

SRM Institute of Science and Technology
DEPARTMENT OF MECHANICAL ENGINEERING
ICEPAM 2025
TENTATIVE SESSION PLAN FOR ORAL PRESENTATION

Paper ID	TITLE OF PAPER	Topic	Date of Presentation	Venue	Time of Presentation
	Day 1 - AN				
	SESSION 1				
ICEPAM-2506	Next-Generation Real-TimeMonitoring Of Oral Glucose: By IoT-Integrated Sensors in 3D-Printed Dental Prostheses	AIML	11.07.2025	Tech Park II LH204	4.00 to 5.30 PM
ICEPAM-25103	A Focused Review of IoT in Additive Manufacturing	AIML	11.07.2025	Tech Park II LH204	4.00 to 5.30 PM
ICEPAM-25114	Machine Learning Assisted Central Tyre Inflation System	AIML	11.07.2025	Tech Park II LH204	4.00 to 5.30 PM
ICEPAM-2512	A novel artificial intelligence based fuzzy decision approaching Machinability Analysis and Optimization of Al–Cu–Mg–SiC–Graphite–Peanut Shell of Composite fabrication	AIML	11.07.2025	Tech Park II LH204	4.00 to 5.30 PM
ICEPAM-2577	Advanced Machine Learning-Driven Optimization of Twin-Screw Extruded Nylon 6,6/MWCNT Nanocomposites: Predictive Modelling of Mechanical and Dynamic Mechanical Properties	AIML	11.07.2025	Tech Park II LH204	4.00 to 5.30 PM
ICEPAM-2583	Understanding the use of Digital Twin Manufacturing Technology in the field of Industry 4.0	AIML	11.07.2025	Tech Park II LH204	4.00 to 5.30 PM
	SESSION 2				
ICEPAM-2504	Biomimicry in 3D printing: Infill pattern inspired by deep sea glass sponge	Biomedical	11.07.2025	Tech Park II LH205	4.00 to 5.30 PM
ICEPAM-25101	A User-Centered Design and Additive Manufacturing Approach for Personalized Cervical Support Braces Using 3D Scanning	Biomedical	11.07.2025	Tech Park II LH205	4.00 to 5.30 PM
ICEPAM-25109	Engineering Agarose-Based Biomaterial Scaffolds for 3D Cell culture and Drug Screening Applications	Biomedical	11.07.2025	Tech Park II LH205	4.00 to 5.30 PM
ICEPAM-2567	Tailoring Treatments with Technology: The Role of 3D Printing in Individualized Drug Delivery	Biomedical	11.07.2025	Tech Park II LH205	4.00 to 5.30 PM
ICEPAM-25127	Advanced Bone Repair Solutions: A Mechanical-Assisted Post Bio-printing Approach	Biomedical	11.07.2025	Tech Park II LH205	4.00 to 5.30 PM

Paper ID	TITLE OF PAPER	Topic	Date of Presentation	Venue	Time of Presentation
	SESSION 3				
ICEPAM-25129	Thermal Characterization of Blended and Extruded Composite Filaments for Material Extrusion 3D Printing	Composite	11.07.2025	Tech Park II LH220	4.00 to 5.30 PM
ICEPAM-25144	Mechanical and thermal investigation of Polypropylene / Nano Zirconia / tungsten disulfide hybrid composites	Composite	11.07.2025	Tech Park II LH220	4.00 to 5.30 PM
ICEPAM-2509	Additive Manufacturing and Compression Testing of Polymeric TPMS Structures	FDM	11.07.2025	Tech Park II LH220	4.00 to 5.30 PM
ICEPAM-25121	Leveraging 3D Printing and Additive Manufacturing for Advanced Electronic Cooling Solutions	FDM	11.07.2025	Tech Park II LH220	4.00 to 5.30 PM
	SESSION 4				
ICEPAM-25100	Additive Manufacturing of Phase Change Materials for Enhancing Thermal Comfort in Buildings	FDM	11.07.2025	Tech Park II LH221	4.00 to 5.30 PM
ICEPAM-25102	Advancements in Microfluidic Device Fabrication through Fused Deposition Modeling and Stereolithography 3D Printing	FDM	11.07.2025	Tech Park II LH221	4.00 to 5.30 PM
ICEPAM-25118	VACUUM-ASSISTED FABRICATION OF MOCK ENERGETIC MATERIALS USING ADDITIVE MANUFACTURING AND EVALUATION OF MECHANICAL PROPERTIES	FDM	11.07.2025	Tech Park II LH221	4.00 to 5.30 PM
ICEPAM-25119	Tensile strength analysis of epoxy resin vacuum casting developed through 3D printing-based silicone moulding	FDM	11.07.2025	Tech Park II LH221	4.00 to 5.30 PM
	SESSION 5				
ICEPAM-25108	A novel fabrication of 10 YSZ electrolyte supported solid oxide fuel cell by stereolithography 3D printing	Interdisciplinary	11.07.2025	Tech Park II LH304	4.00 to 5.30 PM
ICEPAM-25147	Thermal Load Predictions of Cold Plate of an Electrical Light Commercial Vehicle with Conjugate Heat Transfer Model	Interdisciplinary	11.07.2025	Tech Park II LH304	4.00 to 5.30 PM
ICEPAM-25104	Effect of High Pressure Coolant turning on SS 304 using earthen based coolants	Microstructure	11.07.2025	Tech Park II LH304	4.00 to 5.30 PM
ICEPAM-25131	MICROSTRUCTURE AND MECHANICAL PROPERTIES OF IN SITU HYBRID ALUMINIUM MMC MODIFIED WITH STRONTIUM	Microstructure	11.07.2025	Tech Park II LH304	4.00 to 5.30 PM
ICEPAM-25133	Voxel-Based Volumetric Partitioning for Multi-Robot Cooperative 3D Printing	Interdisciplinary	11.07.2025	Tech Park II LH304	4.00 to 5.30 PM

