

Tuesday, September 9th 2025 | Preliminary Agenda

"All sessions and timings are preliminary, and subject to change"

08:55	Welcome
09:05	Keynote: Powering the Future of Flight – Challenges and Opportunities in Next Generation Simulation Technologies <i>D. Uma Maheshwar Chief Consulting Engineer – GE Aerospace Engineering India Center</i>
09:45	Keynote: Advancements in Simulation Technologies - How AI/ML is going to be applied for Concept development in Automotive Product Development <i>Sarma S R Akella Mahindra & Mahindra</i>
10:25	Break

Session 1A AI/ML 1		Session 1B Simulation Governance 1		Session 1C Multiphysics 1	
11:00	Application of Machine learning in Aerospace Structure Engineering and Its Future Directions <i>Sharad Anand Shivaprasad Collins Aerospace</i>	Beyond Software Training: Building Fundamental FEA Understanding for Marine Structural Engineers <i>Sai Sabarish M Warship Design Bureau, Indian Navy</i>		Novel Multi-Physics Simulation Strategy For Stringent Aero-MIL Relay Requirements <i>Abdur Rehman Khatib TE Connectivity</i>	
11:20	HIC Value prediction for Pedestrian Protection using Machine Learning <i>Swapnil Nanaware Stellantis</i>	Automotive CAE - Trends & Challenges <i>Rahul Mahajan Automotive Research Association of India (ARAI)</i>		Experimental Validation of a Three Dimensional Numerical Model of an Annular Linear Induction Pump <i>Avijit Chakraborty Indira Gandhi Centre for Atomic Research</i>	
11:40	Chassis Subframe Part Organising using AI <i>Mayank Kapoor MOBIS India Limited</i>	Application of Credibility assessment framework for virtual testing at Bosch <i>Aurobbindo Lingegowda Robert Bosch</i>		Driving aircraft flap seal design with FSI (Fluid Structure Interaction) simulation <i>Aditya Pandey Trelleborg Sealing Solutions Germany GmbH</i>	
12:00	Accelerating Head Impact Simulations with AI-Driven Surrogate Modeling for Pedestrian Safety Optimization <i>Tejas Ramesh Chavan Altair</i>	Simulation for the industry of tomorrow <i>Satyajeet Kulkarni Transvalor India</i>		High Fidelity Coupled Analysis of Component Loss and Temperature in Power Electronics <i>Sandeep Roy Altair</i>	
12:20	Lunch	Lunch		Lunch	
Session 2A AI/ML 2		Session 2B Materials 1		Session 2C Multiphysics 2	
13:35	Development of an AI model of Airbag Simulation Using Image Processing <i>Arjun Dev MOBIS India Limited</i>	Parameter Identification For Nitinol Shape Memory Alloy Modeling Via Stress-Strain Curve Optimization <i>Bhanu Pratap Reddy Stryker Global Technology Center</i>		Electro-Thermal Co-Simulation Framework for High-Frequency Busbar Design in Aerospace Applications <i>Advait Tikle TE Connectivity</i>	
13:55	Accelerating Battery Pack Thermal Simulations using Physics-Informed Neural Networks <i>Prashant Kumar Srivastava Weedy Software Pvt. Ltd. (oorja)</i>	Numerical simulation studies of microstructure and property evolution during TIG welding of Inconel 718 alloy at service conditions <i>Vinoth Ammasi Keysight Technologies India Private Limited</i>		Dynamic Performance Analysis of Relay/Contactor using Ansys Maxwell + Simplorer <i>Pooja G TE Connectivity</i>	
14:15	Machine Learning-Enhanced Reduced Order Modeling for BIW Design Optimization: A Study in Frequency Response Reduction <i>Vidit Sharma ESTECO Software India Pvt. Ltd.</i>	Evaluating Carburization Effects on Aero-Engine Gears: A Simulation-Driven Approach to Performance Optimization <i>Raktim Biswas CYIENT Ltd</i>		Fluid Structure Interaction with phase change modelling for e2W shock absorber design <i>Soumik Ghatak Ansys Inc.</i>	
14:35	GenAI Solutions for Synthesis of Body Structures <i>Shubham Verma Detroit Engineered Products</i>	FEA Analysis of Aging-Induced Mullins Damage in Rubber Suspensions <i>Dr. Mohammed Ibrahim Kittur Apollo Tyres Ltd</i>		Enhancing HEVs Battery Performance, Reliability & Lifespan Through A Novel Battery Thermal Management Concept By Leveraging CFD Simulation Techniques <i>Vinay Kumar Hyundai Motor Engineering Pvt. Ltd.</i>	
14:55	Break	Break		Break	

