

ADVANCES IN THERMAL TECHNOLOGY (ATT)

MR G.06 (Gr Floor)

Date	Session	Time	Sub Track	Paper No.	Title
Day 1: 11 September 2025	Session 1	8:30-8:40	ATT 1 -Heating, Ventilation and Air-Conditioning In-Built Environment	Welcome Address by Prof. R Velraj (Track Chair)	
		8:40-9:00		159725	Prediction of Regional Heat Waves Using a Hybrid Lstm Approach
		9:00-9:20		160002	Impact of Extreme Aircraft Cockpit Conditions on Human Thermoregulation
		9:20-9:40		160215	Design and Analysis of Tco2 Cycle for the Heat Pump and Chiller System Skid
		9:40-10:00		159629	Techno-Economic Feasibility of Co2 Utilization in Sustainable Energy Harvesting
		10:00-10:20		159257	Topology Optimization in Natural Convection Problems With Constant Heat Generation
		10.20-10.30		Session Summary	
	Common Plenary Sessions & Lunch				
	Session 2	2:10-2:30	ATT 10 - Thermal system optimization	159867	Performance Optimization of BIPVT-LHTES Unit Triplex Tube Heat Exchanger Using RSM and NSGA-II
		2:30-2:50		160516	Numerical Evaluation of a Y-Junction Micromixer With Cavity and Obstacle Arrangements
		2:50-3:10		161184	Analyzing Wake Dynamics of Flow Past a Cylinder by Integrating Openfoam 11.0 With Singular Value Decomposition, A Machine Learning Technique
		3:10-3:30		161627	Development of a Machine Learning Based Surrogate Model to Predict the Thermophysical Properties of Water at Pseudo-Supercritical State
		3:30-3:50		159243	A Case Study on ‘Addressing Venting of Inline Fuel and Fuel Gas Heating Challenges for Reliable Start-Up of Gas Turbines’
		3:50-4:00	Session Summary		
	Coffee Break				
	Session 3	4:40-5:00	ATT 2- Solar Thermal Technologies	Invited Talk by Dr Arun Muley, Chief Engineer & Fellow, Boeing	
		5:00-5:20		158296	Experimental Study of Drying Efficacy Using a Semi-Transparent Solar PV Powered Drying System
		5:20-5:40		159894	Dynamics of Clear Sky Index of Solar Insolation
		5:40-6:00		159905	Thermal Management of Highly Concentrated Photovoltaic Thermal System Using Porous Medium Flows and Thermoelectric Generator Equipped With a Spectral Splitter
		6:00-6:20		161306	Advancing Solar Drying Systems: a Review of Thermal Performance Improvement Techniques
		6.20-6.30	Session Summary		

Day 2: 12 September 2025	Session 1	8:40-9:00	ATT 2- Solar Thermal Technologies	161318	Enhancing Heat Storage and Transfer in Double-Pass Solar Air Heaters Using Phase-Change Materials and Artificial Roughened Surfaces
		9:00-9:20		161329	Evaluating the Performance of a Medium-Scale Solar Air Heating System Roughened With Longitudinal Fins and Transverse Circular Ribs
		9:20-9:40		161435	Estimating the Influence of Non-Sunshine Hour Auxiliary Heating and Humidity on Double Slope Solar Still Performance
		9:40-10:00		160963	Experimental Study: Performance Enhancement of Solar Still Desalination Through Sound Agitation and Automated Glass Surface Cleaning Mechanism
		10:00-10:20		162154	Effect of Geometrical Parameters on Solar to Thermal Conversion Performance of a Cavity Receiver for Solar Parabolic Dish Concentrator
		10.20-10.30	Session Summary		
	Common Plenary Sessions & Lunch				
	Session 2	2:10-2:30	ATT 3- Thermal management of electronic and electrochemical systems	159566	Optimization of the Thermal Performance of Battery Modules in Electric Vehicles
		2:30-2:50		160902	Development of a Test Rig for Evaluating the Thermal Management System of Li-Ion Batteries in Small Electric Vehicles
		2:50-3:10		161093	Simultaneous Estimation of Orthotropic Thermal Conductivity and Spatial Variation of Interface Thermal Contact Conductance of Aluminum Honeycomb Plates Through Inverse Heat Transfer Technique: A Case Study on Bolted Joints
		3:10-3:30		162047	Investigating Natural Convection Cooling in Distribution Transformers Through Integrated EMAG-CFD Analysis
		3:30-3:50		161827	Performance Investigation of Common Header Pulsating Heat Pipe for Thermal Management of Machines
		3.50-400	Session Summary		
	Coffee Break				
	Session 3	4:30-4:40	ATT 3- Thermal management of electronic and electrochemical systems	Industry Talk by Mr. Virendra Jhamb, CEES India	
		4:40-5:00		171646	Thermal Performance of Canopy-to-Canopy Liquid Cooling Systems: A Numerical Modeling Approach
		5:00-5:20		171698	Comparative Analysis of Thermoelectric Cooling vs. Liquid Cooling for High-Performance Electronics
		5:20-5:40		159598	Performance and Emission Evaluation of Automotive Engines With CNG Using Indian Driving Cycle
		5:40-6:00		160394	Influence of Ambient Temperature on Pendant Droplet Evaporation of Biodiesel Blends With Nanoparticles
		6:00-6:20		161044	Performance Evaluation of a Diesel Engine Using Microalgae Biodiesel With Cerium Oxide Nano-Additives
		6.20-.6.30	Session Summary		

