4TH IEEE CONFERENCE ON INFORMATION AND COMMUNICATION TECHNOLOGY, CICT 2020
The Annual Flagship Conference Jointly Organized by the MoE Funded IIITs

December 3 – 5, 2020

Hosted online by IIITDM KANCHEEPURAM

TECHNICAL PROGRAM SCHEDULE

Day 1: Thursday, 3rd December 2020

Technical Session 1 (09:00 AM – 11:00 AM)
Session 1A: Signal, Image and Video Processing
Session 1B: Artificial Intelligence and Machine Learning
Session 1C: Next Generation Communication Technologies

Networking Break (11:00 AM – 11:30 AM)

Technical Session 2 (11:30 AM – 01:00 PM)
Session 2A: CoVID-19 Technologies and Data Analysis
Session 2B: Internet of Everything and Wireless Sensor networks

Lunch Break (01:00 PM – 02:00 PM)

Inaugural Ceremony (02:00 PM – 03:00 PM)

Inaugural Keynote Address (03:00 PM – 04:30 PM)
5G and The Internet of Skills
Prof. Mischa Dohler, Chair Professor of Wireless Communications, Fellow of the Royal Academy of Engineering, the Royal Society of Arts, IEEE and IET, King's College London.

Networking Break (04:30 PM – 05:30 PM)

Day 2: Friday, 4th December 2020

Keynote Address (09:00 AM-10:30 AM)
On The Process of Making Breakthroughs in Engineering
Prof. Thomas Kailath, Hitachi America Professor of Engineering, Dept. of Electrical Engineering, Stanford University, USA.

Networking Break (10:30 AM – 11:00 AM)

Technical Session 3 (11:00 AM – 01:00 PM)
Session 3A: Artificial Intelligence and Machine Learning
Session 3B: Next Generation Communication Technologies
Session 3C: PhD Track

Lunch Break (01:00 PM – 02:00 PM)

Technical Session 4 (02:00 PM – 03:00 PM)
Session 4A: Signal, Image and Video Processing
Session 4B: Circuits and Systems for Signal and Data Processing
Session 4C: Photonics and Optical Systems

Industry Forum Plenary Talk (03:00 PM - 04:30 PM)
Potent Cocktail of UX + AI **Mr. Narendra Ghate**, Chief Designer, Tata Elxsi

Networking Break (04.30 PM – 05.30 PM)

Day 3: Saturday, 5th December 2020

Technical Session 5 (09:00 AM – 10:00 AM)
Session 5A: Digital security and Information Privacy
Session 5B: ICT in Robotics and Automation
Session 5C: Signal, Image and Video Processing

Networking Break (10:00 AM – 10:30 AM)

Industry Forum Panel Discussion (10:30 AM – 12:00 NOON)
Impact of 5G on IIoT and Digital Transformation in Indian Manufacturing *Panelists:* • Mr. Abhik Chatterjee, MD, Centre for Digital in Oil and Gas and Industrial Goods, BCG India • Mr. Chandrasekar VR, Head of Dgital Transformation, JK Fenner • Mr. Eashwar Prasad, Head-BSS Presales, Ericsson India *Moderators*: Dr. Sudhir Varadarajan and Dr. Anand Lakshmanan

Technical Session 6 (12:00 NOON – 01:00 PM)
Session 6A: Artificial Intelligence and Machine Learning
Session 6B: Bio Inspired Computing and Neural Networks
Session 6C: Photonics and Optical Systems

Lunch Break (01:00 PM – 02:00 PM)

Valedictory Keynote Address (02:00 - 03:30 PM)
India's Ascent up the 5G Ladder **Prof. Kiran Kumar Kuchi**, Professor, Department of Electrical Engineering, IIT Hyderabad

Networking Break (03.30 PM – 04.00 PM)

Valedictory Function (04:00 – 05:00 PM)