Paper ID	TITLE OF PAPER	Topic	Date of Presentation	Venue	Time of Presentation
	SESSION 6				
ICEPAM-25120	Unlocking Precision: A Review of Optimization Techniques for Metal 3D Printing Parameters in Complex Geometries	Welding	11.07.2025	Tech Park II LH305	4.00 to 5.30 PM
ICEPAM-25122	Optimization of Friction and Wear Behaviour of AZ91D Magnesium Matrix Composite Reinforced with Boron Carbide and Graphite under Dry Sliding Conditions	Welding	11.07.2025	Tech Park II LH305	4.00 to 5.30 PM
ICEPAM-2513	Microstructural and Mechanical Enhancement of WAAM-Fabricated Stainless Steel Using Silicon Carbide Particles	Welding	11.07.2025	Tech Park II LH305	4.00 to 5.30 PM
ICEPAM-2502	Investigation of Friction Welding Parameters on Microstructure and Mechanical Properties of Similar Duplex Stainless Steel	Welding	11.07.2025	Tech Park II LH305	4.00 to 5.30 PM
ICEPAM-25130	Design and Analysis of a 3D-printed Compliant Mechanism-based Metastructure for Vibration Isolation Applications	Welding	11.07.2025	Tech Park II LH305	4.00 to 5.30 PM
ICEPAM-25156	Investigation on effect of Process Parameters on Mechanical Properties of Part Manufactured by Wire Arc Additive Manufacturing (WAAM) using AA5754	Welding	11.07.2025	Tech Park II LH305	4.00 to 5.30 PM
ICEPAM-25146	Statistical Modelling and Process Optimization of SS316L Fabricated by Laser Metal Deposition for Superior Performance	Welding	11.07.2025	Tech Park II LH305	4.00 to 5.30 PM
	SESSION 7				
ICEPAM-2514	Development of robot wire Arc additive Manufacturing of 316L steel sample: Microstructure & property correlation	Welding	11.07.2025	Tech Park II LH319	4.00 to 5.30 PM
ICEPAM-25145	Optimization of Response Variables in WEDM of Hastalloy C22 using Taguchi Technique	Welding	11.07.2025	Tech Park II LH319	4.00 to 5.30 PM
ICEPAM-25149	Effect of the Thermal cycles on microstructure and mechanical behavior of Duplex Stainless Steel structures fabricated through wire arc additive manufacturing	Welding	11.07.2025	Tech Park II LH319	4.00 to 5.30 PM
ICEPAM-2526	Optimization of Wire EDM Parameters in Machining Nicrofer alloy Using ANN-GA Approach	Welding	11.07.2025	Tech Park II LH319	4.00 to 5.30 PM
ICEPAM-2533	Effect of Process Parameters on Melt Pool and Porosity in LPBF: A Numerical Approach	Welding	11.07.2025	Tech Park II LH319	4.00 to 5.30 PM
ICEPAM-2541	Post-Processing Techniques for WAAM Components: Machining, Heat Treatment, and Surface Enhancement	Welding	11.07.2025	Tech Park II LH319	4.00 to 5.30 PM

