



MANIPAL UNIVERSITY
JAIPUR

ICAMEN 2026

**6th International Conference on
Advances in Mechanical Engineering and Nanotechnology**

Organized by

**Department of Mechanical Engineering
MANIPAL UNIVERSITY JAIPUR, India**

in association with

**Manipal Institute of Technology, MAHE, India
National Institute of Technology Uttarakhand, India
Kasetsart University, Bangkok, Thailand
National Chung Cheng University, Taiwan
Taylor's University, Malaysia**

October 29-31, 2026

Hybrid Mode: In-Presentia and Online

Program Schedule

DAY – 1 (29/10/2026, Thursday)		
Time	Activity	Venue
9:00 AM onwards	Registration	Foyer, Smt. Sharada Pai Auditorium, 2AB
10:00 AM - 10:45 AM	Inaugural Ceremony of ICAMEN 2026	Smt. Sharada Pai Auditorium, 2AB
10:45 AM - 11:30 AM	Plenary Session by Prof. Harish Hirani, Director, Rajiv Gandhi Institute of Petroleum Technology (RGPT) An Institute of National Importance	Smt. Sharada Pai Auditorium, 2AB
11:30 AM - 11:50 AM	Hi-Tea	Foyer, Smt. Sharada Pai Auditorium, 2AB
12:00 PM - 12:45 PM	Keynote Session by Dr. Karthik Kannan National Chung Cheng University, Taiwan	Room 211, Seminar Hall, Admin Building
1:00 PM - 2:00 PM	Lunch	LHC First Floor, Level 1
2:00 PM - 2:30 PM	Keynote Session (Online) by Dr. Ivana Atanasovska Mathematical Institute of the Serbian Academy of Sciences and Arts, Serbia Link:	Room 211, Seminar Hall, Admin Building
2:30 PM - 3:00 PM	Keynote Session by Prof. Tanmay Basak Department of Chemical Engineering, IIT Madras, India	Room 211, Seminar Hall, Admin Building
3:15 PM - 5:10 PM	<u>Technical Session I (Thermal and Energy) – In- Presentia</u> Session Chairs: Prof. Tanmay Basak Prof. Rahul Goyal	Room 211, Seminar Hall, Admin Building
3:15 PM – 5:10 PM	<u>Technical Session II (Design Engineering/Mechanics) – In-Presentia</u> Session Chairs: Prof. Raviraja Adhikari, Dr. Umed Singh	DoIC Board Room, Admin Building
3:15 PM - 5:10 PM	<u>Technical Session III (Materials Science and Engineering) – In-Presentia</u> Session Chairs: Dr. Karthik Kannan, Dr. Vijay Shankar Kumawat	Room 219, 2 nd Floor Admin Building

3:15 PM - 5:10 PM	<u>Technical Session V (Manufacturing/Production Engineering) – Online</u> Session Chairs: Dr. Achyuta Trivedi, Dr. Jitendra Kumar Katiyar Dr Vaibhav Srivastava Link: Invited Talk by Dr. Achyuta Trivedi Chairperson, National Additive Manufacturing Centre West, Ganpat University	Online (Virtual) – Room No. 213, Admin Building
3:15 PM - 5:10 PM	<u>Technical Session VI (Materials Science and Engineering) – Online</u> Session Chairs: Prof. Ravi Kumar Sharma Dr. Upendra Kulshrestha Link:	Online (Virtual) – Room No. 213 Ext., Admin Building
5:30 PM	Tea	2 nd Floor, Admin Building

DAY – 2 (30/10/2026, Friday)