CICT 2020 Paper Presentation Schedule

Paper ID	Title	Authors	Institute	Session
050	Selective Image Watermarking through Normalized Principal Components	Sangeetha N, Anita X and Vijayarajan Rajangam	Vellore Institute of Technology Chennai	1A
051	Efficient Implementation for 3-Parallel Linear-Phase FIR Digital Odd Length Filters.	K. Anjali Rao, Abhishek Kumar and Neetesh Purohit	IIIT Allahabad	1A
092	Representative Primary Capsule in Capsule Network Architecture for Fast Convergence	Eashan Dash, Mercy Faustina J and Sivaselvan B	IIITDM Kancheepuram	1A
098	FRI Signal Reconstruction using Residual Neural Networks	Pokala Sudhakar Reddy, A Premkumar, B Saikiran, B S Raghavendra and A V Narasimhadhan	NIT Surathkal	1A
101	A Data-Driven Weighted LP Method for Formant Estimation	R. Sudharshan and C.S. Ramalingam	IIT Madras	1A
112	GCN embedded with Polynomial Aggregation Function for Group Activity Recognition	Panchal Raj Hemantkumar, Tanvi Gupta, Anjali Vashisth, Prithvi Chintha, Aayush Vijay Wargiya, Mathew Gigi George, Meyga Anne Alexander and Swathi Jamjala Narayanan	Vellore Institute of Technology Vellore	1A
023	Regression based robotic grasp detection using Deep learning and Autoencoders	Pragya Goyal, Priya Shukla and G. C. Nandi	IIIT Allahabad	1B
025	Fake News Detection: a comparison between available Deep Learning Techniques in Vector Space	Lovedeep Singh	Punjab Engineering College	1B
026	Gauging attention of students in an e-learning environment	Abhishek Revadekar, Shreya Oak, Aumkar Gadekar and Pramod Bide	Sardar Patel Institute of Technology	1B
027	Study of Prevention of Mode Collapse in Generative Adversarial Network (GAN)	Bhagyashree, Vandana Kushwaha and G. C. Nandi	IIIT Allahabad	1B
030	A Novel Underwater Image Enhancement Technique	Hema Krishnan, Anjana A Lakshmi, Anamika L.S, Athira C.H, Alaikha P.V and Manikandan V.M	Federal Institute of Science and Technology Angamaly	1B
033	ANN-PSO Approach on Logistic Model based Software Reliability Prediction	Manjubala Bisi	NIT Warangal	1B
014	Effects of Antenna Radiation Pattern on Airborne SAR Imaging with Sufficient Cyclic Prefix-OFDM	Gaurav Sharma and Arockia Bazil Raj	Defence Institute Of Advanced Technology Pune	1C
037	An Improved Model for Dynamic Opinion Updates in Online Social Networks	Ankana Sonowal, Alekhya Idupulapati, Dileep Booravalli, Priyanka Parimi and Rashmi Ranjan Rout	NIT Warangal	1C
054	Power and rate adaptation in the presence of Bernoulli-Gaussian modeled impulsive interference	Sudharsan Parthasarathy and Radha Krishna Ganti	NIT Trichy	1C
072	Design of a Circularly Polarized Textile Antenna For RF Energy Harvesting	Sandeep Kiran Vattiprolu, Prerna Saxena and Anveshkumar Nella	Vellore Institute of Technology Bhopal	1C
080	Outage Analysis of Downlink Non-Orthogonal Multiple Access Scheme Over Rician Fading Channel	K Srinivasarao and M Surendar	NIT Puducherry	1C
083	Outage Analysis of Uplink NOMA Based FD Decode-and-Forward Cooperative Relay System	Shailendra Singh and Matadeen Bansal	PDPM IIITDM Jabalpur	1C
031	COWAR: An Android Based Mobile Application to Help Citizens and COVID-19 Warriors	Tarun Saxena, Prince Anuragi, Gandhali Shinde, Nitesh Yadav and Dr. Mayuri Digalwar	IIIT Nagpur	2A
068	A Comparative Study of Machine Learning Models for COVID-19 prediction in India	Vartika Bhadana, Anand Singh Jalal and Pooja Pathak	GLA University, Mathura	2A
105	Design and Simulation of an Automated Guided Vehicle through Webots for Isolated COVID-19 Patients in Hospitals	Meenakshi Prabhakar, Valenteena Paulraj, Joshuva Arockia Dhanraj, Seenu Nagarajan, Dhusyant Arumukam Karthi Kannappan and Adithyaa Hariharan	Hindustan Institute of Technology and Science	2A
124	Ensemble Model for COVID-19 detection from chest X-ray scans using image segmentation, fuzzy color and stacking approaches	Utkarsh Agrawal, Saksham Tewari, Siddharth Verma, Dr. Sunil Kumar and Dr. Jeevaraj S	ABV-IIITM Gwalior	2A
132	A time-delay SEAIR model for COVID-19 spread	Madhab Barman and Nachiketa Mishra	IIITDM Kancheepuram	2A
034	LoRaWAN Based Secured Water Leak Monitoring System	Suryaa Kasthurisamy Selvaraj, Vigneshwaran S and Sujatha Rajkumar	Vellore Institute of Technology Vellore	2B
088	Novel Wearable Device for Health Monitoring and Tracking of Soldiers Based on LoRa Module	Yashash Jain, Bhupesh Soni, Ayush Goyal and Chetna Sharma	IIIT Kota	2B
145	Cognitive based Device Recommendation (CDR) model for Social Internet of Things	Subash Rajendran and Jebakumar R	SRM Institute of Science and Technology	2B
035	CNN-BPSO Model for Multi Classification of Tweets	Manjubala Bisi, Ankam Divija, Sowmya Namala and Rohan Sarap	NIT Warangal	3A
069	Parkinson's Disease Detection Using Multiple Speech Signals	Vishnu Priya Thoguru, Shoba Sivapatham and Asutosh Kar	IIITDM Kancheepuram	3A
070	Development of Adaptive Sampling Based strategy for Human Activity Predictions Using Sequential Networks	Gaurav Kumar Yadav and G.C. Nandi	IIIT Allahabad	3A
076	Real-time RFID- based item tracking using IoT & efficient inventory management using Machine Learning	Manaswini Mohapatro and Ayaskanta Mishra	Kalinga Institute of Industrial Technology Bhubhaneswar	3A