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Session 3A AI/ML 3		Session 3B Materials 2	Session 3C Systems Modeling 1
15:30	Reimagining Crash Simulations with AI: Transforming Legacy Data into Scalable Surrogate Models <i>Celal Karadogan Ing.-büro J. Schendel</i>	Numerical Simulation Of Hyperelastic EPDM Seal Performance Under Variable Temperature And Material Conditions For Automotive Applications <i>BHARATH P T BorgWarner</i>	Model based systems engineering of electromechanical devices <i>Namratha Prakash Stryker Global Technology Center</i>
15:50	A Novel Cost-Effective Brake Monitoring System Using Minimal Sensing and Data-Driven Modeling <i>B Veda Vamsi Krishna Altair</i>	A Simulation Model To Evaluate Particle-Level Properties Of A Powder Based On Its Bulk Properties <i>Koteswara Rao Gochika Whirlpool India</i>	Energy Efficiency in Domestic Appliances: A System-Level Approach <i>Ajay Naiknaware Whirlpool India</i>
16:10	Advanced Hybrid Algorithms for Predictive Maintenance and Remaining Useful Life Estimation of the Batteries <i>Prashant Kumar Srivastava Weedy Software Pvt. Ltd. (oorja)</i>	A Study Into the Effects of Porosity on a General Composite Laminate Structure using Simulation Methods <i>Ravi Putrevu The Boeing Company</i>	A Novel Approach For Battery Pack Performance Variation To Improve EV Performance <i>Nakul Joshi Gamma CAE Technologies Private Limited</i>
16:30	ML-Driven Optimization of Battery Pack Performance during Concept Design <i>Anit JAIN Dassault Systemes</i>	Integrated Material Modeling for Performance-Driven Design of Railway Anti-Vibration Components <i>Dr. Mohammed Ibrahim Kittur Apollo Tyres Ltd</i>	Hybrid Backstepping and Sliding Mode Control with MPDT thruster as actuator for Attitude correction in CubeSats <i>Akash C Hindustan institute of technology and science</i>
16:50	Short Break	Short Break	Short Break
Session 4A Structural Mechanics		Session 4B Materials 3	Session 4C Systems Modelling 2
17:25	Predicting Washer Button Reliability using Finite Element Simulation <i>Pramod Kanawade Whirlpool India</i>	Measuring Strain Distribution in Tensile Test Specimen Finite Element Model and DIC Experimental Data <i>Mohit Kumar Stryker Global Technology Center</i>	1D Thermal Modelling and Testing of Rack Power Distribution Unit <i>Richie Garg Schneider Electric</i>
17:45	Simulation driven tool for predicting the structural integrity of spin-on filters. <i>Dinesh Lonkar Atmus Filtration (Pune)</i>	Numerical Simulation Methodology For Thermoforming Manufacturing Process For Precisely Evaluating Thickness Variation <i>Dheeraj Kapse CNH</i>	Future-oriented lab data empowering Digital Twins <i>Sridhar K Schneider Electric</i>
18:05	Simulation of Assembly stress in Tube <i>Anjali Ramachandran Caterpillar Inc.</i>	Structural-Diffusion virtualization & effect on structures material properties <i>Chetan Mahawar Ansys Software Pvt. Ltd.</i>	Detailed Modeling and Simulation of HVAC Compressor and Utilization for System Study through 1D simulation <i>Ajith Kumar Modelon</i>
18:25	FEA study on the effect of prying using contact elements and validation with classical hand calculation in the typical structural brackets <i>Kuralanban Ramu Tech Mahindra Ltd</i>		Analysis of Traffic Congestion in North Campus, Delhi University Using Continuous Time Models <i>Siddhartha Mahajan Delhi University</i>
18:45	End of Day 1		

