| 7. | 538 | Routing Protocols Characterization in Real-World Vehicular Network | Varsha (National Institute of Technology Delhi), Dharmendra Kumar Jhariya (National Institute of Technology Delhi) |
| 8. | 651 | Spectroscopy Sensor and Mobile App and Artificial Intelligence Integration for Real-Time Soil Analysis and Crop Management in Precision Agriculture | Anshdeep Singh; Gagandeep Kaur; Mukal Dadhwal; Virat Chauhan; Ishwardeep Singh; Chirag Sharma; Mahender Singh (Guru Tegh Bahadur Institute of Technology) |
| 9. | 592 | Modelling and Performance Analysis of Non-Toxic MASnI ₃ Perovskite Solar Cell with 28.93% Efficiency | Jaspinder Kaur, Ajay K Sharma, Rikmantra Basu, Syamantak Gupta, Devvansh Gahlawat |
| 10. | 591 | Developing a Temperature and Humidity Diagnostic System for the Optical and Electronic Infrastructure of a Primary Caesium Quantum Clock | Devansh Gahlawat, Rikmantra Basu, Ajay K Sharma, Poonam Arora, Jaspinder Kaur (NIT delhi) |



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Microelectronic Circuits and Systems: Session II: (August 09, 2024; 10:00 AM – 1:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|--|--|
| 1. | 341 | Comparative Analysis and Review of Bandgap Reference Circuit for Wide Temperature Range | Gundrathi Vinod Kumar (Dr BR Ambedkar National Institute of Technology Jalandhar); Balwinder Raj (NIT Jalandhar); Aijaz M Zaidi (National Institute of Technology, Jalandhar). |
| 2. | 474 | Intelligent Control of Distribution System FACTS Devices Using Deep Learning Models: A Comparative Study | Pranjali Bafila (Sit pithoragarh); BK Singh (BIAS Bheemtal) |
| 3. | 475 | Numerical Analysis for Modeling CIGS-Based Solar Cells with Varying Absorber Layer Defect Density | Savita Rawat (Chitkara University, Punjab); Jaya Madan (Chitkara University) |
| 4. | 476 | Enhancing the Photovoltaic Performance of CIGS based Solar Cells by Varying Their Thickness | Savita Rawat (Chitkara University, Punjab); Jaya Madan (Chitkara University) |
| 5. | 506 | Intelligent Self Defense Accessory | Harshith Venuthurupalli, Kanagandla Swarna, Badugula Bharath Kumar, Pilli Abhinay, Baddam Sneha, Fatima Unnisa (Vardhaman College of Engineering). |
| 6. | 511 | A Temperature Compensated Read Assist Technique to Enhance SNM of 6T SRAM in FDSOI Technology | Buridi Geetha, Ajay Somkuwar (Maulana Azad National Institute of Technology). |
| 7. | 495 | Fault Diagnosis in Advanced Analog Building Blocks Using Ensemble Stacking Technique | Mansi Singhal, Gufran Ahmad Dayalbagh Educational Institute (Deemed University) Agra, India |