116	Web Powered CT Scan Diagnosis for Brain Hemorrhage using Deep Learning	Nachiketa Hebbar, Hemprasad Yashwant Patil and Kardam Agarwal	Vellore Institute of Technology Vellore	3A
119	Near Infrared Face Recognition using End to End Light Convolution Neural Network	Nilu R Salim, Umarani Jayaraman, Srinivasaraghavan Sundar, Tejas Sivan and Kongathi Mythri	IIITDM Kancheepuram	3A
022	Comparative Study of RF Energy Harvesting With Dielectric Resonator and Microstrip Patch Antenna	Sachin Agrawal, Ravi Dutt Gupta and Manoj Singh Parihar	NIT Delhi	3B
084	Quad Elements Dual Band MIMO Antenna for Advanced 5G Technology	Sanjukta Nej and Anumoy Ghosh	NIT Mizoram	3B
085	On Performance of Downlink NOMA with Equal Gain Combining over κ-μ Fading Channel for limiting value of κ	Priyank Sharma, Atul Kumar and Matadeen Bansal	PDPM IIITDM Jabalpur	3B
089	Co-Channel Interference Suppression for Cellular-Connected UAV using NOMA	Rochak Jain, Aditya Trivedi and Aishwarya Gupta	ABV-IIITM Gwalior	3B
090	OFDM Ensemble Autoencoder Using CNN and SPSA for End-to-End Learning Communication Systems	K Mohammed Asif and Aditya Trivedi	ABV-IIITM Gwalior	3B
091	COMPACT TRIPLE-BAND METAMATERIAL ABSORBER FOR RF ENERGY HARVESTING	John Paul, Shobha Rekh and Lancylet Sibiya	Karunya Institute of Technology and Sciences	3B
095	Design and Analysis of a 5G Electromagnetic Shielding Structure Using Teaching Learning Based Optimization	Varun Chaudhary, Ravi Yadav and Ravi Panwar	PDPM IIITDM Jabalpur	3B
107	A Wideband Folded Dipole RFID Tag with Improved Impedance Matching Technique	Krishna Mazumder and Anumoy Ghosh	NIT Mizoram	3B
P03	Streaming Data Classification using Hybrid Classifiers to tackle Stability-Plasticity Dilemma and Concept Drift	Amutha A L, Annie Uthra R, Preetha Rosleyn J, Golda Brunet	SRM Institute of Science and Technology	3C
P05	Face Recognition in the Dark: A Unified Approach for NIR- VIS and VIS- NIR Face Matching	Nilu R Salim, Srinath V, Umarani J	IIITDM Kancheepuram	3C
P06	Some Classical Problems on $K_{1,3}$-free Split Graphs.	Mohanapriya A, Ch. V. Praveena, P. Renjith, N. Sadagopan	IIITDM Kancheepuram	3C
P07	Convolutional neural network for classification of multiple sleep stages from dual-channel EEG signals	Santosh Kumar Satapathy, D Loganathan, Praveena Narayanan	Pondicherry Engineering College	3C
P11	On Cubic Chordality four Graphs	Mahendra Kumar.R, Devrishi Aggarwal, Shwet Prakash, N Sadagopan	IIITDM Kancheepuram	3C
P12	Mitigation on the Impact of Electric Vehicle Charging Stations in the Radial Distribution System	Moupuri Satish Kumar, K Selvajyothi	IIITDM Kancheepuram	3C