Time	Activity	Venue
9:30 AM onwards	Registration	
10:00 AM - 10:30 AM	Keynote Session (Online) by Assoc. Prof. Ts Dr. Choo Hui Leng Taylor's University, Malaysia Link:	Room 211, Seminar Hall, Admin Building
10:40 AM - 11:10 AM	Keynote Session (Online) by Dr Anshuman Srivastava, Professor, IIP Lucknow Ministry of Commerce and Industry Government of India Link:	Room 211, Seminar Hall, Admin Building
11:15 AM - 11:30 AM	Hi Tea	2 nd Floor, Admin Building
11:30 AM - 12:30 PM	<u>Technical Session IV (Industrial Engineering) – In-Presentia/online</u> Session Chairs: Dr. Nidhi Pareek Dr. Hemant Raj Link: Invited Talk by Dr. Nidhi Pareek Department of Microbiology, School of Life Sciences, Central University of Rajasthan	Room 211, Seminar Hall, Admin Building
11:30 AM - 12:30 PM	<u>Technical Session INT* (Interdisciplinary) – In-Presentia</u> Session Chairs: Prof. Kalpna Sharma Dr. Manish Rawat	Room 219, 2 nd Floor Admin Building

11:30 AM - 12:30 PM	<u>Technical Session VII (Thermal and Energy) – Online</u> Session Chairs: Assoc. Prof. Dr. Chinnathan Areeprasert, Dr Abhishek Priyam, Dr. Sanjeev Jakhar Invited Talk by Assoc. Prof. Dr. Chinnathan Areeprasert Kasetsart University Bangkok, Thailand Link:	Online (Virtual) – Room No. 213, Admin Building
11:30 AM - 12:30 PM	<u>Technical Session VIII (Design Engineering/Mechanics) – Online</u> Session Chairs: Dr. K K Dwivedi Dr. Rakesh Kumar Dr. Umed Singh Invited Talk by Dr. K K Dwivedi Research Associate Biomedical Engineering University University of Utah, USA Link:	Online (Virtual) – DoIC Board Room Admin Building
12:30 PM - 1:00 PM	Keynote Session (Online) by Prof. Ir. Dr. Haji Kamarul Arifin Bin Ahmad Universiti Putra Malaysia, Malaysia Link:	Room 211, Seminar Hall, Admin Building
1:00 PM - 2:15 PM	Lunch	LHC, First Floor, Level 1
2:15 PM - 3:00 PM	Campus Walk	
3:00 PM - 4:00 PM	Conference Valedictory	Room 211, Seminar Hall, Admin Building
4:00 PM	Tea Break	Foyer, Room 211, Seminar Hall, Admin Building
7:00 PM onwards	Conference Dinner	Venue will be informed separately
DAY – 3 (31/10/2026, Saturday) – JAIPUR DAY TOUR		
Time	Activity	Venue
8:00 AM – 8:15 AM	Assembly and departure for the city tour	Manipal University Jaipur campus
5:00 PM- 6:00 PM	Return to campus	Manipal University Jaipur campus
<i>Venues, invited-speaker allocation and the city-tour itinerary are tentative and any changes will be updated accordingly.</i>		

Technical Sessions

Note: Each paper is allotted 10-12 minutes (8-10 minutes presentation + 2 minutes Q&A). Papers within a session are arranged in order of Paper ID. Online sessions will be held on a virtual platform; the joining link will be shared with registered participants.