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Signal Processing and Applications: Session I: (August 08, 2024; 2:30 PM – 5:00 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|--|--|
| 1. | 18 | Performance Analysis of AIRBORNE SAR System | Pranshu Upadhyay, Sandeep Kumar, Kritika Upadhyay, Manisha Bharti, NIT Delhi |
| 2. | 40 | Detection of Number Plate in Hit and Run Crime Environment using Image Processing | R. Pavaiyarkarasi (R.M.K. Engineering College), S. Kanageswari (Loyola College, Chennai), S. Chandra Mohan (Sri Chandrasekharendra Sarawathi Viswa Mahavidyalaya, Kancheepuram), R. Shobana Lakshmi (Sairam Institute of Technology Chennai), S. Nalini Jayanthi (KCG College of Technology, Chennai), R. Manimegalai (SIMATS, Saveetha University, Chennai) |
| 3. | 59 | Internal Defect Detection in Mango X-ray Images using Image Processing and Machine Learning Techniques | Archana Singh, Dhiraj (CSIR-Central Electronics Engineering Research Institute) |
| 4. | 64 | Steel surface defect detection using machine learning techniques | Atharva Maheshwari Dharwa (BITS Pilani); Anshul Kumar Yadav (CSIR CEERI Pilani); Dhiraj Sangwan (CSIR CEERI Pilani); Vinod Maan (Mody University of Science and Technology); Kuldip Singh Sangwan (BITS Pilani) |
| 5. | 468 | ECG Data Compression Analysis by Employing Different Transforms in Orthogonal Transformation Technique | Dhwani Kaushal (Delhi Technological University), Vivek Singh (Delhi Technological University), Priyanka Jain (Delhi Technological University) |
| 6. | 161 | Built-Up and Land Use Land Cover Mapping for Sustainable Planning in Himalayan Region by Using Machine Learning and Sentinel-2 Satellite Imagery | Suraj Singh; Rashmi Saini (G. B. Pant Institute of Engineering and Technology Pauri Garhwal) |
| 7. | 169 | Development of a Sensor-Based Wearable Fetal and Maternal Health Monitoring System | Yugashi Jayalath (Liverpool John Moores University Liverpool), MWP Maduranga (Sri Lanka Technology Campus Padukka), Valmik Tilwari (Institute of Information Technology Guwahati), WMSRB Wijayarathna (General Sir Jhon Kotelawala Defence University Colombo), WAAM Wanniarachchi (General Sir Jhon Kotelawala Defence University Colombo), Debashree Sharma (Institute of Information Technology, Guwahati). |
| 8. | 99 | Integration of artificial intelligence (AI) and machine learning (ML) into Product Roadmap Planning | Pranav Khare, Sahil Arora, Sandeep Gupta (SIRT (RGPV)) |



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Signal Processing and Applications: Session II: (August 09, 2024; 10:00 AM – 1:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|--|--|
| 1. | 171 | FPGA Implementation of Area Efficient Adaptive Filter for Low Computational Complexity | SYED JAFAR ABBAS (IIT ISM Dhanbad); Srishty Dwivedi (IIT ISM Dhanbad); Govind Murmu (IIT ISM Dhanbad) |
| 2. | 213 | A Comparative Analysis of Decision Tree Classifier Performance in the Medical Data Analysis | Prakash (NIT Silchar), Goutam Agrawal (NIT Silchar), Malaya Dutta Borah (NIT Silchar), Vishwajeet Kumar (NIT Silchar), Purani Dharmesh Kamleshbhai (P. Savani University Surat), Pawan Kumar (NIT Delhi). |
| 3. | 234 | Digital Cropping: A Comparative Analysis of Hybrid CNN-XGBoost with Stacking & Ensemble Techniques | Mukul Kumar (Guru Nanak Dev Dseu Rohini Campus); Preeti Saini (Guru Nanak Dev Dseu Rohini Campus); Vicky Kumar (Guru Nanak Dev Dseu Rohini Campus); Ritesh Jain (Guru Nanak Dev Dseu Rohini Campus) |
| 4. | 236 | Comparative Analysis of Classifiers using Wav2Vec2.0 Layer Embeddings for Imbalanced Stuttering Datasets | Madhurima Sen (IIT G); Ashita Batra (Indian Institute of technology, Guwahati (IIT G)); Pradip K. Das (IIT G) |
| 5. | 242 | Rice Plant Diseases Classification using a New Convolutional Neural Network based Approach | Chandan Kumar Jha (IIIT Bhagalpur) |
| 6. | 259 | Arrhythmia Classification using Hybrid CNN-LSTM Model | Pranshu Swaroop, Natansh Badolia, Rishav Ranjan, Manjeet Kumar (Delhi Technological University). |
| 7. | 273 | Facial Emotion Recognition using YOLO based Deep Learning Classifier | Sri Vaibhav Mohan Dev Vanamoju, Moturi Veda Vineetha, Hitesh Tekchandani (Koneru Lakshmaiah Education Foundation Hyderabad), Pallavi Joshi (Amrita Vishwa Vidyapeetham Mysuru), Praveen Kumar Shukla (Manipal University Jaipur), Anita Khanna (Guru Ghasidas Vishwavidyalaya Bilaspur). |
| 8. | 295 | CT and MRI Image Segmentation Using Random Walk | Om Prakash Verma; Abhivyakt Sharma; Abhivyakt Sharma; Akshat Gupta (DTU) |
| 9. | 297 | Stage Prediction of Liver Cirrhosis Disease using Machine Learning | Bhanu Prakash K, Vennela D, Dhana Lakshmi N, Siva Priyanka S (Chaitanya Bharathi Institute of Technology Hyderabad) |
| 10. | 515 | Soldering Defect Identification using Deep Learning and Machine Learning Approach | Swati Shilaskar (VIT, Pune); Shobit Y Shinde; Sai Singar; Abhijit D Sonawane (Vishwakarma Institute of Technology) |



