

IEEE International Conference on Robotics and Mechatronics (ICRM 2025)

Organized by: **Humanitarian Technology (HuT) Labs**,

In association with: **Department of Electronics and Communication Engineering, Amrita
School of Engineering, Amritapuri Campus**

Day 1 – November 7th, 2025, Conference Agenda

Time	Activity	Venue
08:00 AM – 09:00 AM	Registration	Front Lobby
09:00 AM – 09:05 AM	Inviting the Guests to the Dias	Amriteswari hall
	Prayers and Lighting the lamp	Amriteswari hall
09:05 AM – 09:10 AM	Welcome Address by Dr. Rajesh Kannan Megalingam Director, Humanitarian Technology (HuT) Labs Head, SMART Centre, ACORD Center, Professor, ECE Department	Amriteswari hall
09:10 AM – 09:30 AM	Inaugural Address by Chief Guest Shri. Kannan Tajpur Sampath Chief Executive Officer Bio-WMS, Chennai - India	Amriteswari hall
09:30 AM – 09:35 AM	Video Presentation of Initiatives (HuT Lab, SMART, and ACCORD Centres)	Amriteswari hall
09:35 AM – 09:55 AM	Guest of Honour Address Shri. Ramanathan Srinivasan Managing Director Automotive Test Systems (ATS), Delhi - India	Amriteswari hall
09:55 AM – 10:05 AM	Benevolent Address by Swami Brahmachari Achyutamrita Chaitanya Principal, School of Spiritual & Cultural Studies Associate Professor, Philosophy Arts and Culture, Spiritual Studies	Amriteswari hall
10:05 AM – 10:15 AM	Distribution of AI-powered coconut-dehusking machines to the beneficiaries	Amriteswari hall



AMRITA
VISHWA VIDYAPEETHAM
DEEMED TO BE UNIVERSITY UNDER SECTION 3 OF UGC ACT, 1956



HuT Labs
Humanitarian Technology Labs



Time	Activity	Venue
10:15 AM – 10:20 AM	Felicitation I Dr. B. S. Manoj Chair (IEEE Kerala Section) Senior Professor and Associate Dean at the Indian Institute of Space Science and Technology (IIST), Trivandrum - India	Amriteswari hall
10:20 AM – 10:25 AM	Felicitation II Dr. Jyothi S. N. Associate Dean & HoS, School of Engineering, Amritapuri Campus - India	Amriteswari hall
10:25 AM – 10:30 AM	Felicitation III Dr. Remya Chairperson, Department of Electronics and Communication Engineering, School of Engineering, Amritapuri Campus - India	Amriteswari hall
10:30 AM – 11:00 AM	Tea Break	
11:00 AM – 01:00 PM	Keynote Session 1: Shri. Amal S Scientist F / Associate Director, Power Electronics Group, CDAC Trivandrum – India <i>Talk Title: Robotics and Mechatronics: Applications and Emerging Challenges</i> Keynote Session 2: Shri. Bharathi Raj Balasubramanian Country Head, LionsBot India Pvt Ltd , Chennai – India <i>Talk Title: Future of Service Robots</i> Keynote Session 3: Dr. B. S. Manoj Chair (IEEE Kerala Section), Senior Professor and Associate Dean, IIST, Trivandrum – India <i>Talk Title: Robotics: The Next Frontier of Human Possibility</i> Keynote Session 4: Shri. Balram Sankaran Scientist-G (Sr Grade) & CEO, TIMed, SCTIMST, Trivandrum – India <i>Talk Title: Bringing Innovation to Life and Giving Life to Innovation</i>	Amriteswari hall