Paper ID	TITLE OF PAPER	Topic	Date of Presentation	Venue	Time of Presentation
	Day 2 - FN				
	SESSION 9				
ICEPAM-2545	Multi-Material Deposition in WAAM: Challenges, Innovations, and Future Prospects	Welding	12.07.2025	Tech Park II LH204	10.35 to 12.05 PM
ICEPAM-2550	Topology Optimization and WAAM: Designing for Additive with Complex Geometries and Load Conditions	Welding	12.07.2025	Tech Park II LH204	10.35 to 12.05 PM
ICEPAM-2556	Shaping the Future of Electronics with Sustainable Additive Manufacturing A Review of Design, Materials, and Industrial Implementation	Welding	12.07.2025	Tech Park II LH204	10.35 to 12.05 PM
ICEPAM-2563	Electron Beam-Assisted Processing of Inconel 625 Alloy in Additive Manufacturing: A Comprehensive Review	Welding	12.07.2025	Tech Park II LH204	10.35 to 12.05 PM
ICEPAM-2571	Environmental and Economic Assessment of WAAM: Sustainability Metrics and Cost Modeling	Welding	12.07.2025	Tech Park II LH204	10.35 to 12.05 PM
ICEPAM-2576	Comprehensive Review of Mechanical and Additive Manufacturing Routes for High-Entropy Alloys: Processing Strategies, Challenges and Functional Properties	Welding	12.07.2025	Tech Park II LH204	10.35 to 12.05 PM
ICEPAM-2589	Literature Guided Framework for Process Parameter Optimization in Wire Arc Additive Manufacturing (WAAM): An Intelligent Metal Fabrication Approach	Welding	12.07.2025	Tech Park II LH204	10.35 to 12.05 PM
ICEPAM-2595	Enhancing Structural Integrity Through Friction Welding of Polymer – Metal	Welding	12.07.2025	Tech Park II LH204	10.35 to 12.05 PM
ICEPAM-2598	Additive Manufacturing-assisted Vacuum Investment Casting – A Hybrid approach to Produce Metallic Lattices	Welding	12.07.2025	Tech Park II LH204	10.35 to 12.05 PM

Paper ID	TITLE OF PAPER	Topic	Date of Presentation	Venue	Time of Presentation
	SESSION 10				
ICEPAM-25143	Optimization of Process Parameters in Wire Arc Additive Manufacturing of Aluminium Wall Structures Using RSM, Machine Learning Models, and Genetic Algorithm	AIML	12.07.2025	Tech Park II LH205	10.35 to 12.05 PM
ICEPAM-2519	IntelliLight: A Fuzzy Logic-Based Adaptive Traffic Control System with Emergency Priority	AIML	12.07.2025	Tech Park II LH205	10.35 to 12.05 PM
ICEPAM-2521	Intelligent Defect Detection in Arecanuts Using Convolutional Neural Networks and IRB 360 Vision Robot	AIML	12.07.2025	Tech Park II LH205	10.35 to 12.05 PM
ICEPAM-2528	Development and Optimization of Eco-Friendly Aluminum Matrix Composites Reinforced with Industrial Waste: A Hybrid RSM–TOPSIS Framework	AIML	12.07.2025	Tech Park II LH205	10.35 to 12.05 PM
ICEPAM-2534	Multi-Criteria Optimization of Brake Discs: Integrating Thermo-Structural Analysis with TOPSIS Decision Making	AIML	12.07.2025	Tech Park II LH205	10.35 to 12.05 PM
ICEPAM-2586	Fuzzy-Based Anti-Cruise Missile Interception System	AIML	12.07.2025	Tech Park II LH205	10.35 to 12.05 PM
ICEPAM-2529	Intelligent Defect Detection in LLDPE Composite Tiles Using Machine Learning Approach	AIML	12.07.2025	Tech Park II LH205	10.35 to 12.05 PM

Paper ID	TITLE OF PAPER	Topic	Date of Presentation	Venue	Time of Presentation
	SESSION 11				
ICEPAM-2544	Robot Path planning and Dynamic Obstacle Avoidance Using Fuzzy Logic System	AIML	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2547	Hybrid Fuzzy-PID Control for Anti-lock Braking Systems in Emergency Situations	AIML	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2548	Adaptive Fuzzy logic control for optimized mixing in Banbury rubber mixers using Real – Time process feedback	AIML	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2551	Adaptive Fuzzy Logic System for Intelligent Braking and Gear Selection in Modern Vehicle	AIML	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2561	Dimensional Accuracy in Laser Directed Energy Deposition Through Hybrid Machine Learning Models	AIML	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2564	Performance and Structural Enhancement of UAV Landing Gear through Topology Optimization and 3D Printing	AIML	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2572	Artificial Intelligence and Machine Learning in WAAM: Predictive Modeling and Smart Process Optimization	AIML	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2574	A Machine learning framework for predicting mechanical and biological performance of 3D printed scaffold	AIML	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM