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Signal Processing and Applications: Session III: (August 09, 2024; 10:00 AM – 1:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|--|--|
| 1. | 299 | Sugarcane Leaf Disease Classification Using Hybrid CNN And RNN | S. Bala Dhanalakshmi, A.Rajeswari, Gokul T, Harish M, kesavaa M K, Vijaykumar S. (Coimbatore Institute of Technology). |
| 2. | 301 | Deep Learning based fruit crop disease classification using plants leaf imagery | Akanksha Joshi (G.B. Pant Institute of Engineering & Technology Pauri Garhwal), Arjun Badola (G.B. Pant Institute of Engineering & Technology Pauri Garhwal), Rashmi Saini (G.B. Pant Institute of Engineering & Technology Pauri Garhwal) |
| 3. | 312 | Automated Signature Verification in Bank Cheque Processing using Siamese and Convolutional Neural Networks | Disha Tuteja (Guru Tegh Bahadur Institute of Technology); Raman Dhand (GTBIT); Jyotika Israni (Guru Tegh Bahadur Institute of Technology); Mrigya Reineu (Guru Tegh Bahadur Institute of Technology); Khushi Dhal (Guru Tegh Bahadur Institute of Technology); Divyanshu Singh (Guru Tegh Bahadur Institute Of Technology) |
| 4. | 340 | Sentiment Analysis: A Machine Learning Perspective | Nadimpalli Madana Kailash Varma, Sri Harsh Mattaparty, Shifa Ismail, Joel Thaduri, Gagan Deep Arora, AnandKumar B (Vardhaman College of Engineering). |
| 5. | 361 | Novel Ensemble Sentiment Classification through Speech Processing and Stacking Generalization | Shriya Chowdhury, Soumo Roy, Mathew John, V Rama Chandra Chathurvedi, Deepanjali Das, Aparna Mohanty (Vellore Institute of Technology). |
| 6. | 365 | Automatic Number Plate Recognition in Hazy Conditions | Manas Gupta; Gaurav Bansal; Lakshay Joshi; Pankaj Dahiya (Delhi Technological University) |
| 7. | 379 | Land Use Land Cover Classification Using Machine Learning and Remote Sensing Data: A Case Study of Karnaprayag, Uttarakhand, India | Rashmi Saini; Suraj Singh (G B Pant Institute of Engineering and Technology Pauri Garhwal) |
| 8. | 408 | Disease Detection in Plant Leaves using Transfer Learning | Sristy Das, Harsh Bardhan Karna, Snigdha Das, Ranjay Hazra (National Institute of Technology Silchar). |
| 9. | 413 | Water Body Detection Utilizing NDWI, NDVI and NMDWI Indices in SEN-12 Spectral Imagery | Vasanthi A; Lakshmi Joshitha K (Sri Sai Ram Engineering College) |
| 10. | 429 | Melasma Segmentation using U-Net: A Precise Approach for Skin Pigment | Swati Shilaskar (VIT, Pune); Shushwet S Joshi (Vishwakarma Institute of Technology, Pune); Shraddha Chavanke |