Time	Activity	Venue
11:00 AM – 01:00 PM	Keynote Session 1: Shri. Amith Raman Co-Founder& CEO, Inker Robotics, Thrissur – India <i>Talk Title: Deep tech & Engineering Excellence: Driving India's Techade</i> Keynote Session 2: Shri. Ajith C B Pillai Director, Operations & Design, Panchatejas Innovations Pvt Ltd, Bengaluru – India <i>Talk Title: Aatmanirbhar Flightline: Human-Robot Synergy Powering India's Defence Aviation</i> Keynote Session 3: Dr. Rajesh Chandramohandas Scientist E-II, Division of Pathogen Biology, BRIC-Rajiv Gandhi Centre for Biotechnology (RGCB), Thiruvananthapuram - India Adjunct Associate Professor, Regional Centre for Biotechnology, New Delhi <i>Talk Title: Computational Frontiers in Infection Biology: AI and Robotics for Next-Gen Malaria Research</i> Keynote Session 4: Shri. Shaji Kumar Manager-Sustainable Agriculture , Parachute Kalpavriksha foundation , Coimbatore – India <i>Talk Title: Parachute Kalpavriksha Foundation and Farmers' Voices</i>	Acharya hall
01:00 PM – 02:00 PM	Networking Lunch	Annapoorneswari hall
02:00 PM – 02:30 PM	Keynote Session: Dr. Arun P Chair-IEEE RAS Kerala Chapter , Associate Professor and Head, Dept. of ECE, SJCT Palai, Kerala – India <i>Talk Title: Intelligent Mechatronic Systems for Biomedical Rehabilitation: Bridging Electronics and Human Recovery.</i>	Amriteswarri hall
	Keynote Session: Dr. Udaka Ayas Manawadu (Postdoctoral Researcher at the University of Aizu, Japan) <i>Talk Title: Robots in Harsh Environments: Insights from WRS 2025 and Future Research Directions</i>	Acharya hall

Time	Activity	Venue
02:30 PM – 03:30 PM	Paper Presentation Session 1: Paper ID: 240 Paper Title: Non-Cutting Dynamic Power Consumption and Vibration Characterization of a Custom Built Tabletop CNC Machine with a DC Spindle Motor Presenter: BALARAM DASH Paper ID: 65 Paper Title: Real-World Performance Analysis of a Proposed Deep Learning Framework Against Established Baselines Presenter: Balajee Maram Paper ID: 135 Paper Title: Joint Learning of Language Identification and Multilingual ASR Using Deep Neural Architectures Presenter: Nisha Madewaal	Shraddha Hall
	Paper Presentation Session 2: Paper ID: 398 Paper Title: Human-Centric, Low-Cost Smart Mobility Aid for Elderly and Differently-Abled Individuals in Assisted Living Environments Presenter: Kagitala Lakshmi Ramani Reddy Paper ID: 98 Paper Title: AI-Driven IoT System for Real-Time Elderly Safety and Threat Detection Presenter: P Jayanthi Paper ID: 134 Paper Title: ASIC Design of Median Filter for Digital Image Processing Applications Presenter: Pavan Prabhu	Amba Hall
02:30 PM – 03:30 PM	Paper Presentation Session 3: Paper ID: 95 Paper Title: Design, Analysis, and Prototyping of a Structurally Optimized Robotic Arm Through Topology Optimization Presenter: Uthraj M Paper ID: 132 Paper Title: Real-Time Perception and Planning for Human-Robot Collaboration over Shared Workspace Presenter: Durva Gaikwad Paper ID: 170 Paper Title: Webcam Based Teleoperation of Robotic Hand Presenter: Ganesh Roy	Classroom N202