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Day 3: 13 September 2025	Session 1	8:30-8:50	ATT 7 - Heat Exchangers	159410	Experimental Analysis of Double Pipe Corrugated Heat Exchanger	ATT 10- Thermal system optimization	
		8:50-9:10		159666	Development of a 3D Hybrid Model Utilizing Thermal Resistance Network and Density-Based CFD Tools for a Cylindrical Microchannel Heat Exchanger		
		9:10-9:30		159973	Effect of Twist and Aspect Ratio in Supercritical Heat Transfer Augmentation in Helical Channel With Square Cross-Section		
		9:30-9:50		160442	Restructure Thermal Management: Enhanced Performance of Closed Loop Pulsating Heat Pipe (CLPHP) With Synthesized Reduced Graphene Nanofluid (rGN) for Advanced Electronic and 3D Printer Extruder Cooling		
		9:50-10:10		160805	Comparative Analysis of Aerobeads and Aerofoil Shapes for Heat Transfer Enhancement in Heat Exchanger Systems		
		10:10-10:30		161300	Design and Development of Thermostatic Pressure Relief Bypass Valve		
	Coffee Break						
	Session 2	11:10-11:30	ATT 8- Computational and Experimental Heat Transfer	160767	Large Eddy Simulation of Rayleigh-Bénard Convection Using the Spectral Element Method: A Robust Approach for High Rayleigh Number Flows		
		11:30-11:50		159613	Handmade Platinum Thin Film Sensor for Thermal Sensing Applications		
		11:50-12:10		160084	Influence of the Directional Magnetic Field on the Convection Heat and Mass Transfer in the Gradually Constricted Sinusoidal Enclosure		
		12:10-12:30		160559	Heat Flux Predictions From Single and Cluster Configuration of Satellite Thrusters Using a Hybrid Computational Approach		
		12:30-12:50		160724	Numerical Investigation of Droplet Breakup and Evaporation in Polymer Devolatilization With Steam Treatment		
		12.50-1.00		160584	New Calibration Method of Thin Film Sensor Using Water Vapour Particles		
	Common Lunch						
	Session 3	2:10-2:30	ATT 9- Thermal storage technologies	160324	Effect of Fins and Graphene Nanoparticles on PCM Solidification in Triple Tube Heat Exchanger		
		2:30-2:50		160326	Effects of Graphene Nano Aggregates on Thermal Properties of Inorganic Phase Change Material		
		2:50-3:10		160337	Parametric Analysis of Silica Gel for Thermal Energy Storage in Space Heating Applications		
		3:10-3:30		161401	Necpcm and It's Uses.		
		3:30-3:50		159333	Investigation of Stratification Performance in Oil-Based and Water-Based Cylindrical Thermal Storages for Industrial Applications		
		3.50-400		Session Summary			