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| | | Disorder Assessment | (Vishwakarma Institute of Technology Pune); Supriya Surve (Vishwakarma Institute of technology Pune) |
| 11. | 637 | FPGA Based LSTM Network: A Power and Resource Optimized Solution for Edge Computing | Rama Muni Reddy Yanamala; PULLAKANDAM MURALIDHAR; Satya Sri Varsha Potluri; Sai Sharanya Vattam; Leela Prasanthi Chekka (NIT WARANGAL) |
| 12. | 644 | GAN-Based Image Augmentation and Comparative Analysis of Various CNN Models for Monkeypox Detection | Deepti Sehgal, Indu Saini (NIT Jalandhar). |



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Signal Processing and Applications: Session IV: (August 09, 2024; 2:30 PM – 5:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|---|--|
| 1. | 433 | Enhanced sEMG Signals Process with Two-stream CNN on Gesture Classification | Sudhir Kumar (Delhi Technological University, Delhi) |
| 2. | 458 | Attention-enabled Convolutional Autoencoder with Optimal Threshold to Detect Image Anomaly for Industrial Quality Assurance | Rashmiranjan Nayak (National Institute of Technology Rourkela); Pritha Dutta (NIT Rourkela); Umesh Chandra Pati (National Institute of Technology, Rourkela) |
| 3. | 479 | Performance Analysis of Speech Enhancement Techniques | Mahak Jodwal (National Institute of Technology Delhi), Sandeep Kumar (National Institute of Technology Delhi), Laldinpui Colney (National Institute of Technology Delhi), Manisha Bharti (National Institute of Technology Delhi) |
| 4. | 508 | Dysarthria Voice Disorder Detection Using Mel Frequency Logarithmic Spectrogram and Deep Convolution Neural Network | Shailaja S Yadav; Dinkar Yadav (G. H. Raisoni College of Engineering and Management, Wagholi) |
| 5. | 536 | AI-Powered Pneumonia Detection: Enhanced Chest X-ray Interpretation with CNNs | Mohit Beri, Kanwarpartap Singh Gill, Deepak Upadhyay, Swati Devliyal (Chitkara University) |
| 6. | 553 | Insect Classification using Mel-CSTFT: A Fusion of Mel Spectrogram and Chroma STFT Features | Pranshu Raghuwanshi, Rekha Kaushik (Manipal University Jaipur) |
| 7. | 594 | Brain Signal-based Emotion Classification using DEAP Corpus | Bittu Kumar; M.A. Jahangeer Pasha; N Apoorva; K.Sai Dheeraj; S Sivanand; Ashwini Kumar Varma (Koneru Lakshmaiah Education Foundation, Hyderabad) |
| 8. | 604 | Performance Analysis of CNN-Based Speech Emotion Recognition System | Bittu Kumar (Koneru Lakshmaiah Education Foundation Hyderabad); P. Nikhita Reddy (Koneru Lakshmaiah Education Foundation Hyderabad); Ch. Samyana Reddy (Koneru Lakshmaiah Education Foundation Hyderabad); P. Sree Varsha Reddy (Koneru Lakshmaiah Education Foundation Hyderabad); Ashwini Kumar Varma (Koneru Lakshmaiah Education Foundation Hyderabad) |



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| 9. | 620 | Deep Learning Approaches and Security domains in Sentiment Analysis | Suman Lata (Maharaja Agrasen University H.P, Maharaja Surajmal institute of Technology New Delhi) |
| 10. | 621 | A Deep Learning Attention Approach for Diagnosis of Rice Diseases | Vidit Kumar (Graphic Era Deemed to be University); Ashish Singh (Graphic Era deemed to be University) |
| 11. | 632 | Optimal Design of Two-Dimensional Fractional-Order Riesz Digital Differentiator | Shilpa Garg (JIMS EMTC, Greater Noida); Richa Yadav (Dira Gandhi Delhi Technical University for Women (IGDTUW), Delhi); Manjeet Kumar (Delhi Technological University, Delhi) |
| 12. | 240 | Implementation of Subject Specific Model and General Model using Bayesian Algorithm and Compare their Performance | Nishant Shaklan; Love Jain; Hemant Kumar; Rajesh Birok (Delhi Technological University) |