Time	Activity	Venue
02:30 PM – 03:30 PM	Paper Presentation Session 4: Paper ID: 150 Paper Title: Branch Prediction Using Reinforcement Learning Presenter: Abhinav Nair Paper ID: 173 Paper Title: Exploring the Role of Reinforcement Learning in Autonomous Vehicles Presenter: Gunasekaran V Paper ID: 222 Paper Title: Comparative Evaluation of Communication Protocols with Vision-Based Localization Presenter: Mervin Thomas	CIR-1 Shivam
	Paper Presentation Session 5: Paper ID: 19 Paper Title: Transformer-MIL and AdaBoost Fusion for Non-Invasive Depression Detection Presenter: Alwin Poulose Paper ID: 111 Paper Title: Upper Extremity Rehabilitation in Stroke Patients using Neuromuscular Electrical Stimulation: A Literature Review Presenter: Krishnakumar Sankar Paper ID: 235 Paper Title: Primary Capsule-Enhanced AlexNet-GRU Hybrid Model for Classifying Skin Cancer Types Presenter: Yerra Pranaya	CIR-2 Sathyam
	Paper Presentation Session 6: Paper ID: 123 Paper Title: Evolution of Industrial Automation Using Low-Cost Embedded Platforms and Edge Computing Presenter: Ankush Gund Paper ID: 250 Paper Title: Structural Optimization and FEA Validation of a Lightweight AA 6063 Pedestal for Robotic Support Presenter: Unnikrishnan M M Paper ID: 266 Paper Title: Design and Development of Master Controller for Robotic Application Presenter: Subhaash Vinayagam	Classroom N203
03:30 PM – 04:00 PM	Tea break	

Time	Activity	Venue
04:00 PM – 06:40 PM	Paper Presentation Session 7: Paper ID: 165 Paper Title: Deep Learning Based CNN Approach for Bacterial Wilt Disease Detection in Ginger Presenter: Gagana S Paper ID: 379 Paper Title: Attention- and Uncertainty-Based Enhancements to U-Net Model for Semantic Segmentation of Aerial Imagery for Land Cover Classification Presenter: Jaya Sreevalsan-Nair Paper ID: 442 Paper Title: Self-Supervised Weather Pattern Prediction with Temporal Contrastive Learning from Multi-Spectral Satellite Imagery Presenter: Madhavan K Paper ID: 16 Paper Title: Design and Development of a Cost-Effective Cardio Resuscitation Device for Emergency Cardiac Support Presenter: Dr. Silpa P A Paper ID: 349 Paper Title: Dual ML Approach for Myopia Prediction in Children Using Bayesian Risk Assessment and Genomic Classification Presenter: Avanthika N Paper ID: 450 Paper Title: Individualized Environmental Health Risk Prediction System with Satellite Data Integration: A Machine Learning Approach for Respiratory Disease Prevention Presenter: Madhavan K Paper ID: 108 Paper Title: Designing Multi-Band Frequency Reconfigurable Antennas for 5G and Biomedical Applications: A Comparative Analysis Presenter: Yashasvi Borkar Paper ID: 211 Paper Title: Radar-Based Pothole Detection and Optimal Path Evaluation Using Machine Learning Presenter: Anand Mahadevan S M	Shraddha Hall



Time	Activity	Venue
04:00 PM – 06:40 PM	Paper Presentation Session 8: Paper ID: 152 Paper Title: Optimized Design of I2C Master and Slave Controller Presenter: Sai Rama Krishna Pediredla Paper ID: 171 Paper Title: Enhanced ALU Using Vedic Multiplier Presenter: Abhinav Aju Paper ID: 215 Paper Title: Implementation of Hardware Prototype for Smart Parking and Electric Vehicle Charging Station Presenter: Selva Kumar Sethu Paper ID: 217 Paper Title: Python-Based Implementation of a Novel Reversible Carry Look-Ahead BCD 8-bit Subtractor Presenter: Palnati Siddhartha Paper ID: 228 Paper Title: Low-Noise High Speed Detection of Photons in Cold Atom Interferometry Based Quantum Sensors Presenter: Dr. Anjitha Viswanath Paper ID: 246 Paper Title: Real-Time Modelling and Implementation of Power Converter Using NI-RIO Embedded Controller Presenter: Lahari MVP Paper ID: 395 Paper Title: Smart Fish Tank Monitoring System with Manual and Automatic Actuator Control Presenter: Aparna Menon Paper ID: 446 Paper Title: Automatic Distance-Based Fare Collection for Efficient Public Transportation Presenter: Amal Anand	Amba Hall