115	Face mask detection using MobileNet and Global Pooling Block	Isunuri B Venkateswarlu, Jagadeesh Kakarla and Shree Prakash	IIITDM Kancheepuram	4A
118	A Bioinformatic Method Of Semi-GlobalAlignment For Query-By-Humming	Shivangi Ranjan and Vipul Arora	IIT Kanpur	4A
120	Synthetic Aperture Ultrasound Imaging	Snigdha Dange	VNIT Nagpur	4A
123	MitrApp: An Intelligent Recommendation System For Counselling	Santosh Kumar Uppada, Dani Prakash Esukapalli and Sivaselvan B	IIITDM Kancheepuram	4A
093	Energy Efficient Hardware Architecture for Matrix Multiplication	Shanmugakumar M, S M Srinivasavarma Vegesna and Noor Mahammad S	IIITDM Kancheepuram	4B
127	A Novel High Performance Universal Measurement Logic Element	Dr. Shanmugakumar M, Dr. Noor Mahammad Sk and Dhayalakumar M	IIITDM Kancheepuram	4B
154	Design and Analysis of Multilevel Current Charging for Electric Vehicles	Chandrasekaran R, Srivani A, Dr. Raja B and Dr. Selvajyothi K	IIITDM Kancheepuram	4B
003	Effect of magnesium fluoride buffer on PdY alloy coated Side-Polished Optical Fiber Hydrogen Sensor	Mukesh Pratap Singh and Santosh Kumar Chaurasia	ABES Engineering College Ghaziabad	4C
029	Exploiting the non-uniform characteristics of Silicon photodiode in vibration monitoring	T Santhanakrishnan, Honey Devassy and Chandrakanta A. S	Federal Institute of Science and Technology Angamaly	4C
038	Vertical Grating Coupler for Efficient Chip to Fiber Coupling in Silicon Photonics Technology	Anamika Singh	VNIT Nagpur	4C
064	2 x 4 90 degree Hybrid based Stokes Vector Receiver for Silicon Photonic Integrated Circuits	Riddhi Mudaliar and Anamika Singh	VNIT Nagpur	4C
055	Comparison of SVM and Random Forest Methods for Online Signature Verification	Leetesh Meena, Vijay Kumar Chaurasiya, Neetesh Purohit and Sujit Sangram Sahoo	IIIT Allahabad	5A
057	A Reversible Data Hiding Scheme in Encrypted Images by Controlled Pixel Modification	Jagruth K and Manikandan V M	SRM University AP	5A
117	TU Malware Dataset Generation and Evaluation	Parthajit Borah, Dhruba Kumar Bhattacharyya and Jugal Kalita	Tezpur University	5A
142	Improving DGA-Based Malicious Domain Classifiers for Malware Defense with Adversarial Machine Learning	Ibrahim Yilmaz, Ambareen Siraj and Denis Ulybyshev	Tennessee Tech University, USA	5A
049	A novel volume decomposition methodology for Multi-Robots Collaborative Additive Manufacturing	Madhanagopal Manoharan, Aditya Navghare Sridhar, Vivek Yadav Vinod and Senthilkumaran Kumaraguru	IIITDM Kancheepuram	5B

