

**2024 IEEE DISCOVER - 8th IEEE International Conference on  
Distributed Computing, VLSI, Electrical Circuits and Robotics  
October 18-19, 2024**

**PROGRAM SCHEDULE**

**Friday, 18-10-2024**

<b>9:00 AM – 9:45 AM</b>	<b>Registration and Breakfast</b>
<b>9:45 AM – 10:45 AM</b>	<b>Inauguration of 2024 IEEE DISCOVER</b> Venue: Kalam Auditorium, 5 <sup>th</sup> Floor, Academic Block II
<b>10:45 AM – 11:30 AM</b>	<b>Keynote Address-1: Dr C P Ravikumar</b> , Director of Technical Talent Development at Texas Instruments, India <b>Title: DISCOVERY of Technology - Past, Present and Future</b> Venue: Kalam Auditorium, 5th Floor, Academic Block II
<b>11:30 AM – 11:45 PM</b>	<b>Tea Break</b>
<b>11:45 AM – 01:15 PM</b>	<b>Paper Presentation</b> 1a: Track - Distributed Computing 1b: Track - Healthcare 1c: Track - Communication 1d: Track - VLSI
<b>01:15 PM – 02:00 PM</b>	<b>Lunch Break</b>
<b>02:00 PM – 03:00 PM</b>	<b>Panel Discussion: Role of Patents and Standards in Driving Innovation</b> Venue: Kalam Auditorium, 5 <sup>th</sup> Floor, Academic Block II Panel Members: <b>Mr Shailesh Praphu</b> , Technical Specialist at Nokia <b>Dr Purushothama Chippar</b> , Vice principal, SJEC <b>Mr Pranav Bhat</b> , IP Consulting Strategist, Lightspeed Photonics, Singapore Moderator: <b>Dr Vasudeva</b> , Chair, IEEE MSS
<b>03:00 PM – 03:15 PM</b>	<b>Tea Break</b>
<b>03:15 PM – 05:15 PM</b>	<b>Paper Presentation</b> 2a: Track - Distributed Computing 2b: Track - Healthcare 2c: Track – Electric and Electronic Circuits 2d: Track - Healthcare 2e: Track - Robotics
<b>05:15 PM – 06:00 PM</b>	<b>Break</b>
<b>06:00 PM – 07:00 PM</b>	<b>Cultural Programme</b> Venue: Kalam Auditorium, 5 <sup>th</sup> Floor, Academic Block II
<b>7:00 PM – 8:30 PM</b>	<b>Banquet Dinner</b>

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**PROGRAM SCHEDULE**

**Saturday, 19-10-2024**

<b>9:00 AM – 9:45 AM</b>	Breakfast
<b>9:45 AM – 10:45 AM</b>	<b>Keynote Address-2: Dr S K Ramesh</b> , Professor at California State University. <b>Title - Engineering the Future: Sustainable Development</b> Venue: Kalam Auditorium, 5th Floor, Academic Block II
<b>10:45 AM – 11:30 AM</b>	<b>Keynote Address-3: Mr Anindya Saha</b> , Tejas Networks <b>Title: Journey from Prototype to Standardization</b> Venue: Kalam Auditorium, 5 <sup>th</sup> Floor, Academic Block II
<b>11:30 AM -11:45 AM</b>	<b>Tea Break</b>
<b>11:45 AM – 1:30 PM</b>	<b>Paper Presentation</b> 3a: Track - Distributed Computing 3b: Track - Healthcare 3c: Track - VLSI 3d: Track - Distributed Computing
<b>1:30 PM – 2:30 PM</b>	<b>Lunch Break</b>
<b>2:30 PM – 3:30 PM</b>	<b>Keynote Address-4: Dr S D Madhu Kumar</b> Professor at National Institute of Technology Calicut. <b>Title: Cyber Security, Cyber Forensics, and the DPDP Act: Strengthening Data Protection in the Digital Age</b>
<b>3:45 PM – 4:30 PM</b>	<b>Valedictory</b> Venue: Kalam Auditorium, 5 <sup>th</sup> Floor, Academic Block II
<b>4:30 PM – 5:00 PM</b>	<b>High Tea</b>