Paper ID	TITLE OF PAPER	Topic	Date of Presentation	Venue	Time of Presentation
	SESSION 12				
ICEPAM-25148	Mechanical Characterization of Aloe Vera and Hydroxyapatite-Based Biocomposites Under Compressive Load for Bone Tissue Engineering Applications	Biomedical	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2523	Additive Manufacturing for Craniofacial Applications	Biomedical	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2524	Biomechanical evaluation of fixation plates with lattice structures for treating segmental mandibular defects.	Biomedical	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2536	Correlation between wettability and bio-corrosion resistance of AZ91 Magnesium Alloy	Biomedical	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2553	Influence of Printing Parameters on Mechanical Properties of Bio- degradable Polymer (PLA) developed by Fused Filament Fabrication (FFF) Technique	Biomedical	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2555	Design and Development of a Mouthpiece for Isometric Jaw Clenching: Numerical and Experimental Analysis	Biomedical	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-25105	Real-Time Wearable Safety System for Seafarers Using Wi-Fi Connectivity and Biometric Monitoring	Biomedical	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM
ICEPAM-2558	TRIBOLOGICAL PROPERTIES OF LASER ASSISTED SURFACE MODIFIED 3D-PRINTED BIODEGRADABLE POLYMERS	Biomedical	12.07.2025	Tech Park II LH220	10.35 to 12.05 PM

Paper ID	TITLE OF PAPER	Topic	Date of Presentation	Venue	Time of Presentation
	SESSION 13				
ICEPAM-2516	Effect of friction welding parameters on similar duplex stainless steel pipes based on mechanical and metallurgical properties	Composite	12.07.2025	Tech Park II LH304	10.35 to 12.05 PM
ICEPAM-2518	Numerical and Experimental analysis of Fibre-Reinforced Polysulfone Matrix Composites for vehicular body armor application	Composite	12.07.2025	Tech Park II LH304	10.35 to 12.05 PM
ICEPAM-2549	Multi-physical Behavior of Lightweight Natural Composites Reinforced with seashell powders	Composite	12.07.2025	Tech Park II LH304	10.35 to 12.05 PM
ICEPAM-2562	Design and Evaluation of a Kevlar-Bamboo Hybrid Composite for Lightweight UAV Wing Structures.	Composite	12.07.2025	Tech Park II LH304	10.35 to 12.05 PM
ICEPAM-2568	Investigation of Flexural Behavior in Hybrid Sandwich Composites for Automotive Applications	Composite	12.07.2025	Tech Park II LH304	10.35 to 12.05 PM
ICEPAM-2578	Effect of Functional Fillers on the Fading and Recovery Characteristics of Non-Asbestos Friction Composites Used in Automotive Applications	Composite	12.07.2025	Tech Park II LH304	10.35 to 12.05 PM
ICEPAM-2592	Evaluation of Mechanical Behavior of Fiber-Reinforced Epoxy Composites	Composite	12.07.2025	Tech Park II LH304	10.35 to 12.05 PM
ICEPAM-2593	Sustainable Coconut Shell Powder (CSP) as Next-Gen Abrasive and Reinforcement for AJM & Additive Manufacturing	Composite	12.07.2025	Tech Park II LH304	10.35 to 12.05 PM
ICEPAM-2597	DEVELOPMENT OF A LOW-COST RECYCLED PP-JUTE FILAMENT FOR 3D-PRINTED PROSTHETIC SOCKET APPLICATIONS	Composite	12.07.2025	Tech Park II LH304	10.35 to 12.05 PM

Paper ID	TITLE OF PAPER	Topic	Date of Presentation	Venue	Time of Presentation
	SESSION 14				
ICEPAM-2527	Evaluating the Combined Impact of Process Parameters and Reinforcement on Interlaminar Integrity in FDM Using AE	FDM	12.07.2025	Tech Park II LH305	10.35 to 12.05 PM
ICEPAM-2531	Tensile and Flexural Behavior of 3D-Printed Sandwich Structures with PLA Hexagonal Core and CF-PLA Face Sheets	FDM	12.07.2025	Tech Park II LH305	10.35 to 12.05 PM
ICEPAM-2537	ENHANCING DIMENSIONAL ACCURACY IN FDM-PRINTED POLYCARBONATE PARTS THROUGH PROCESS PARAMETER OPTIMIZATION	FDM	12.07.2025	Tech Park II LH305	10.35 to 12.05 PM
ICEPAM-2554	"Structural Design and Rheological Characterization of a Novel 3D Food Printing System"	FDM	12.07.2025	Tech Park II LH305	10.35 to 12.05 PM
ICEPAM-2585	Thermal Analysis of PLA and ABS Components Fabricated via Fused Deposition Modeling (FDM)	FDM	12.07.2025	Tech Park II LH305	10.35 to 12.05 PM
ICEPAM-2599	Advancements in Lightweight Structural Components using 3D Printing for Aerospace Applications	FDM	12.07.2025	Tech Park II LH305	10.35 to 12.05 PM
ICEPAM-25154	Effect of FDM Printing Parameters on the Tensile Response of Thermoplastic Materials	FDM	12.07.2025	Tech Park II LH305	10.35 to 12.05 PM
ICEPAM-2587	Virtual Reality Co-Simulator for FDM 3D Printer	FDM	12.07.2025	Tech Park II LH305	10.35 to 12.05 PM

