



**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 <sup>th</sup> Floor, Administrative Building	<b>Inauguration</b>	
		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 <sup>th</sup> Floor, Administrative Building	High Tea	
12:00 Noon – 1:15 PM	Main Auditorium 5 <sup>th</sup> Floor, Administrative Building	<b>Key Note Address 1</b> (Session Chair: Dr. Manisha Bharti) <b>Prof. Sudeb Dasgupta</b> , 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	<b>Technical Sessions (Afternoon Sessions)</b>		
	Main Auditorium 5 <sup>th</sup> Floor, Administrative Building	<b>Communication Systems and Networks: Session I</b> <i>Session Chairs:</i> 1. Dr Poonam Arora, NPL Delhi and Dr. Malti Puri, KCET, Amritsar 2. Dr. Nitin Singha, NIT Delhi	<b>Offline Presentations:</b> Paper IDs: 264, 288, 304, 363, 484 <b>Online Presentations:</b> Paper IDs: 31, 93, 102 <b>Student Coordinators:</b> Mr. Kamal Singh Ms. Seema Devi
	Committee Room 5 <sup>th</sup> Floor, Administrative Building	<b>Signal Processing and Applications: Session I</b> <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	<b>Offline Presentations:</b> Paper IDs: 18, 59, 468 <b>Online Presentations:</b> Paper IDs: 40, 64, 99, 161, 169. <b>Student Coordinators:</b> Mr. Amit Kumar Ms. Arathy Rajeev
	Committee Room 4 <sup>th</sup> Floor, Administrative Building	<b>VLSI Technology and Embedded Systems: Session I</b> <i>Session Chairs:</i> 1. Prof R K Sharma, NSUT, Delhi 2. Dr. D. Vaithiyanathan, NIT Delhi	<b>Offline Presentations:</b> Paper IDs: 25, 183 <b>Online Presentations:</b> Paper IDs: 80, 81, 147, 160, 217 <b>Student Coordinators:</b> Mr. Anuraj V Ms. Archana
	T&P Committee Room 3 <sup>rd</sup> Floor, Administrative Building	<b>Microelectronic Circuits and Systems: Session I</b> <i>Session Chairs:</i> 1. Prof. Jasdeep Kaur Dhanoa, IGDTUW, Delhi and Dr. Atul Agnihotri, KCET, Amritsar 2. Dr. Baljit Kaur, NIT Delhi	<b>Offline Presentations:</b> Paper IDs: 450, 538, 651, 591, 592 <b>Online Presentations:</b> Paper IDs: 111, 230, 325, 329, 344 <b>Student Coordinators:</b> Mr. Vibhash Choudhary Ms. Nikita
5:00 PM – 5:30 PM	Terrace, 5 <sup>th</sup> Floor, Administrative Building	Tea Break	
5:30 PM – 6:15 PM		<b>Key Note Address 2</b> (Session Chair: Dr. Rikmantra Basu) <b>Prof. Guo En Chang</b> , 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 Session Chairs: 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 Session Chairs: 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 Session Chairs: 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 Session Chairs: 1. Prof Dinesh Kumar, DTU Delhi 2. 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 Session Chairs: 1.Prof. Vandana Niranjana, 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 Session Chairs: 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	<b>Communication Systems and Networks: Session II</b> <b>Session Chairs:</b> 1. Prof Sandeep Kumar, JNU Delhi 2. Dr. Sachin Agrawal, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 251, 272, 275, 290, 291, 296 <b>Student Coordinators:</b> Ms. Arathy Rajeev Mr. Mohan K Paswan
	Lab Room No. 122 (ECE) First Floor, Mini Campus Building	<b>Communication Systems and Networks: Session III</b> <b>Session Chairs:</b> 1. Dr Arati Jain, NSUT, Delhi 2. Dr. Dharmendra Jhariya, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 431, 441, 447, 510 <b>Student Coordinators:</b> Ms. Kritika Upadhyay Mr. Priyanshu Lakra
	Committee Room No. 101 (EE) First Floor, Mini Campus Building	<b>Signal Processing and Applications: Session II</b> <b>Session Chairs:</b> 1. Dr Ankur Kumar, IIIT Una/ Dr. Anuradha Chug, USICT, GGSIPU, Delhi 2. Dr. Mahesh Singh, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 242, 259, 273, 295, 297, 515. <b>Student Coordinators:</b> Mr. Hemant K Varshney Ms. Madhulika Verma
	Lab Room No. 206 (ECE) Second Floor, Mini Campus Building	<b>Signal Processing and Applications: Session III</b> <b>Session Chairs:</b> 1. Prof Dinesh Kumar DTU Delhi 2. Dr. Manish Verma, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 379, 408, 413, 429, 637, 644 <b>Student Coordinators:</b> Mr. Abhishek Upadhyay Ms. Roopam
	Lab Room No. 125 (ECE) First Floor, Mini Campus Building	<b>VLSI Technology and Embedded Systems: Session II</b> <b>Session Chairs:</b> 1. Prof. Vandana Niranjana, IGDTUW, New Delhi 2. Dr. Baljit Kaur, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 309, 376, 416, 421, 451, 302 <b>Student Coordinators:</b> Ms. Seema Devi Mr. Amit Kumar
	Committee Room No. 29 (AS) Ground Floor, Mini Campus Building	<b>Microelectronic Circuits and Systems: Session II</b> <b>Session Chairs:</b> 1. Prof. Akhilesh Mohan, IIT Roorkee Uttarakhand, India, and Prof. Suman Mann, GU, Greater Noida, U.P.	<b>Online Presentations:</b> Paper IDs: 476, 506, 511, 495 <b>Student Coordinators:</b> Ms. Nikita Mr. Ankur Mittal