CICT 2020 Paper Presentation Schedule

131	A Close Look at Software Design Aspects of Remotely Operated Vehicles - A Survey	Sourjyadip Ray, Rahil Bhowal, Purvik Patel and Annapurani Panaiyappan K.	SRM Institute of Science and Technology	5B
134	Brain Age Estimation using PCA and PLS components for Healthy controls	Shiwangi Mishra and Pritee Khanna	PDPM IIITDM Jabalpur	5C
144	Automatic Artifact Removal from EEG Signals using W-MOBICA	Banu Priya Prathaban and Ramachandran Balasubramanian	SRM Institute of Science and Technology	5C
147	Experimental Study and Analysis of Low Frequency Signal Characteristics for UWA Communication in Bay of Bengal	Logeshwaran Rajasekaran and Sakthivel Murugan Santhanam	Anand Institute of Higher Technology Chennai	5C
148	Reflectional and Rotational Symmetry Detection of CAD Models Based on Point Cloud Processing	Rajkumar Gothandaraman and Sreekumar Muthuswamy	IIITDM Kancheepuram	5C
106	Device aware VoD Services with Bicubic Interpolation Algorithm on Cloud	Venkata Naga Rani Bandaru, Dr. Usha Kiruthika S and Rajasekaran Govindaraj	Easwari Engineering College Chennai	6A
126	X-ray Imaging Based Pneumonia Classification using Deep Learning and Adaptive Clip Limit based CLAHE Algorithm	Pratik Patil and Hemprasad Patil	Vellore Institute of Technology Vellore	6A
149	Reinforcement Learning based Path Planning of Mobile Agents with Constrained Locomotion for Material Handling Applications	Satheeshkumar Veeramani and Sreekumar Muthuswamy	IIITDM Kancheepuram	6A
108	Convolutional Neural Net based Dementia and Tumour Classification from MRI Brain Images	Aakash Varma Nadimpalli, Abhilash Srivastava and Ruban Nersisson	Vellore Institute of Technology Vellore	6B
150	A simple PSTDP ciruit for Analog Implementation of Spiking Neural Networks	Ippili Satyaraj and Binsu Kailath	IIITDM Kancheepuram	6B
153	A Novel Modified U-shaped 3-D Capsule Network (MUDCap3) for Stroke Lesion Segmentation from Brain MRI	Subin Sahayam, Abirami A and Umarani Jayaraman	IIITDM Kancheepuram	6B
066	Performance Analysis of Indoor Visible Light Communication System with Angle Diversity Transmitter	Vipul Dixit and Atul Kumar	PDPM IIITDM Jabalpur	6C
096	Improvement in Sensitivity of Single-Fiber MZI by Exploiting Non-reciprocal Phase Shift in Fiber Loop Mirror	N N Subhashree Ojha and Naveen Kuamr	IIITDM Kancheepuram	6C
111	Self-Homodyne Coherent Optical Communication System – A Review	Mansi Fulzele, Anamika Singh and Avinash Keskar	VNIT Nagpur	6C