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**Paper Presentation Schedule - Summary**

<b>Session 1a: Track - Distributed Computing</b>		
18-10-2024, 11:45 AM – 01:15 PM	Venue: Kalam Auditorium, 5 <sup>th</sup> Floor, Academic Block II	Paper IDs: 119, 126, 128, 157, 182
<b>Session 1b: Track - Healthcare</b>		
18-10-2024, 11:45 AM – 01:15 PM	Venue: Spoorthi Hall, 7 <sup>th</sup> Floor, Academic Block III	Paper IDs: 72, 115, 141, 144, 153, 156
<b>Session 1c: Track - Communication</b>		
18-10-2024, 11:45 AM – 01:15 PM	Venue: Prerana Hall, Ground Floor, Academic Block III	Paper IDs: 92, 122, 127, 142, 217
<b>Session 1d: Track - VLSI</b>		
18-10-2024, 11:45 AM – 01:15 PM	Venue: Fr. Fred Memorial Hall, Basement, Academic Block I	Paper IDs: 99, 149, 220, 248, 285

<b>Session 2a: Track - Distributed Computing</b>		
18-10-2024, 03:15 PM – 05:15 PM	Venue: SANJOSH TLC, 2 <sup>nd</sup> Floor, Admin Block	Paper IDs: 193, 209, 218, 227, 231, 310, 315
<b>Session 2b: Track - Healthcare</b>		
18-10-2024, 03:15 PM – 05:15 PM	Venue: Spoorthi Hall, 7 <sup>th</sup> Floor, Academic Block III	Paper IDs: 159, 163, 164, 166, 184, 188, 192
<b>Session 2c: Track – Electric and Electronic Circuits</b>		
18-10-2024, 03:15 PM – 05:15 PM	Venue: Prerana Hall, Ground Floor, Academic Block III	Paper IDs: 138,172,173,183,194,196,214,238
<b>Session 2d: Track - Healthcare</b>		
18-10-2024, 03:15 PM – 05:15 PM	Venue: Fr. Fred Memorial Hall, Basement, Academic Block I	Paper IDs: 223, 309, 240, 253, 308, 262, 263
<b>Session 2e: Track - Robotics</b>		
18-10-2024, 03:15 PM – 05:15 PM	Venue: Chinthana Hall, Near Placement Office, Basement, Admin Block,	Paper IDs: 49, 100, 160, 296

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<b>Session 3a: Track - Distributed Computing</b>		
19-10-2024, 11:45 AM – 1:30 PM	Venue: Kalam Auditorium, 5th Floor, Academic Block II	Paper IDs: 102, 143, 260, 267, 270, 281
<b>Session 3b: Track – Healthcare</b>		
19-10-2024, 11:45 AM – 1:30 PM	Venue: Spoorthi Hall, 7 <sup>th</sup> Floor, Academic Block III	Paper IDs: 158, 199, 239, 264, 272, 312, 319
<b>Session 3c: Track – VLSI</b>		
19-10-2024, 11:45 AM – 1:30 PM	Venue: Prerana Hall, Ground Floor, Academic Block III	Paper IDs: 154, 167, 278, 302, 324, 187
<b>Session 3d: Track - Distributed Computing</b>		
19-10-2024, 11:45 AM – 1:30 PM	Venue: Fr. Fred Memorial Hall, Basement, Academic Block I	Paper IDs: 230, 300, 318, 320, 322, 323

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**Paper Presentation Schedule**

<b>Session 1a: Track - Distributed Computing</b>		
18-10-2024, 11:45 AM – 01:15 PM	Venue: Kalam Auditorium, 5 <sup>th</sup> Floor, Academic Block II	Paper IDs: 119, 126, 128, 157, 182
<b>Session Chair 1: Dr Jeevitha B K, VCET Puttur</b>		
<b>Session Chair 2: Dr Sharmila Kumari, PACE Mangaluru</b>		
119 - Identifying Deceptive AI Reviews: A Machine Learning Approach		
126 - Securing Digital Media: Integrating Bitstream and DCT for Effective Image Watermarking		
128 - PreScienceMED: Leveraging Text Classification for Precise Disease Prediction		
157 - Bidirectional Communication System for Deaf blind Individuals		
182 - Data-Driven Beauty: Unleashing the Power of Deep Learning in Skincare		