Wednesday, September 10th 2025 | Preliminary Agenda

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08:25	Welcome
08:30	Keynote: Enabling Advanced Structural Modelling and Simulation (M&S) as Certification Means of Compliance in Aerospace <i>Jaya Raju Namala Head of Advanced Numerical Simulations Group Airbus</i>
09:10	Short Break for Turnaround

Session 5A Thermo-Mechanical Analysis		Session 5B Dynamics 1		Session 5C Fluid Dynamics 1	
09:20	Thermo-Mechanical Reliability Study Of BGA Packages Using Finite Element Analysis <i>Manish Kumar Valeo</i>	Dynamic Simulation and Experimental Validation for Horizontal Axis Washing Machine <i>Mahendra Jadhav Whirlpool India</i>		Aero-Vibroacoustic Noise Prediction and Design Optimization of Blower for Acoustic Performance Improvement <i>Pushpendra Mahajan Whirlpool India</i>	
09:40	Thermal Buckling Prediction For Natural Fiber Reinforced Composites Using AIML <i>Guru Anandan Altair</i>	Instrument Panel design optimization for Head Impact Analysis <i>Smit Sharma Hyundai Motor Engineering Pvt. Ltd.</i>		A Brief Study Of Parametrization In CFD For Optimized Results <i>Prem Chinna Polamada MOBIS India Limited</i>	
10:00	Study Of Thermo-Mechanical Behavior Of Overmolded Parts Under Sudden Temperature Fluctuations <i>Manish Kumar Valeo</i>	Physics-Based Cloth Simulation in Dryers: Impact on Dryer Efficiency <i>Umakant Thakur Whirlpool India</i>		Drag Prediction of Qargos F09 Electric Cargo Vehicle using CFD <i>Pranav Shinde Revolta Motors Pvt Ltd [QARGOS]</i>	
10:20	Thermal structural coupled analysis for two manufacturing processes used in semiconductor industry <i>Soumik Ghatak Ansys Inc.</i>	Hybrid IGA/FEA Model Approach for Crash Simulation <i>Amruta Raut Stellantis</i>		Design Insights for Efficient Ventilation: A CFD-Based Sensitivity Analysis of Factors Influencing CO ₂ Levels in a Washer/Dryer <i>Ketan Parashar Whirlpool India</i>	
10:40	Break	Break		Break	
Session 6A Analysis and Testing		Session 6B Dynamics 2		Session 6C Fluid Dynamics 2	
11:15	The Role of Virtual Testing in Passive Automotive Safety - Past, Present and Future <i>Kirankumar Pedamallu ARUP</i>	Use Of Transient Dynamic Simulations For Damage Prediction Of Aircraft Composite Structures For Bird Strike And Tyre Debris Impacts <i>Abhijit Chaudhuri Airbus Group India Private Ltd</i>		Non-dimensional model for pressure drop prediction across spring loaded valve <i>Vivek Tripathi Atmus Filtration (Pune)</i>	
11:35	Transforming Surgical Stapler Development: From Physical Testing to Virtual Validation <i>Sunil Sutar Dassault Systemes</i>	Optimizing the crashworthiness of plastic components by utilizing the injection molding manufacturing effects. <i>Nagananda Upadhyha Gopalakrishna BETA CAE Systems India Pvt. Ltd.</i>		Virtual Assessment of Rotating Spray Arm Performance Using Multiphase CFD Simulatio <i>Vaibhav Gulakhe Whirlpool India</i>	
11:55	A Digital Twin Framework with Machine Learning for Real-Time Life Prediction of PCBs Under Vibration Loading <i>Sohan Rao Altair Engineering India Pvt. Ltd</i>	High-Fidelity Simulation of Internal Cell Explosion in EV Battery Packs <i>Akshaya Gomathi Ansys Software Pvt. Ltd.</i>		CFD investigation of Princess Royal propeller cavitation and acoustics: A benchmark study <i>Madhan Kumar Simerics Technology India Pvt. Ltd.</i>	
12:15	Leveraging Finite Element Simulation and Machine Learning Algorithm for Reaction Force Prediction of Solenoid Bracket Plate <i>Mayur Sabale Knorr-Bremse Technical Center India</i>	Emergency Brace Positioning and Injury Risk Prediction of Aircraft Occupants under Impact Loading <i>Shankar Venkat ARUP India - nHance Engineering</i>		Evaluation of operational characteristics of Hydrocyclones to enhance performance using numerical studies <i>Vaideeswarasubramanian Kannan FLSmidth</i>	
12:35	Lunch	Lunch		Lunch	

