

ADVANCED MATERIALS & MANUFACTURING TECHNOLOGIES (AMMT)					
MR 1.01 (1st floor)					
Date	Session	Time	Sub Track	Paper No.	Title
Day 1: 11 September 2025	Session 1	8:30-8:40	AMMT1	Welcome Address by Dr Dheepa Srinivasan & Prof Raghu Prakash (Track Chairs)	
		8:40-9:00		159067	Development and Characterization of Al-TiB ₂ -Mg ₂ Si-Mg ₂ Sn Composites: Enhanced Mechanical and Wear Properties
		9:00-9:20		159331	Effect of Nanoclay Based Coating in Gfrp on Mechanical, Hydro and Thermal Properties
		9:20-9:40		159687	Green Algae: A Sustainable Alternative in Composite Development
		9:40-10:00		159717	Damage Analysis of Nacre-Inspired Composites
		10:00-10:20		159752	Experimental and Fea-Based Failure Analysis of Injection-Molded Structural Thermoplastic Composites
	Common Plenary Sessions & Lunch				
	Session 2	2:10-2:30	AMMT8	159308	Driving Sustainability for the Cutting Tools in Drilling Process
		2:30-2:50		159311	Machine Learning-Based Prediction of Surface Roughness in Magnetorheological Finishing of Ti6al4v Alloy
		2:50-3:10		159850	Laser Wobble Welding of CU/AL Dissimilar Metals With Ni-Interlayer for Electric Vehicle Battery Application
		3:10-3:30		160236	Evaluation of Grain Size and Improvement of Residual Stresses Through the Heat Treatment in Ti-6al-4v Alloy Using Electron Beam Welding
		3:30-3:50		160475	Advancements in Friction Stir Welding of Dissimilar Metals: A Review on Parameter Optimization Using Machine Learning Techniques
	Coffee Break				
	Session 3	4:40-5:00	AMMT11	159279	Hygrothermal Behaviour of Stainless Steel 316l Based Fiber Metal Laminates Used for Subsea Housing Applications
		5:00-5:20		159688	Investigation of Erosion Behavior of Nickel Added Aa2024 and Aa7175 Aluminium Alloys in As-Cast and Homogenized Condition
		5:20-5:40		159828	Comprehensive Characterization of Polyurethane Coated Fabrics Using Digital Image Correlation for Accurate Fea Simulations
		5:40-6:00		160596	Optimized Cooling Time of Shape Memory Alloy Wires With Gadolinium-Assisted Magnetocaloric Effect
		6:00-6:20		162156	Material Characterization Studies of Fused Silica Ceramic for Performance-Based Aerospace Applications

MR G.05 (Gr Floor)						MR 1.01 (1st floor)			
Date	Session	Time	Sub Track	Paper No.	Title	Sub Track	Paper No.	Title	
Day 2: 12 September 2025	Session 1	8:30-8:40	AMMT 14	Opening Remarks		AMMT 8	159695	Effect of Compensators on the Load Bearing Capacity of Recess Pads in Hydrostatic Guideways	
		8:40-9:00		159000	Performance Investigation of Micro Tools Coated With Carbon Nanotubes and Graphene in Micro-Electro Discharge Machining Process		160515	Design of Portable Friction Stir Welding System: Advancements in Mobility and Innovation for On-Site Applications	
		9:00-9:20		159619	On the Characteristics of the Microchannels Fabricated by μ-Ed Milling Process Using Different Vegetable Oils as Dielectric		160632	Advances in Transition Joint Welding: Techniques, Materials, and Applications	
		9:20-9:40		160275	Nanosecond Laser-Assisted Joining of Soda-Lime Glasses With Aluminium Interlayer for Microelectronic Applications		160804	Wavelet Scattergram Based Acoustic Signal Analysis for Chatter Detection in Turning Process	
		9:40-10:00		160439	Thermo-Mechanical and Microstructural Evaluation of Post-Annealed Waam Niti Alloys.		160946	Numerical study for anode shape prediction with different tool designs in electrochemical milling of titanium alloy	
		10:00-10:20		160738	Optimization of Micro-Milling Parameters for Python Skin-Inspired Biomimetic Micro-Textures: An Experimental Study		160978	Electrode Wear, Surface Roughness and Acoustic Emission Signal Estimation of P-20 Tool Steel and Stavax Materials in Wire Electric Discharge Machining Process Using Ann	
	Common Plenary Sessions & Lunch								
	Session 2	2:10-2:30	AMMT 2	Invited Talk - Biomaterial Scaffolds as 3D Invitro Platformsfor Tumour Modeling		AMMT 9	159295	Influence of Mos2 Morphology for Sensing No2 Gas at Room Temperature	
		2:30-2:50		160714	Development of Animal Biowaste Derived Sustainable Biomaterials for Bone Regeneration Applications		160930	Predictive Model Development for Entry/exit Tension and Power-Torque Optimization in Tension Leveling Systems	
		2:50-3:10		160746	Manufacturing and Mechanical Characterization of Green Composite Materials Using Cashew Nut Shell Liquid and Phenalkamine - an Experimental Study		161215	Tailoring Microstructural Features of Aa6061 Aluminum Alloy at Low to High Cooling Rates in a Casting and Solidification Interface	