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Signal Processing and Applications: Session V: (August 10, 2024; 10:00 AM – 12:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|--|---|
| 1. | 72 | An Enhanced Car Parking Detection Using YOLOv8 Deep Learning Capabilities | Vishnu Shankar (NIT Delhi); Vibhav Singh (NIT Delhi); Vibhash Choudhary (NIT Delhi); Sachin Agrawal (NIT Delhi); Bhaskar Awadhiya (Manipal Institute of Technology) |
| 2. | 170 | Compression-Encryption based Efficient Dual Image Watermarking for e-Healthcare Applications | Gautam Malhotra, Abhimanyu Atri, Jyoti Rani, Ashima Anand (Thapar Institute of Engineering and Technology) |
| 3. | 389 | EEG Graph-Based Disease Analysis: A Novel Approach to Neurological Disorder Diagnosis | R Radhika, Sachin Mishra, Rajesh birok (Delhi Technological University) |
| 4. | 647 | Power Spectrum Estimation Method to Detect Target Frequency from SSVEP Brain Signals | Hritik (University of Delhi); Mukesh Kumar Ojha (Greater Noida Institute of Technology); Manoj Kumar Mukul (University of Delhi) |



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VLSI Technology and Embedded System: Session I: (August 08, 2024; 2:30 PM – 5:00 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|---|---|
| 1 | 25 | Performance Analysis of GaSb/InAs Heterojunction TFET for Gas Sensing Applications | Narender Singh Shekhawat; Madhulika Verma; Dr. Sachin Agrawal (National Institute of Technology, Delhi). |
| 2 | 80 | Design and Evaluation of FPGA-Optimized Asymmetrical Three-Term Karatsuba Multipliers | Sumit Kumar; Saubi Patel; Shubham Singh; Monalisa Das; Babita Jajodia (Indian Institute of Information Technology Guwahati). |
| 3 | 81 | ATP-Optimized Four-Term Karatsuba Multipliers for Large Integer Arithmetic on FPGAs | Saubi Patel; Shubham Singh; Sumit Kumar; Monalisa Das; Babita Jajodia (Indian Institute of Information Technology Guwahati). |
| 4 | 147 | FPGA-Optimized Seven-Term Karatsuba Multipliers for Large Integer Arithmetic | Raushan Maharana; Arghya Roy; Sourabh Kumar Singh; Monalisa Das; Babita Jajodia (Indian Institute of Information Technology Guwahati). |
| 5 | 160 | Comparison of Analog Performance between Si Junctionless FinFET, Si Conventional FinFET, Tunnel FET, and InGaAs MOSFET. | Emona Datta (Institute of Engineering and Management, Salt Lake); Avik Chattopadhyay (Department of Radio Physics and Electronics, University of Calcutta, Kolkata); Avijit Mallik (Department of Electronic Science, University of Calcutta, Kolkata). |
| 6 | 183 | Design of Arithmetic Logic Unit Using Energy Charge Recovery Adiabatic Logic Technique | Jyothi B (GGSIPU, Delhi); B.V.R. Reddy (NITK, Haryana); Mansi Jhamb (GGSIPU, Delhi). |
| 7 | 217 | Performance Comparison of Antimony with Group III Compounded Semiconductor based JLTFT. | MD AKRAM AHMAD (IIT DHANBAD); Pankaj Kumar (Graphic Era Deemed to be University); Aradhana Mohanty (Graphic Era Deemed to be University); Sagar Surendra (VIT, vellore); PANKAJ KUMAR SHARMA (National Institute of Technology (NIT), Srinagar) |