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		2. Dr. Preeti Verma, NIT Delhi	
1:30 PM – 2:30 PM	ECE Department, First Floor, Mini Campus Building	<b>Lunch</b>	
	<b>Technical Sessions (Evening Sessions)</b>		
	Committee Room No. 126 (ECE) First Floor, Mini Campus Building	<b>Communication Systems and Networks: Session IV</b> <b>Session Chairs:</b> 1. Dr. Garima Shrivastava, NSUT Delhi 2. Dr. Dharmendra Jhariya, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 517, 525, 526, 529 <b>Student Coordinators:</b> Ms. Sakshi Mr. Hemant K Varshney
	Lab Room No. 122 (ECE) First Floor, Mini Campus Building	<b>Communication Systems and Networks: Session V</b> <b>Session Chairs:</b> 1. Dr. Ashish Payal, USICT, GGSIPU 2. Dr. Sachin Agrawal, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 626, 294, 252 <b>Student Coordinators:</b> Mr. Amit Kumar Ms. Kritika Upadhyay
	Committee Room No. 101 (EE) First Floor, Mini Campus Building	<b>Signal Processing and Applications: Session IV</b> <b>Session Chairs:</b> 1. Prof. Rahul Katarya, DTU, Delhi 2. Dr. Mahesh Singh, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 433, 458, 479, 508, 536, 553 <b>Student Coordinators:</b> Mr. Mohan K Paswan Ms. Madhulika Verma
	Lab Room No. 206 (ECE) Second Floor, Mini Campus Building	<b>VLSI Technology and Embedded Systems: Session III</b> <b>Session Chairs:</b> 1. Prof. Poornima Mittal, DTU Delhi 2. Dr. Preeti Verma, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 483, 489, 490, 492, 494, 509 <b>Student Coordinators:</b> Mr. Abhishek Upadhyay Ms. Nidhi Yadav
	Lab Room No. 125 (ECE) First Floor, Mini Campus Building	<b>VLSI Technology and Embedded Systems: Session IV</b> <b>Session Chairs:</b> 1. Dr. Deva Nand, DTU Delhi 2. Dr. Manish Verma, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 547, 606, 615 <b>Student Coordinators:</b> 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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Day - 2: August 09, 2024 (Friday)			
4:30 PM – 5:30 PM	Committee Room No. 126 (ECE) First Floor, Mini Campus Building	<b>Communication Systems and Networks: Session IV</b> <i>Session Chairs:</i> 1. Dr. Garima Shrivastava, NSUT Delhi 2. Dr. Dharmendra Jhariya, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 559, 610, 611, 612 <b>Student Coordinators:</b> Ms. Sakshi Mr. Hemant K Varshney
	Lab Room No. 122 (ECE) First Floor, Mini Campus Building	<b>Communication Systems and Networks: Session V</b> <i>Session Chairs:</i> 1. Dr. Ashish Payal, USICT, GGSIPU. Delhi 2. Dr. Sachin Agrawal, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 276, 293, 338 <b>Student Coordinators:</b> Mr. Amit Kumar Ms. Kritika Upadhyay
	Committee Room No. 101 (EE) First Floor, Mini Campus Building	<b>Signal Processing and Applications: Session IV</b> <i>Session Chairs:</i> 1. Prof. Rahul Katarya, DTU, Delhi 2. Dr. Mahesh Singh, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 594, 604, 620, 621, 632, 240 <b>Student Coordinators:</b> Mr. Mohan K Paswan Ms. Madhulika Verma
	Lab Room No. 206 (ECE) Second Floor, Mini Campus Building	<b>VLSI Technology and Embedded Systems: Session III</b> <i>Session Chairs:</i> 1. Prof. Poornima Mittal, DTU Delhi 2. Dr. Preeti Verma, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 521, 539, 543, 545, 79, 401 <b>Student Coordinators:</b> Mr. Abhishek Upadhyay Ms. Nidhi Yadav
	Lab Room No. 125 (ECE) First Floor, Mini Campus Building	<b>VLSI Technology and Embedded Systems: Session IV</b> <i>Session Chairs:</i> 1. Dr. Deva Nand, DTU Delhi 2. Dr. Manish Verma, NIT Delhi	<b>Online Presentations:</b> Paper IDs: 631, 398 <b>Student Coordinators:</b> 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)**