Time	Activity	Venue
04:00 PM – 06:40 PM	Paper Presentation Session 9: Paper ID: 198 Paper Title: Automated Fertilizer Application and Plant Bed Formation Robot Presenter: Peeyush P Paper ID: 213 Paper Title: Agricultural Robots and Implementation of Weed Detection by Machine Learning Presenter: Selva Kumar Sethu Paper ID: 339 Paper Title: CIARA: Integrating AI in a Low-Cost Articulated Robotic Arm for Image-to-Sketch Reproduction Presenter: Albin Thomas Paper ID: 373 Paper Title: Static Stability Analysis of a Novel Stair-Climbing Wheelchair Presenter: Hari Krishnan R Paper ID: 381 Paper Title: Reinforcement Learning Controller Design for Underwater Rescue Vehicle Presenter: Aravind Kumar Kondaji Paper ID: 389 Paper Title: Stochastic Random Walk Approach for Efficient Individualistic Autonomous Exploration: An Investigative Study Using Turtlebot3 in Gazebo Presenter: Blesson Mathews Luke Paper ID: 418 Paper Title: Tumbleweed-Inspired Autonomous Seeding Robot with Tensegrity Structure and Reinforcement Learning Control Presenter: Piyush Pratap Singh Paper ID: 423 Paper Title: Prismatic-Revolute Hybrid Biped Robot Walking in Unstructured Terrain Using Reinforcement Learning Presenter: Krishnendu Roy	Classroom N202

Time	Activity	Venue
04:00 PM – 06:40 PM	Paper Presentation Session 10: Paper ID: 268 Paper Title: Optimized Quaternion Rotation Methods: Geometric Approaches for Real-Time Applications Presenter: Vijayaragavan CM Paper ID: 271 Paper Title: A Low-Cost Adaptive Missile Guidance System Using Deep Learning for Decoy Discrimination and Target Accuracy Presenter: P Hari Govind Paper ID: 310 Paper Title: A Joint Channel Impairments Classification in a UAV-FSO System using Machine Learning Presenter: Yamuna Tumma Paper ID: 360 Paper Title: Adaptive Adversarial Learning in Multi-Agent Combat: A Deep Reinforcement Learning Approach for Border Evasion Scenarios Presenter: Arindam Ghosh Paper ID: 363 Paper Title: Deep Learning-Driven Cognitive Radar: A Comparative Implementation of CNN, LSTM, and RNN for Adaptive Target Detection Presenter: Kavitha Pillai Paper ID: 393 Paper Title: Accelerating Frontier Point Detection and Unknown Space Correction in Cartographer SLAM Map Presenter: Karnika Pandey Paper ID: 404 Paper Title: Machine Learning-Based Speed Prediction for a Mobile Robot on Different Terrains Presenter: Rammohan S Paper ID: 445 Paper Title: Competitive Pricing Strategies for Electric Vehicle Charging Stations by Optimization Approach Presenter: Dr. Nandini K. K.	CIR-1 Shivam

Time	Activity	Venue
04:00 PM – 06:40 PM	Paper Presentation Session 11: Paper ID: 143 Paper Title: Emergence of Glioma, A Graph Theoretical Approach Presenter: Hasna Noushad Paper ID: 151 Paper Title: Comparative Analysis of Machine Learning Models for Obsessive-Compulsive Disorder Severity Prediction Presenter: Swarnasmitha Paper ID: 187 Paper Title: Impact of Sitting and Squatting Postures on Knee Angles: A Marker-Based Biomechanical Study Presenter: Dr. K. Adalarasu Paper ID: 193 Paper Title: Grad-CAM-Driven Explainability in a Weighted Ensemble of Pretrained Models for Brain MRI Analysis Presenter: Fathima Basheer Paper ID: 208 Paper Title: Segmentation of Optic Cup and Disc for Fully Automated Glaucoma Screening: A Novel Approach Presenter: Murugadass K Paper ID: 209 Paper Title: Intelligent Kidney Stone Diagnosis: Evaluating ML and DL Methods for Prediction and Classification Presenter: Sathiya Priya Paper ID: 230 Paper Title: A Low-Cost Goniometer System with Integrated Inertial and Pressure Sensors for Real-Time Gait and Joint Monitoring Presenter: Vaibhav Santhosh Paper ID: 411 Paper Title: A Low-Cost, Human-Centered, Voice-Guided Automated Pill Dispenser for Assistive Medication Management Presenter: S T Thunhaal	CIR-2 Sathyam