		3:10-3:30		161242	DEVELOPING ELECTROSPUN FIBER OF SOYA PROTEIN ISOLATES FOR BIOMEDICAL APPLICATIONS		161260	Property and Composition Dependence of Hot Cracking in Lpbf for Different Materials	
		3:30-3:50		171547	Biodegradable Materials for Sandwiched Roofs: Coir		161500	Long-Term Tribological Performance of Ws ₂ -Blended Inconel 625 Coating Fabricated via Laser-Assisted Cold Spray	
	Coffee Break								
	Session 3	4:40-5:00	AMMT 6	160437	Effect of Surface Treatments on the Thermal Emissivity of 304l Austenitic Stainless Steel	AMMT 10	159642	Understanding the Crack Tip Environment for a Carbon Steel in a 3.5% Nacl Solution Under Static and Fatigue Loading	
		5:00-5:20		161531	A Study on Laser-Assisted Burnishing of Mild Steel		160820	Investigation of Hydrogen Embrittlement (He) in 18ni M250 Steel	
		5:20-5:40		161557	Current Developments in High Entropy Alloys Processed via Powder Metallurgy		162212	Numerical Analysis of Tensile Behaviour of Ss304 Having Stochastically Distributed Pits	
		5:40-6:00		162192	Improving Adhesion Strength of Diamond like carbon coating on Ti6Al4V througih substrate roughness analysis		161014	Understanding Ball Indentation Response of Stainless Steel 304 Post-Constant Amplitude Fatigue Through Finite Element Simulation Studies	
		6:00-6:20		159792 162533	Nature-Inspired Self-Cleaning Titanium Alloy Surfaces: Design, Fabrication, Testing and Applications Rare Earth Doped Thermal Barrier Coatings: Photoluminescence Spectroscopy for Stress Monitoring		159268	An Inelastic Framework for Evolving Orientation Density Distribution in Fiber-Oriented Materials	

MR G.05 (Gr Floor)						MR 1.01 (1st floor)			MR 1.02 (1st floor)		
Date	Session	Time	Sub Track	Paper No.	Title	Sub Track	Paper No.	Title	Sub Track	Paper No.	Title
Day 3: 13 September 2025	Session 1	8:40-9:00	AMMT 14	160780	Investigations on Characteristics of Inconel 617 Superalloy Fabricated by Wire Arc Additive Manufacturing.	AMMT 7	160107	A Novel Approach to Assess Tailored Additive Manufactured Nano-Imprinted Lens for Aircraft Light System	AMMT 15	160573	Microstructure, Microhardness, and Tribological Properties of Al7075/ti ₃ si ₂ c ₂ Max-Phase Surface Composites Fabricated by Friction Stir Processing
		9:00-9:20		160853	A Cost-Effective and Rapid Approach in Manufacturing Microchannel Masters Having Width Perturbations		160205	A Comparative Assessment of Prediction Capabilities of Flow Stress Behavior by Various Constitutive Equation Models for Hot Deformation of Aluminum Alloy Aa2219		160733	Tribological Enhancement of Az91d Magnesium Composites Using Zrb2 Concentration and Ageing Temperature for High-Performance Lightweight Materials
		9:20-9:40		160864	Fabrication of Bio-Inspired Surface Texturing of Ti-6al-4v Eli by Laser Induced Technique to Improve Wear Resistance and Controlled Wettability for Biomedical Application		160590	Impact of Fasteners on the Radar Cross-Section Performance of Radar Absorbing Air Intake Duct		160766	Laboratory Material Compatibility Studies Simulating the Effect on Hydrogen on Ic Engine Components
		9:40-10:00		161064	Exploring the Impact of Process Parameters on Laser μ-3d Printing of Silicon Carbide for High-Precision Applications		161182	Innovative Approach for Synthesis and Metallization of Carbon Fiber Reinforced Polymer Nanocomposites for Highly Reliable Applications.		162669	Scope of Nano-Oil as Mql Medium in Grinding With Touch-Dressed Cbn Wheels Having Patterned Grit Distribution
		10:00-10:20		161078	Investigation of Low-Pressure Air Plasma Treatment of Fluorinated Ethylene Propylene for Triboelectric Nanogenerator-Based Vibration Sensor		171617	Optimized Hipims-Deposited Tialsin Coatings: Tailoring Deposition Parameters for Superior Machining of Inconel 718		160874	Aerospace Joining Processes: Focus on Mechanical Fastening & Advanced Assembly
	Common Plenary Sessions & Lunch										
	Session 2	11:10-11:30	AMMT 14	161120	Influence of Laser Annealing of Kapton Polyimide Substrate on Non-Contact-Based Actuation of Niti Shape Memory Alloy Bimorph Based Smart Actuator	AMMT 8	161031	An Overview of Advanced Sustainable Joining Techniques for Thermoplastic Coated Flexible Polymeric Substrates	AMMT 1	159907	Computational Investigations of Sound Transmission Loss in Hybrid Multi-Layered Fiber - Aluminum Composite Material.