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VLSI Technology and Embedded System: Session II: (August 09, 2024; 10:00 AM – 1:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|--|--|
| 1. | 218 | Performance Analysis of Nitrides with Group III based Semiconductor in JLTFT Device | RAUSHAN KUMAR (Bonam Venkata Chalamayya Institute of Technology and Science Amalapuram); Aradhana Mohanty (Graphic Era Deemed to be University); Sagar Surendra (VIT, vellore); Pankaj Kumar (Graphic Era Deemed to be University); PANKAJ KUMAR SHARMA (National Institute of Technology (NIT), Srinagar) |
| 2. | 262 | Design of Vertical Double Source TFET for Low Power Applications. | Mandeep Singh (Dr. BR Ambedkar National Institute of Technology Jalandhar); Sachin Yadav (Dr. BR Ambedkar National Institute of Technology Jalandhar); Tarun Chaudhary (Dr. BR Ambedkar National Institute of Technology Jalandhar); Balwinder Raj (Dr. BR Ambedkar National Institute of Technology Jalandhar). |
| 3. | 277 | Exploring MOSFET Differential Amplifiers: Using TCAD and Multisim Applications | Atmadeep Banerjee (Vellore Institute of Technology Chennai); Sourya Biswas (Vellore Institute of Technology Chennai); Shriya Chowdhury (Vellore Institute of Technology Vellore); Dr. Girija S Sahoo (Vellore Institute of Technology Chennai). |
| 4. | 278 | Comparative Analysis of Reversible Arithmetic Logic Units (R-ALU) using Verilog. | Manvendra Singh (Guru Gobind Singh Indraprastha University); Manoj Kumar (National Institute of Technology Delhi); Vandana Nath (Guru Gobind Singh Indraprastha University) |
| 5. | 282 | Low Power and High -Speed Sense Amplifier Design For 6T SRAM | Fabiha Zahin (AUST); MD Lutfur Hasan (Ahsanullah University of Science and Technology); Maria Khan Ria (AUST); Satyendra N Biswas (Bloomsburg University); Maliha Rahman (Ahsanullah University of Science and Technology). |
| 6. | 309 | Real-Time Implementation of Spatial Audio on FPGA Using Interaural Time Difference and Amplitude-Driven Perceptual Depth | Dhanush Joy; Kiran S; Alan Ponnachan; Ashok R (College of Engineering Trivandrum). |
| 7. | 376 | Safe Route - IoT and AI-based Fire Evacuation System for | Prajwal H Kuchewar; Chetan N Aher; Atharva Achrekar; |



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| | | Smart Buildings | Suyash Shewale; Yash Patil (AISSMS IOIT). |
| 8. | 416 | Optimization of Dielectric Modulated TFET as a label-free Biosensor | Ms SWATI (Indira Gandhi Delhi Technical University for Women (IGDTUW)); Jasdeep Kaur (Indira Gandhi Delhi Technical University for Women (IGDTUW)). |
| 9. | 421 | Performance evaluation of Adiabatic Logic-Based Multiplexer and Full Adder Circuits for Ultra Low Power Applications | Nemali Sai Kiran (National Institute of Technology Delhi); Sandeep Kumar (NIT Delhi) |
| 10. | 451 | Design and Verification of High-Speed, Low-Power Flash ADC for Mixed Signal Applications | Kapaka Ajay Kumar (Student); Aijaz M Zaidi (National Institute of Technology, Jalandhar); Balwinder Raj (NIT Jalandhar). |