Time	Activity	Venue
04:00 PM – 06:40 PM	Paper Presentation Session 12: Paper ID: 383 Paper Title: Design and Analysis of Petrol Engine with Electronic Control Unit for Optimizing the Fuel Injection Timing and Ignition Timing by Using Machine Learning Presenter: Ashwin R Paper ID: 437 Paper Title: Image and Shadow Fusion for Precise Bead Orientation Detection in Jewellery Making Automation Presenter: Raghavendra Bhalerao Paper ID: 17 Paper Title: Learning to Color: An Empirical Study of Autoencoder Models for Deep Image Colorization Presenter: Alwin Poulose Paper ID: 39 Paper Title: Spike2Image: A Comparative Framework for Visual Reconstruction Using Biologically Inspired Neural Encoding Presenter: Alwin Poulose Paper ID: 63 Paper Title: A Deep Learning-Based Image-to-Music Recommendation System Using Visual and Semantic Fusion Presenter: Alwin Poulose Paper ID: 120 Paper Title: AI – Enhanced Traffic Management Network Presenter: Arun Jose Paper ID: 149 Paper Title: Automated Sign Language Production for Subject Specific Learning Presenter: P Jayanthi Paper ID: 155 Paper Title: Real Estate Price Prediction Using Deep Learning Models: A Comparative Study on the Zillow Dataset Presenter: Shailesh K R	Classroom N203
09:00 AM – 05:30 PM	Smart Vehicle Expo	Right side of Annapoorneswari hall
09:00 AM – 05:30 PM	Robo Expo	Exhibition hall



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Day 2 – November 8th, 2025, Conference Agenda

Time	Activity	Venue
08:30 AM – 09:30 AM	Registration	Front Lobby
09:30 AM – 10:00 AM	Keynote Session 1: Shri. Venkat Krishnan Balasubramanian Senior Manager at NVIDIA, Bengaluru, Karnataka – India <i>Talk Title: Evolution of Chip Industry for AI Applications</i>	Amriteswarri hall
	Keynote Session 1: Dr. Rishabh Kumar Senior Consultant Radiation Oncologist, Amrita Hospital in Faridabad – India <i>Talk Title: Robotics Beyond the Scalpel: The Evolution of Intelligent Precision in Cancer Therapy</i>	Acharya hall
10:00 AM – 10:30 AM	Keynote Session 2: Dr. U Deva Priyakumar Professor, IIIT, Hyderabad – India <i>Talk Title: Data driven technologies for population scale solutions in healthcare and smart mobility</i>	Amriteswarri hall
	Keynote Session 2: Shri. Jaleesh P Chief Technical Officer, Genrobotics Innovations, Trivandrum – India <i>Talk Title: How Genrobotics build robotics technology platform</i>	Acharya hall
10:30 AM – 11:00 AM	Tea break	