Paper ID	TITLE OF PAPER	Topic	Date of Presentation	Venue	Time of Presentation
	SESSION 15				
ICEPAM-2559	Design and development of a solar powered agricultural Robot	Interdisciplinary	12.07.2025	Tech Park II LH319	10.35 to 12.05 PM
ICEPAM-2560	Additive Manufacturing Enabled Contactless Inductive Position Sensors for High-Precision Motion Control	Interdisciplinary	12.07.2025	Tech Park II LH319	10.35 to 12.05 PM
ICEPAM-2579	AUTOMATED GUIDED VEHICLE	Interdisciplinary	12.07.2025	Tech Park II LH319	10.35 to 12.05 PM
ICEPAM-2580	Optimization of process parameters for the pseudocapacitive properties of Cu ₂ O thin films prepared by r.f. magnetron sputtering	Interdisciplinary	12.07.2025	Tech Park II LH319	10.35 to 12.05 PM
ICEPAM-2511	Smart Railway Signal Monitoring: Enhancing Safety and Efficiency with Real-Time Analysis	Interdisciplinary	12.07.2025	Tech Park II LH319	10.35 to 12.05 PM
ICEPAM-25153	Thermal Properties of Solar Concentrated Parabolic Collector (SCPC) Developed from Recycled Plastic waste: Sustainable Energy Application	Interdisciplinary	12.07.2025	Tech Park II LH319	10.35 to 12.05 PM
ICEPAM-25110	Development of Sustainable Hybrid Thermoset Composites Reinforced with Synthetic Fibers for Circular Economy	Composite	12.07.2025	Tech Park II LH319	10.35 to 12.05 PM
ICEPAM-25161	State of art of research on advancements and currents status of Wire Arc Additive Manufacturing (WAAM) Technique	Composite	12.07.2025	Tech Park II LH319	10.35 to 12.05 PM

Paper ID	TITLE OF PAPER	Topic	Date of Presentation	Venue	Time of Presentation
	SESSION 16				
ICEPAM-25155	Development of a Novel Fin Structure to Enhance Thermal Performance of Liquid-Cooled Cold Plates for Electronic Thermal Management	Interdisciplinary	12.07.2025	Tech Park II LH320	10.35 to 12.05 PM
ICEPAM-2573	TOPOLOGY OPTIMISATION AND 3D PRINTING OF FACIAL JAW	Biomedical	12.07.2025	Tech Park II LH320	10.35 to 12.05 PM
ICEPAM-2582	INFLUENCE OF MATERIAL COMPOSITION AND HOLE GEOMETRY ON THERMAL AND MOISTURE COMFORT IN 3D-PRINTED WEARABLE STRUCTURES	Biomedical	12.07.2025	Tech Park II LH320	10.35 to 12.05 PM
ICEPAM-2596	A comparative study of finite element analysis for variation in thread geometry for pedicle screw fixation onto lumbar spine	Biomedical	12.07.2025	Tech Park II LH320	10.35 to 12.05 PM
ICEPAM-2584	Dual Filament Extruder with individual X-axis	Interdisciplinary	12.07.2025	Tech Park II LH320	10.35 to 12.05 PM
ICEPAM-2588	Simulation Study of Lightweight Piezoelectric Vibration Energy Harvesters for IoT Applications	Interdisciplinary	12.07.2025	Tech Park II LH320	10.35 to 12.05 PM
ICEPAM-2569	Optimization of Fused deposition modelling process parameters for fabrication of ABS – 10% Carbon fiber reinforced composite for higher tensile strength	Composite	12.07.2025	Tech Park II LH320	10.35 to 12.05 PM
ICEPAM-25165	Composites Additive Manufacturing for Space: Enabling Autonomous and Sustainable In-Space Fabrication	Composite	12.07.2025	Tech Park II LH320	10.35 to 12.05 PM