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



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Day - 3: August 10, 2024 (Saturday)			
11:30 AM – 12:30 PM	Main Auditorium 5 <sup>th</sup> Floor, Administrative Building	<b>Communication Systems and Networks: Session VI</b> <i>Session Chairs:</i> 1. Prof. Rashmi Gupta, NSUT, Delhi 2. Dr. Nitin Singha, NIT Delhi	<b>Offline Presentations:</b> Paper IDs: 552, 597, 638, 641 <b>Student Coordinators:</b> Mr. Vibhash Choudhary Ms. Nikita
	Committee Room 5 <sup>th</sup> Floor, Administrative Building	<b>Signal Processing and Applications: Session V</b> <i>Session Chairs:</i> 1. Prof. Virendra Prasad Vishwakarma, USICT, GGSIPU, Delhi 2. Dr. Sandeep Kumar, NIT Delhi	<b>Offline Presentations:</b> Paper IDs: 389, 647 <b>Student Coordinators:</b> Mr. Priyanshu Lakra Ms. Seema Devi
	Committee Room 4 <sup>th</sup> Floor, Administrative Building	<b>VLSI Technology and Embedded Systems: Session V</b> <i>Session Chairs:</i> 1. Prof. Manju Khare, JNU, Delhi 2. Dr. D Vaithiyanathan, NIT Delhi	<b>Offline Presentations:</b> Paper IDs: 410, 605 <b>Student Coordinators:</b> Mr. Ankur Mittal Ms. Kritika Upadhyay
12:30 PM – 1:30 PM	Main Auditorium 5 <sup>th</sup> Floor, Administrative Building	<b>Valedictory Session:</b>	
		12:30 PM – 12:35 PM	Welcome Address
		12:35 PM – 12:45 PM	Felicitations 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	Terrace, 5 <sup>th</sup> 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 <sub>2</sub> ) 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 <sub>3</sub> 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).



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7.	376	Safe Route - IoT and AI-based Fire Evacuation System for Smart Buildings	Prajwal H Kuchewar; Chetan N Aher; Atharva Achrekar; 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 <sub>2</sub> CuBiCl <sub>6</sub> 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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**VLSI Technology and Embedded System: Session IV: (August 09, 2024; 2:30 PM – 5:30 PM)**

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).