Time	Activity	Venue
11:00 AM – 01:00 PM	Workshop keynote session 1: Dr. Sai Manoj Prakhya Solution Engineer-Applied Intuition, Germany <i>Talk Title: Simulate, Validate, Deploy: Iterative V&V Methodology for Scalable Autonomy across Vehicle Fleets</i> Workshop keynote session 2: Shri. Ramanathan Srinivasan Managing Director, Automotive Test Systems(ATS), Delhi - India Workshop keynote session 3: Dr. Thejus Pathmakumar Robotics Lead, TÜV SÜD Asia Pacific Pte Ltd., Singapore <i>Talk Title: From Reactive to Adaptive: Transforming the Conventional Safety Paradigm in the Age of Intelligent Manufacturing</i> Workshop keynote session 4: Shri. Vineeth Menon Senior Design Engineering Manager, Cadence Design Systems India Pvt. Ltd. , Bengaluru - India	Acharya hall
	Paper Presentation Session 13: Paper ID: 83 Paper Title: RFID Based Attendance Marking System with Clock-in/Clock-out and Email Alert for Academic Record Keeping Presenter: SANDRA R S Paper ID: 92 Paper Title: IMPLEMENTATION AND COMPARISON OF SNOOPING-BASED CACHE COHERENCE PROTOCOLS IN DUAL-CORE PROCESSORS Presenter: Keerthi Krishna Paper ID: 20 Paper Title: Enhanced Autonomous Landing for Disaster Response Drones Using Deep Learning: A Comparative Study of YOLOv8 and VGG Architectures Presenter: Guru Aswini Dath C Paper ID: 144 Paper Title: A Modular Approach to Autonomous Vehicle Prototyping with Real-Time Performance Assessment Presenter: ABHAYKRISHNAN PJ Paper ID: 220 Paper Title: Design and Implementation of a Differential Drive Manipulator Robot for Industrial Pickup and Sorting Applications Using ROS2 Presenter: Adithya Pothula Paper ID: 236 Paper Title: Autonomous Healthcare Assistant Robot Using SLAM Gmapping Presenter: Amal Prakash	Shraddha Hall



Time	Activity	Venue
11:00 AM – 01:00 PM	Paper Presentation Session 14: Paper ID: 96 Paper Title: Distributed Arithmetic based Finite Impulse Response Filter Integrated with a Vedic Multiplier Presenter: Srimol K S Paper ID: 136 Paper Title: Automatic Car Parking System on FPGA Using Verilog Presenter: Devika Vinod Paper ID: 140 Paper Title: Design and Implementation of an Optimized 32-Operand Parallel Floating-Point Adder using CSA and Wallace Tree Architecture Presenter: Sreya Lekshmi Saji Paper ID: 141 Paper Title: Low latency floating point division using radix-64 and square root using radix-16 with reduced iteration Presenter: Gowripriya Sreevidya Paper ID: 142 Paper Title: Secure and Scalable Access Control Using a Hybrid RFID Framework Presenter: Adithya Tummala Paper ID: 148 Paper Title: Evaluating the Suitability of MQTT and HTTP for ESP32-Based IoT Architectures Presenter: Raunak Dev	Amba Hall
	Paper Presentation Session 15: Paper ID: 257 Paper Title: A ROS-Based Autonomous Navigation Platform with Multi-Sensor Fusion for Educational and Experimental Robotics Presenter: Aiswarya T P Paper ID: 258 Paper Title: GUI-Controlled Autonomous Wheelchair Navigation with Robust Sensor Fusion and Recovery Presenter: Dhilna Manjooran Paper ID: 267 Paper Title: Performance Evaluation of a 6-DOF Robotic Arm for Assistive Applications Presenter: Kevin Wilson Paper ID: 346 Paper Title: Development and Experimental Validation of a Fixed-Wing UAV for Post-Flood Operations Presenter: Mervin Thomas Paper ID: 352 Paper Title: Design and Implementation of a Voice-Assisted Mobile Robot for Elderly Presenter: Ottigunta Sathvika Paper ID: 357 Paper Title: Mapping the Dynamics of Robotic Jumps in Hopping Robots Presenter: Rammohan S	Classroom N202