<b>Session 1b: Track - Healthcare</b>		
18-10-2024, 11:45 AM – 01:15 PM	Venue: Spoorthi Hall, 7 <sup>th</sup> Floor, Academic Block III	Paper IDs: 72, 115, 141, 144, 153, 156
<b>Session Chair 1: Dr Mustafa Basthikodi, SCEM Mangalore</b>		
<b>Session Chair 2: Dr Ravichandra, MIT Mysore</b>		
72 - DentaGAN - Smart Dental Image Segmentation		
115 - Design and Development of a Device to Measure Tissue Strength in Experimental Animals		
141 - Review of Machine learning Approaches in the analysis of Cancer Tumor heterogeneity using Single-cell sequencing		
144 - Predictive Model of Early Ischemic Stroke in Diabetic Patients		
153 - Performance Analysis of Advanced Filtering Techniques for Removal of EEG Muscle Artifacts		
156 - Diabetic Retinopathy Detection From Retina Image Using Machine Learning		

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<b>Session 1c: Track - Communication</b>		
18-10-2024, 11:45 AM – 01:15 PM	Venue: Prerana Hall, Ground Floor, Academic Block III	Paper IDs: 92, 122, 127, 142, 217
<b>Session Chair 1: Dr Yashwanth N, MIT Manipal</b>		
<b>Session Chair 2: Dr Jennifer Charlotte Saldanha, SJEC Mangaluru</b>		
92 - Power Optimization Techniques During Synthesis And Physical Design For A Low-Power RISC-V Design		
122 - Implementation Of Digital Fir Filter Using Optimized Hybrid Arithmetic Unit		
127 - Improved Scan Chain Stitching For Reducing Test Power		
142 - Dual Phased-Write 7t Sram Cell		
217 - Design And Implementation Of 32-Bit RISC-V Processor Using Verilog		

<b>Session 1d: Track - VLSI</b>		
18-10-2024, 11:45 AM – 01:15 PM	Venue: Fr. Fred Memorial Hall, Basement, Academic Block I	Paper IDs: 99, 149, 220, 248, 285
<b>Session Chair 1: Dr Gurusiddhaya Hiremath, SCEM Mangalore</b>		
<b>Session Chair 2: Dr Gnane Swarnadh Satapathi, AJIET Mangalore</b>		
99 - Review if Communication Technologies used in Electric Vehicles		
149 - Behaviour-based Malware Detection for Resource-constrained IoT devices		
220 - AI controlled Smart IoT based Greenhouse Monitoring System		
248 - Seamless Attendance Monitoring with Face Recognition and RFID Technology		
285 - Non binary Polar Codes for Short Reach Optical System based on an Efficient Channel Model		

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<b>Session 2a: Track - Distributed Computing</b>		
18-10-2024, 03:15 PM – 05:15 PM	Venue: SANJOSH TLC, 2 <sup>nd</sup> Floor, Admin Block	Paper IDs: 193, 209, 218, 227, 231, 310, 315
<b>Session Chair 1: Dr Raghavendra S, MIT Manipal</b>		
<b>Session Chair 2: Dr Santhosh Kumar D K, SJEC Mangaluru</b>		
193 - DStruct: Handwritten Data Structure Problem Solving using Detectron2 and YOLO		
209 - Western Ghats Spatial Distribution Analysis in Goa State Boundary, India		
218 - Spatial Urban Change and Trend Analysis of Davanagere City Boundary between 2000 - 2020		
227 - Analysis of Spatial Changes in Jogimatti Forest Division, Karnataka, India between 2009-2022		
231 - SmartDefend - IOT Security using Machine Learning		
310 - Detecting Ransomware Threats Using Machine Learning Approach		
315 - Optimizing Botnet Detection in IoT Networks Feature Selection Analysis on the UNSW-NB15 Dataset		