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VLSI Technology and Embedded System: Session III: (August 09, 2024; 2:30 PM – 5:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|--|--|
| 1. | 483 | Real Time Video Processing Using Polar Fire FPGA. | Ujjwal kumar (NIT Jamshedpur); Mrutyunjay Rout (NIT Jamshedpur); Aditya Sashank Palipudi (Manager Microchip Technology Hyderabad). |
| 2. | 489 | Impact of the Variation of Density on Cs ₂ CuBiCl ₆ Based Solar Cell. | Vishal Yadav; Rahul Pandey; Nikhil Shrivastav (Chitkara University, Punjab). |
| 3. | 490 | Examination of the Total Defect Density and Thickness of CIGS Based PV cell through the SCAPs-1D | Vishal Yadav; Rahul Pandey; Nikhil Shrivastav (Chitkara University, Punjab) |
| 4. | 492 | ASIC Implementation of FIR filter using 16x16 Hybrid Vedic-Dadda multiplier for ECG-Denoising | Jayanth Mahankali Kumar; Sankula Srinagasai Venkata durga Prashad; Bhavana Bai Sabhavath; Kishore Kumar Gundugonti; Chinnapurapu Naga Raghuram (VR Siddhartha Engineering College) |
| 5. | 494 | MOSFET based different structures for Hydrogen gas sensor applications: a review | Shiv Shankar Yadav (Delhi Technological University Delhi)*; Sachin Dhariwal (DTU Delhi); Sonam Rewari (Delhi Technological University) |
| 6. | 509 | Design of Canonical Huffman Encoder in VLSI for Data Compression. | Ewins Pon Pushpa S; Jayasree T; Pavithra P; Mariammal K; Pushpalatha V; Sittalatchoumy R (Anna University) |
| 7. | 521 | A literature review on the Advancements in Hybrid Perovskite Solar Cells. | Anuradha Baghel (Narain College, Shikohabad); Digpratap Singh (Narain College, Shikohabad); Ankur Kumar (Indian Institute of Information Technology Una) |
| 8. | 539 | Efficient Chip Design of Penta Linear Array Charge Coupled Device (CCD). | Kreena Desai (Pandit Deendayal Energy University); Ayush Kumar (SAC, ISRO); Amit Kumar (Pandit Deendayal Energy University) |
| 9. | 543 | Dynamic Characterization of Proposed SRAM Cell At 16nm Technology. | Gaurav Dhiman; Anubhav Shukla; Shreshth Shrivastava; Sanaskar Saran; Dr. Gurjinder Singh (DIT University). |
| 10. | 545 | Design and Analysis of 16-bit Modified Vedic Multiplier. | Kavita (UIET, Panjab University, Chandigarh); Arvind Kumar (UIET, Panjab University, Chandigarh). |
| 11. | 79 | FPGA-Optimized Asymmetrical and Symmetrical Six-Term Karatsuba Multipliers | Raushan Maharana, Sourabh Kumar Singh, Arghya Roy, Monalisa Das, Babita Jajodia (Indian Institute of Information Technology Guwahati) |



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| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|--|---|
| 1. | 547 | Evaluation of Power, Thermal, and Temperature Considerations in FPGA-Based Shift Register Circuits. | Gurdeep Singh (Chitkara University); Amanpreet Kaur (Chitkara University) |
| 2. | 606 | Minimizing Leakage Current & Ground Rail Fluctuations in 1-Bit 8T Full Adder Circuit using MTCMOS Techniques | Yash Pathak (NIT Delhi); Dharmendra Kumar Jhariya (NIT Delhi) |
| 3. | 615 | Generic Parametrized Cell Design Methodology for Analog and Mixed-Signal Circuits. | Jyoti Gautam (Dr. B. R. Ambedkar National Institute of Technology); Vishal sao (STMicroelectronics); Aijaz M Zaidi (National Institute of Technology, Jalandhar); Balwinder Raj (NIT Jalandhar) |
| 4. | 631 | Comparative Analysis of 12-nm Gate-all-Around Vertically Stacked Nanosheet Field Effect Transistor for High-k Gate oxide Dielectrics | Kanchan Saini (NIT Hamirpur); Vinod Kumar (NIT Hamirpur). |
| 5. | 398 | A Comprehensive Evaluation of Schmitt Trigger Designs in 90nm CMOS Technology | Sahil Saurabh, Manisha Bharti, Neha Paras (NIT Delhi) |



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VLSI Technology and Embedded System: Session V: (August 10, 2024; 10:00 AM – 12:30 PM)

| S. No. | Paper ID | Title of the Paper | Authors and Organization |
|--------|----------|---|---|
| 1. | 605 | Comparative Analysis of Machine Learning Algorithms for Los/NLOS Identification | Prachi Agarwal (NIT Delhi); Rohit Kumar (NIT Delhi); Dharmendra Kr. Jhariya (NIT Delhi); Mahesh K. Singh (NIT Delhi) |
| 2. | 401 | Low Power and High-Speed Current Mirror-Based Level Shifter in Sub-Threshold Regime | Kiran Kumar Kuna (National Institute of Technology DELHI); Manoj Kumar (National Institute of Technology DELHI). |
| 3. | 410 | A Low-Temperature Coefficient CMOS Voltage Reference for Wide Temperature Range | Komal Duggal (IGDTUW, NEW DELHI); Rishikesh Pandey (Thapar Institute of Engineering and Technology); Vandana Niranjana (IGDTUW, NEW DELHI). |