Time	Activity	Venue
11:00 AM – 01:00 PM	Paper Presentation Session 16: Paper ID: 203 Paper Title: Examining the Role of Conversational AI in MNCs' Marketing Strategies in India Presenter: Monika Sharma Paper ID: 214 Paper Title: Smart Parking and Electric Vehicle Charging Infrastructure using Predictive Models Presenter: Selva Kumar Sethu Paper ID: 340 Paper Title: Spoken-Intent Classification using Hybrid Activation Function Presenter: Adithya Hegde Kota Paper ID: 353 Paper Title: Multi-Modal Video Summarization: A Comprehensive Survey Presenter: Sivajyothi Chandra Paper ID: 434 Paper Title: Predictive Modelling for Solar Production Presenter: Megha K J Paper ID: 435 Paper Title: Battery RUL Prediction Using Machine Learning Models Presenter: Anusha Sunny	CIR-1 Shivam
	Paper Presentation Session 17: Paper ID: 117 Paper Title: Adaptive Fetal ECG Extraction Using Normalized LMS Filter and Metaheuristic Optimization Presenter: Shrisharva Dayananda Paper ID: 118 Paper Title: VISTA in Motion: The Hardware That Sees for the Blind Presenter: Sreehari S Paper ID: 174 Paper Title: Implementing and Deploying a Student-Friendly GUI-Based Biomedical Software Platform for EEG Signal Processing Presenter: Akula Venkat Harshith Paper ID: 241 Paper Title: Device for Learning Programming Through Haptic Interaction Useful Even for the Visually Challenged Presenter: Pravinkumar Vasveliya Paper ID: 253 Paper Title: Transformer Augmented Feature Fusion for Gene Expression-Based Prediction of Low Back Pain Outcomes Presenter: Ananth Patnaik S Paper ID: 269 Paper Title: A Mobile App for Real-Time Motion Monitoring and Remote Rehabilitation Presenter: Amirtha Prakash	CIR-2 Sathyam



Time	Activity	Venue
11:00 AM – 01:00 PM	Paper Presentation Session 18: Paper ID: 180 Paper Title: From Keywords to Key Contributors: A Bibliometric Analysis of AI-Based Virtual Influencer Research Presenter: Devika Rani S. R Paper ID: 251 Paper Title: Synthetic Dysarthric Speech Generation via Finetuned TTS and Speech Augmentation Presenter: Aswin Sindhu S. K Paper ID: 254 Paper Title: A Deep Learning Application for Accurate Oil Palm Counting by Eliminating Re-Counting Errors in UAV Imagery Presenter: Pragatheesh L. G Paper ID: 285 Paper Title: Low-Light Object Detection Using YOLOv8 with Zero-DCE-Based Image Enhancement Presenter: Goppinath Saravanan Paper ID: 286 Paper Title: A Deep Learning–Based Approach for Classifying Diseases Affecting Banana Leaves Presenter: Guddila Lakshmikanth Reddy Paper ID: 300 Paper Title: Monitoring Presence of Employee in the Workplace During Working Hours Using Image Processing and AI Presenter: Zuha Momin	Classroom N203
	Robo competition	Annapoorneswari hall (stage)
	Poster presentation	Ground floor in front of lift and first floor
01:00 PM – 02:00 PM	Networking Lunch	Annapoorneswari hall
02:00 PM – 03.30 PM	Paper Presentation Session 13: Paper ID: 239 Paper Title: Design and Implementation of the Platform for Testing a Differential Drive Robot Using ROS2 Presenter: Akshay Nambiar Paper ID: 427 Paper Title: Collaborative Payload Transport Using a Four-Quadcopter Swarm with RTK and MQTT-Based Coordination Presenter: Shyam Sridhar Neeli Paper ID: 443 Paper Title: Real-Time Navigation in Dynamic Environments Using Intelligent SLAM Presenter: Subhradip Mukherjee	Shraddha Hall