<b>Session 2b: Track - Healthcare</b>		
18-10-2024, 03:15 PM – 05:15 PM	Venue: Spoorthi Hall, 7 <sup>th</sup> Floor, Academic Block III	Paper IDs: 159, 163, 164, 166, 184, 188, 192
<b>Session Chair 1: Dr Ashwini B, NMAMIT Nitte</b>		
<b>Session Chair 2: Dr Saumya Y M, SJEC Mangaluru</b>		
159 - Identification and Prediction of type of TB based on Drug Resistance Using Machine Learning		
163 - Listening to Feelings of Emotion: Exploring ML and DL for Speech-Based Detection and Classification		
164 - A Study on AI Applications for Orthodontics and Malocclusion Detection Approaches		

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166 - Advanced Deep Learning Model for Breast Cancer Detection via Thermographic Imaging
184 - An Approach in Prediction of Medicine Side Effects Using RNN Networks
188 - NurturHub : A Smart Maternal Health Monitoring Device For Post Partum Depression
192 - IoT-Based Heart Disease Monitoring Using Neural Networks For Detecting Arrhythmia And Assessing Hypertrophic Cardiomyopathy(Hcm) Risk

**Session 2c: Track – Electric and Electronic Circuits**

18-10-2024, 03:15 PM – 05:15 PM	Venue: Prerana Hall, Ground Floor, Academic Block III	Paper IDs: 138,172,173,183,194,196,214,238
<b>Session Chair 1: Dr Vinay Kumar Jadoun, MIT Manipal</b>		
<b>Session Chair 2: Dr Sanath Salalaya, SJEC Mangaluru</b>		
138 - A Systematic Study on the Intelligent Cyber Security for Smart Microgrid		
172 - Study of the Effect of Temperature and C-rate on Inductor based Active Cell Balancing for a Li-ion based Battery		
173 - Design and Implementation of Fly-back Converter		
183 - Analysis of PV system using iterative techniques for various R load conditions		
194 - Dynamic and Static Wireless Charging of EVs Using Solar Energy		
196 - Supercapacitor based STATCOM for Enhancing Power Quality in Grid-Connected Photovoltaic Systems		
214 - Performance study of 72V PMBLDC Motor in Light Electric Vehicles		
238 - IOT based Energy Efficient Smart Street Lighting Technique with Air Quality Monitoring		

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<b>Session 2d: Track – Healthcare</b>		
18-10-2024, 03:15 PM – 05:15 PM	Venue: Fr. Fred Memorial Hall, Basement, Academic Block I	Paper IDs: 223, 309, 240, 253, 308, 262, 263
<b>Session Chair 1: Dr Venugopala P S, NMAMIT Nitte</b>		
<b>Session Chair 2: Dr Sridevi Saralaya, SJEC Mangaluru</b>		
223 - Voice disorder detection and classification using machine learning techniques and feature selection methods		
309 - Prediction and Modelling of Suicidal Mental Tendencies		
240 - Alzheimer’s Disease Prediction Using Deep Learning		
253 - Diabetic Retinopathy Detection in Fundus Images Using Deep-Learned Features		
308 - Development of CheXNet-based Web Application to detect Pneumonia using Chest X-ray images		
262 - Machine Learning and Deep Learning for Knee Osteoarthritis Diagnosis: A Survey on Classification and Severity Grading		
263 - Paddy Care: Paddy disease identification and classification using Deep DenseNet Network		

<b>Session 2e: Track – Robotics</b>		
18-10-2024, 03:15 PM – 05:15 PM	Venue: Chinthana Hall, Near Placement Office, Basement, Admin Block	Paper IDs: 49, 100, 160, 296
<b>Session Chair 1: Dr Shreenath Acharya, SJEC Mangalore</b>		
<b>Session Chair 2: Dr Binu K G, SJEC Mangalore</b>		
49 - Real Time Object Detection And Tracking Using SSD Mobilenetv2 on Jetbot GPU		
100 - Smart Garbage Sorting System: Integrating Robotic Arm and Machine Learning for Segregation		
160 - Design and Development of a Hybrid Rocker-Bogie and Mecanum Wheels System for Robotic Mobility		
296 - Identifying Marine Algae Habitats: A Sea Water Classification Approach		