S. No.	Paper ID	Topic (Paper Title)	Presenting Author	Date/ Time
PART A – IN-PRESENTIA (OFFLINE) PRESENTATIONS				
[Technical Session I] Thermal and Energy – In-Presentia				
	Session Chairs: Prof. Tanmay Basak (IIT Madars), Dr. Rahul Goyal (MUJ)			29/10/2026 3:15 PM to 5:10 PM In-Presentia Room 211, Seminar Hall, Admin Building
1.	009	Electroosmotic Peristaltic Transport of Ag Cu/Blood Hybrid Nanofluid in a Porous Asymmetric Channel: Beer Lambert Photothermal Modeling and Entropy-Constrained Hyperthermia Optimization	Dr. Pragya Pandey	
2.	010	Modeling Blood-Based Casson Hybrid Nanofluid Peristalsis in Asymmetric Porous Microchannels: Implications for Targeted Thermal Therapy	Dr. R. Surendar	
3.	069	CFD-Based Numerical Investigation of Flow, Thermal and Combustion Characteristics in a Reverse-Flow Annular Gas Turbine Combustor Using ANSYS Fluent	Sudharshan Rayal	
4.	080	Preliminary Evaluation of Start-up Performance of Three Microbial Strains in a Single-Chamber Microbial Fuel Cell	Nattapong Prompitak	
5.	081	Design and Initial Commissioning of Modular Pilot-Scale Hybrid Microbial Fuel Cell Prototypes	Bhurinat Lorpisanchai	
6.	082	Preliminary Evaluation of SPS R1 – STUTZ B Co-Culture Ratios for Cutting-Fluid Wastewater Treatment in a Free-Falling Droplet Microbial Fuel Cell	Jakkapong Chookaew	
7.	115	GA Tuned Multi Output Neural Surrogate for LiBr Water Properties Structured and Experimental Validation	Swati D Chaugaonkar	
[Technical Session II] Design Engineering/Mechanics – In-Presentia				
	Session Chairs: Prof. Raviraja Adhikari (MUJ), Dr. Rakesh Kumar (MUJ)			29/10/2026 3:15 PM to 5:10PM In-Presentia
1.	028	Magnetostatic Simulation of Magnetic Flux Distribution in a Magnetorheological Fluid Journal Bearing Using a N52 Permanent Magnet	Raghavendra Kudva K	
2.	051	Design of a Bio-Inspired Aerator for Water Body Oxygenation	Durga Charan	
3.	053	Design and Computational Assessment of Hybrid Barrier of High-Density Polyethylene (HDPE) and Hydrogenated Nitrile Butadiene Rubber (HNBR) for Mitigation of Sympathetic Detonation	Awadhesh	

S. No.	Paper ID	Topic (Paper Title)	Presenting Author	Date/ Time
4.	070	A Comprehensive Comparative Study of Underwater Robotic Systems for Coral Reef Surveillance: Mechanical Design, Navigation Frameworks, Sensor Integration, and Artificial Intelligence	Sandra Thomas	DoIC Board, Admin Building
5.	100	Vibration Suppression of a Beam Using a Particle Damper: An ANN-Based Study of Particle Size and Packing Ratio	Sunil Kumar	
6.	104	Design and Numerical Validation of a Compliant Spiral-Flexure Z Stage for a Surface Profilometer	Suraj M Yashwant	
7.	114	Feedback Design for Descriptor Systems for Admissibility of Arbitrary Initial Conditions and Index Reduction	Mahendra Gupta	
8.	127	Design and fabrication of a cycloidal gear reducer	Siddharth Arora	
[Technical Session III] Materials Science and Engineering – In-Presentia				
	Session Chairs: Dr. Karthik Kannan (CCU, Taiwan), Dr. Vijay Shankar Kumawat (MUJ)			29/10/2026 3:15 PM to 5:10 PM In-Presentia Room 219, 2 nd Floor, Admin Building
1.	022	Effect of Different Annealing Treatments on the Microstructure and Mechanical Properties of Normalised AISI 4140 Steel	Srinidhi Kukula	
2.	029	Assessment of the Mechanical Performance of Additively Manufactured Geometric-Derived Open-Channel Sandwich Cores	Basavaraja K	
3.	044	From Flow to Failure: Predicting Resin Processability And Layer Defects In 3d Printed Conductive MWCNT Polymer Composites Using Steady State Rheology	Chandrashekar Adake	
4.	057	Quantifying Flank Wear in ZrO ₂ Ceramic Milling Inserts by On-Machine CCD Imaging: Accuracy and Surface-Contrast Limitations	Kittipot Sangkaew	
[Technical Session IV] Industrial Engineering – In-Presentia/Online				
	Session Chairs: Dr. Nidhi Pareek (Central University Rajasthan), Dr. Hemant Raj (MUJ)			30/10/2026 11:30 AM - 12:30 PM In-Presentia/Online Room 211, Seminar Hall, Dome Building
	Invited Talk: Dr. Nidhi Pareek			
1.	015	Study on Barriers for Digital Twin, challenging manufacturing supply chain in emerging economies	Venkat Narayan Das	
2.	030	Decarbonization Potential of Packaging Material Supply Chains in the Indian Auto-Component Industry	Ravi Shankar Jaiswal	
3.	072	Integrating Digital Product Passports and Life Cycle Assessment for Sustainable and Circular Textile Manufacturing (Online)	Ananya Pandey	
4.	107	A Minimal-Path Based Algorithm for Component Reliability Importance in Complex 2-Terminal and k-Terminal Networks (Online)	Haider Saleh Howeidi	