Time	Activity	Venue
02:00 PM – 03.30 PM	Paper Presentation Session 14: Paper ID: 234 Paper Title: Interprocess Communication Through System V Queues: A Multi-Terminal and GUI-Based Demonstration Presenter: Srivani Chintala Paper ID: 252 Paper Title: A Field-Deployable Extendable Pole Camera System for Visual Data Collection in Tall Tree Canopies Presenter: Rohith Prem Kumar Paper ID: 278 Paper Title: Cross-Domain Power Orchestration for TI AM6442 Heterogeneous Multi-Core Processor Presenter: Vipinlal S P	Amba Hall
	Paper Presentation Session 15: Paper ID: 377 Paper Title: Small Scale Raspberry Pi Based Autonomous Car: A Practical Guide to Understand Complexity Presenter: Nallabati Venkata Durga Sai Sarat Chandra Paper ID: 390 Paper Title: FPGA Based Voice Automated Cleaning Robot Presenter: Teena S Paper ID: 265 Paper Title: Development of a Low-Cost, Compact Hardware Platform for ROS-Based Educational Robotics. Presenter: Justin Antony	Classroom N202
	Paper Presentation Session 16: Paper ID: 417 Paper Title: SmartOR-AI: An Intelligent Predictive Analytics and Decision Support System for Anesthesia Equipped with Perioperative Risk Management Presenter: Ajo George Paper ID: 259 Paper Title: Vision-Based Multi-Object Tracking for Unstructured and Congested Indian Roads Presenter: Vijaya Lekshmi V Paper ID: 260 Paper Title: A Dual-Model Hybrid Vision Approach for Road Lane Markings Detection and Traffic Participant Object Detection Presenter: Shehsaath V S	CIR-1 Shivam
	Paper Presentation Session 17: Paper ID: 279 Paper Title: Dual-Path Multi-Model Lung Disease Classification Using Deep Learning on CT Scan and Lung Sounds Presenter: Ganesan M Paper ID: 388 Paper Title: BCI-Based Robotic Arm for Medical Rehabilitation Presenter: G. Hari Sudharsan	CIR-2 Sathyam

Time	Activity	Venue
02:00 PM – 03.30 PM	Paper Presentation Session 18: Paper ID: 302 Paper Title: AI-Driven Inspection and Maintenance for Aircraft: Real-Time Damage Detection of Aero-Engine Components to Enhance Flight Safety Presenter: Srinivasan Ramakrishnan Paper ID: 329 Paper Title: AdaptIQA: Adaptive Intelligent Query and Assessment for Personalized Learning Presenter: Shanmuga Sundar	Classroom N203
	Workshop keynote session 5: Dr. Rajeevlochana Chittawadigi Assistant Professor (SG), Vice Chair, Department of Mechanical Engineering, Amrita School of Engineering, Amrita Vishwa Vidyapeetham, Bengaluru – India <i>Talk Title: Effective Robotics Education using Indigenous Tools and Student Competitions through Experiential Learning</i> Workshop keynote session 6: Shri. Muni Karthik Reddy Senior Software Engineer, Microsoft, Hyderabad - India <i>Talk Title: Agentic and generative AI in Software</i> Workshop keynote session 7: Shri. Senthil Kumar R Head – Industry & Corporate Connect, MeitY–Nasscom Centre of Excellence – IoT & AI, Chennai – India <i>Talk Title: Entrepreneurship in Deep Tech</i>	Acharya Hall
03:30 PM – 04:00 PM	Tea break	
04:00 PM – 04:30 PM	Workshop keynote session 8: Dr. Abdullah Aamir Hayat Assistant Professor, United Arab Emirates University <i>Talk Title: AI in Motion: Safety, Forecasting, and Adaptive Gait Intelligence for Reconfigurable Service Robots</i>	Acharya Hall
04:00 PM – 05:00 PM	Valedictory Function	Amriteswari hall
09:00 AM – 05:30 PM	Robo Expo	Exhibition hall