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<b>Session 3a: Track - Distributed Computing</b>		
19-10-2024, 11:45 AM – 1:30 PM	Venue: Kalam Auditorium, 5th Floor, Academic Block II	Paper IDs: 102, 143, 260, 267, 270, 281
<b>Session Chair 1: Dr Manoj Gadiyar, CEC Mangaluru</b>		
<b>Session Chair 2: Dr Hareesh B, SJEC Mangaluru</b>		
102 - Character Classification and Actor Recognition in Yakshagana Images Using Machine Learning Techniques and Facial Makeup Pattern Analysis		
143 - Assessing Variations in Water Quality Parameters: An Analysis of Variance Study for Environmental Monitoring		
260 - Enhancing Big Data Security through Anomaly Detection		
267 - Classification of Diseases in Vegetable Bearing Plants using Deep Learning Methods		
270 - Audio Dub Detection using Machine Learning		
281 - Multisport Dynamics Explored Through Advanced Activity Recognition Techniques in Athletic Performance		

<b>Session 3b: Track – Healthcare</b>		
19-10-2024, 11:45 AM – 1:30 PM	Venue: Spoorthi Hall, 7 <sup>th</sup> Floor, Academic Block III	Paper IDs: 158, 199, 239, 264, 272, 312, 319
<b>Session Chair 1: Dr Pushpalatha K, SCEM Mangaluru</b>		
<b>Session Chair 2: Dr Sunitha G, SJEC Mangaluru</b>		
158 - Predicting Bioactivity Using Chemical Fingerprint Models & Cell Morphology with Deep Neural Networks		
199 - Early Detection of Cardiovascular Disease Atrial Fibrillation		
239 - Detection of Brain Disorders using Ocular Responses		
264 - SegFormer-based Approach for Semantic Segmentation of Necrotic Tissues From Histopathology Images		

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272 - Classification of Social Anxiety Disorder using Explainable Machine Learning and Pearson's Correlation Technique
312 - Optimizing Human Activity Recognition for Precision in Yoga Practice Analysis
319 - Plant Health App: A Tool for Plant Enthusiasts

<b>Session 3c: Track – VLSI</b>		
19-10-2024, 11:45 AM – 1:30 PM	Venue: Prerana Hall, Ground Floor, Academic Block III	Paper IDs: 154, 167, 278, 302, 324, 187
<b>Session Chair 1: Dr Sathyanarayana S V, JNNCE Shimoga</b>		
<b>Session Chair 2: Dr Rohan Pinto, SJEC Mangaluru</b>		
154 - VLSI Implementation of Stochastic MAC unit for 2D convolution		
167 - Enhancing Voltage Amplification in FE-DE Heterostructure with Multiple Dielectrics		
278 - Lightweight ANU-II Implementation on FPGA		
302 - Low power single cycle RISC V processor for Biomedical Applications		
324 - IMPLEMENTATION OF HIGH SNM SRAM CELL AND TESTING IN 45 Nm CMOS LOGIC PROCESS		
187 - Low Power, High Accuracy Approximate Multiplier for Error-Resilient Image Processing Applications		

<b>Session 3d: Track - Distributed Computing</b>		
19-10-2024, 11:45 AM – 1:30 PM	Venue: Fr. Fred Memorial Hall, Basement, Academic Block I	Paper IDs: 230, 300, 318, 320, 322, 323
<b>Session Chair 1: Dr Radhakrishna Bhat, MIT Manipal</b>		
<b>Session Chair 2: Dr Shrisha H S, SJEC Mangaluru</b>		
230 - Gesture-Enhanced Presentation Control for Education		

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300 - Convolutional Neural Network based Approach for Automatic Detection of Diseases from Pomegranate Plants
318 - Forecasting Total Dissolved Solids to Predict Ground Water Quality using Machine Learning Techniques
320 - Data Mining And Identification Of Influencing Factors For Effective Load Forecasting Of A Substation Using Machine Learning Regressors
322 - Dynamic Surveillance : Integration of VGG and ResNET
323 - Automated Detection of Capuchinbird Calls in Tropical Forest Recordings Using Deep Learning-Based Spectrogram Analysis