		11:30-11:50		161876	Study of Laser Shock Peening Impact on the Wettability of Ti-Grade 23 Alloy		161108	Machine Learning-Driven Regression Modelling and Rsm-Based Experimental Analysis		159940	Surface Characterization of Al-Wc Nano-Composites During Wedm
		11:50-12:10		162032	Real-Time Analysis of Surface Roughness During Micro-Turning of Ti-6al-4v Alloys Using Vision-Based Techniques		161126	Ultrasonic Dissimilar Joining of Cf/peek Composite and 6061 Aluminium Alloy With Drilled Pattern as Energy Directors		160501	Investigating the Effect of Friction Stir Processing of Stir-Cast Al (2014)-Sic Mmcs on Their Superplastic Behavior
		12:10-12:30		162136	Manufacturing of Textured Surfaces by Creating an Array of Circular Dimples Using Micro Milling		161237	Experimental Analysis to Examine the Significance of Various Process Parameters During Laser-Assisted Machining of Ti6al4v Alloy		161094	Estimation of Coupled Properties of Horizontally Reinforced Short Piezo Fuzzy Fiber Composites With Radially Grown Straight Carbon Nanotubes
		12:30-12:50		167914	On the Characteristics of the Microchannels Fabricated by μ-Ed Milling Process Using Different Vegetable Oils as Dielectric		161471	Optimising Laser Machining of Go Coated Jute/epoxy Composites by Combining Response Surface Approach With Machine Learning to Study the Impact of Coating on Jute Fibre		161113	Study of Tribological Performance of Eutectic Al-Si Alloy Composite Enhanced With Combination of Kyanite and Graphite Reinforcement
	Coffee Break									Coffee Break	
	Session 3	2:10-2:30	AMMT 8	161489	Advancements in Electrical Discharge Machining of Inconel X-750 Using a Rotational Tool Electrode	AMMT 8	Invited Talks - Prog. R. Gangadharan, Indian Institue of Technology, Hyderabad		AMMT 9	161885	Experimental Investigation on Effect of Deep Rolling Process Parameters on the Surface Roughness and Hardness of Aisi 1040 Commercial Steel
		2:30-2:50		161512	Investigating the Solid State Welding of Two Corrosion Resistant Aluminium Alloys		161133	Effects of Interfacial Compounds & Strengthening Mechanism in Comparative Study of Boron Carbide Reinforced and Graphene Reinforced Nanocomposite		159307	Forming of Hard-to-Deform α-Titanium Sheet via Incremental Sheet Forming Process and Assessment of Metallurgical Characteristics
		2:50-3:10		161973	A Novel Submerged Friction Stir Welding Method for Strengthening 6061 Aluminum Alloy With Ti ₂ Nanoparticles		162168	Experimental Investigation on the Mechanical Properties of Graphene Coated Carbon Fibre Composites		161938	Friction Processing of Copper-NaCl Mixture to Fabricate Hollow Cylindrical Metal Foam
		3:10-3:30		159378	Thermo-Physical and Machining Performance of Nanoparticles and Halogen-Free Ionic Liquids-Based Hybrid Metalworking Fluids		163021	Vision Based Parameter Estimation to Reduce Joint Fitment Issues in Hybrid Welding		161540	Fracture Toughness and Low Cycle Fatigue Behaviour of S700mc Ferrite Steel
		3:30-3:50		161849	Effect of Cu Powder Addition Into Melt Pool on Mechanical Properties of Ti/al Laser Welded Joints		171611 171840	Monitoring Failure and Progressive Wear of Uncoated and Tialsin-Coated Carbide Micro Drills Using Acoustic Emission Sensor Microextrusion Technology for Fabricating Micro Components With Enhanced Properties Through Cladding		160256	Elastic-Plastic Fracture Analysis of Additively Manufactured Abs: Influence of Geometry and Raster Configurations on Fracture Toughness and Plastic Zone Size