S. No.	Paper ID	Topic (Paper Title)	Presenting Author	Date/ Time
5.	112	Multi-Label Steel Surface Defect Detection Using Ensemble Learning with Confidence-Based Decision Framework (Online)	Varun Manoharan	
6.	121	Advancing Industrial Productivity Through Ergonomics: A Review Of Ergonomic Practices And Interventions	Alpa Sethi	
PART B – ONLINE (VIRTUAL) PRESENTATIONS				
[Technical Session V] Manufacturing/Production Engineering – Online				
	Session Chairs: Dr. Achyuta Trivedi (Ganpat University), Dr Vaibhav Srivastava (MUJ)			29/10/2026 3:15 PM to 5:10 PM Online (Virtual) Room 213, Admin Building
	Invited Talk by Dr. Achyuta Trivedi,			
1.	021	Optimization of Tool Pin Profile for Improved Corrosion Resistance in Friction Stir Welded AA2024-AA6061	C N Vikas	
2.	047	Modeling, Simulation and Analysis of Different Process Parameters of Robotic Forging Line	Narayan Hanmantrao Mane	
3.	067	Investigation of Large-Scale Deformation of a Sheet Metal Forming Die Structure Using the Digital Image Correlation Technique	Sujitra Lolupiman	
4.	071	Experimental Investigation of SiO ₂ –Graphite Nanopowder Mixed Dielectric on Surface Integrity during EDM of Nimonic 90 Alloy	Shail Sharma/Arpit Kumar	
5.	073	Directional Tensile Properties and Fracture Behaviour of Dissimilar Aluminium Alloy Friction Stir Welded Joints	Dhanyashree P	
6.	096	Experimental Analysis of Tensile Strength and Surface Topology of 3D Printed PLA using Taguchi and Grey’s Relational Analysis	Manashri Vashishtha	
7.	097	Systematic Review on Additive Manufacturing for Lightweight EV Components	Anik Kumar	
8.	099	Effect of Build Orientation on Dimensional Accuracy and Functional Fit of FDM Printed Mating Pin and Hole Features in PLA	Ansh Sharma	
9.	119	Recent Advances in Cold Spray Process the State of Art Review	Shivang Upadhyay	
[Technical Session VI] Materials Science and Engineering – Online				
	Session Chairs: Prof. Ravi Kumar Sharma (MUJ), Dr. Upendra Kulshrestha (MUJ)			29/10/2026 3:15 PM to 5:10 PM Online (Virtual) Room No. 213 Ext., Admin Building
1.	016	Hydroxyapatite Biomaterials A Comparative Review of Natural Extraction and Chemical Synthesis Routes for Biomedical Application	Appu C Kurian	
2.	018	Investigation of Nano-Clay-Reinforced Pineapple Leaf Fiber–Glass Fibre Hybrid Epoxy Composites: Tensile, Flexural, SEM and FTIR Analysis	Dharanendra Y T	
3.	020	Investigation of Mechanical and tribological properties of Mg-Zn-xSr-HA-Based Nanocomposites Synthesized via Stir Casting	Appu C Kurian	

S. No.	Paper ID	Topic (Paper Title)	Presenting Author	Date/ Time
4.	023	Combined Influence of Austenitizing Temperature, Soaking Time, and Water–Cow-Dung Hybrid Quenchant Composition on the Hardness and Impact Toughness of 42CrMo4 Steel	Shankarappa Kalgudi	
5.	031	Nanoparticle-Reinforced PEEK Nanocomposites for Biomedical Implants: A Comprehensive Review	Ms. Nishchitha A H	
6.	068	Development and Characterisation of Zirconia Enhanced Jute Epoxy Green Composites for Medical Applications	Dr. Reshmi Basak	
7.	077	Numerical and Experimental Study of the 3D-Printed Re-entrant Auxetic Metamaterials	Daniel Josephs	
8.	120	Mechanical Performance and Fracture Behavior of Polypropylene Hybrid Composites Reinforced with Multi-Walled Carbon Nanotubes and Glass Fibers	Gopeesh Upadhyay	
[Technical Session VII] Thermal and Energy – Online				
	Session Chairs: Assoc. Prof. Dr. Chinnathan Areeprasert (KU, Bangkok), Dr Abhishek Priyam (NMIMS, Mumbai) Co-Chair: Dr. Sanjeev Jakhar			30/10/2026 11:30 AM - 12:30 PM Online (Virtual) Room 213, Admin Building
	Invited Talk by Assoc. Prof. Dr. Chinnathan Areeprasert Kasetsart University, Thailand			
1.	074	Performance Analysis of HCCI Engine Fuelled with Algae Oil and Hydrogen: A Mini Review	Mohammed Zoheb Sarang	
2.	075	Hydrogen-Enriched Biodiesel in CI Engines: A Review of Performance and AI Optimization	Simi Galia	
3.	076	A CFD-Based Quantification of Thermal Saturation in Earth–Air Heat Exchangers under Continuous and Intermittent Operation	Swati Donde	
4.	088	Performance and Emission Characteristics of Diesel Engines Fuelled with Canola Oil Biodiesel: A Mini Review	Soham Gujar	
5.	101	Experimental Investigation of a Low-Cost Solar Water Bulb Integrated with Solar Energy Storage for Indoor Illumination	Suraiya Bhati	
[Technical Session VIII] Design Engineering/Mechanics – Online				
	Session Chairs: Dr. K K Dwivedi (Univ. of Utah, USA). Dr. Umed Singh (MUJ)			30/10/2026 11:30 AM - 12:30 PM Online (Virtual) DoIC Board Room Dome Building
	Invited talk By Dr. K K Dwivedi Biomedical Engineering, University of Utah, USA			
1.	004	Brake pedal durability test cycle estimation	Ravindra Narayan Babhulkar	
2.	059	Multi-Persona Utility Modelling in User-Centered Design for Passenger e-Moped Conceptualization	Sirasak Tepjit	

S. No.	Paper ID	Topic (Paper Title)	Presenting Author	Date/ Time
3.	095	A Reconfigurable Electromechanical Test Platform for Force-Displacement Characterization of Heavy-Duty Gear Shifter Assemblies	Aniket Arun Nale	
4.	111	Design of a Compact Two-Speed Automatic Transmission with Synchronised Shifting for Battery Electric Vehicles	Jayanth Suresh	
5.	153	Modelling of the osteogenesis in large osseous defects as a function of scaffold porosity in 3D-printed titanium implants using a mechano-regulation algorithm	Vasilis Vasilas	
[Technical Session INT*] Interndisciplinary – In presentia				
	Session Chairs: Prof. Kalpna Sharma (MUJ), Dr. Manish Rawat (MUJ)			30/10/2026 11:30 AM - 12:30 PM In-Presentia Room 219, 2 nd Floor, Admin Building
1.	151	Synthetic Gas from Biowaste: Assessing Feasibility and performance as a coal substitute in Power Plants	Dr. Sumit Taneja	
2.	017D	Comparative Evaluation of Additive Manufacturing Technologies of Resource Constrained Manufacturing MSMEs	Satish B Gunjati	
3.	041	Assessment of High Density and Medium Density Polyethylene Materials for Engineering Applications	Madhusoodhanan Nair G	
4.	152	Uncertainty-Aware Process-Region Mapping for Single-Track Laser Directed Energy Deposition of NiTi-CuCrZr Alloy	Ms. Angur Bala Jayant	
5.	036	Exploring the Structure Property Relationship in Annealed EN8D Steel through Microstructure and Mechanical Characterization	Chinnadurai V	
6.	037	Optimal Edge Detection Technique for Wavelet-Assisted Crack Detection and Localization in Experimental Beam Images	Dr. Ravi Nigam	