	Session 7A Optimisation 1	Session 7B Noise, Vibration, and Harshness	Session 7C Fluid Dynamics 3
13:50	Air Channel Warpage Optimization with Injection Molding Simulation <i>Sreevin Satheesan Whirlpool India</i>	Electric Vehicle Motor Magnetic Noise Reduction By Integrating Electromagnetic Simulation and Machine Learning <i>Vinothini Gurudevan Valeo India Private Limited</i>	Aid of CFD simulations in safe and efficient thermal management of IT servers in data centre cooling <i>Ankit Khandelwal ITB Engineering Services Private Limited</i>
14:10	Optimizing Elastomer Sealing for IP-Rated Enclosures: A Nonlinear Simulation Approach with Preload Bolted Systems <i>Dore Prasad R TE Connectivity India</i>	Electromagnetic Noise Prediction of Washing Machine BLDC Motor <i>Nagaraja Jade Whirlpool India</i>	3D CFD Simulation Methodology For Safe And Efficient Hydrogen Refueling For Hydrogen Internal Combustion Engines <i>Gourav Khanna Cummins - CTCI - CES</i>
14:30	Surrogate Based Multi-Objective Process Optimization of Laminated Composite Panels <i>Soban Babu Beemaraj TATA Consultancy Services Limited</i>	Simulation Driven Structural And Vibration Fatigue Analysis Of PCBs For Agricultural Machineries <i>Mayalekshmi K.M CNH</i>	Tractor muffler design and simulation for transmission Loss (TL) evaluation and Back Pressure <i>Vinay Yadav TAFE</i>
14:50	Robust Design Optimization of Turbine Discs <i>Abhiram D R Infosys</i>	Enhancing Industrial Ethernet-to-Fiber Converter Reliability Through Vibration Simulation and Testing <i>Pallavi Pawar TE Connectivity</i>	Three Dimensional CFD Analysis of a Cabin Thermal Comfort During Heating and Cooling Cycles <i>Raghu Vamsee Godavarthi Simerics Technology India Pvt. Ltd.</i>
15:10	Break	Break	Break
	Session 8A Optimisation 2	Session 8B SDM	Session 8C Electromagnetics
15:45	Optimization Automation for Subframe Design Improvement <i>Mayank Kapoor MOBIS India Limited</i>	Master Complexity of Version Management in SDM by AI-Driven Assistance <i>Harsh Sharma SCALEsdm India Pvt. Ltd.</i>	Testing and Electromagnetic simulations Circuit Breaker Busbar Architecture <i>Richie Garg Schneider Electric</i>
16:05	Process Development for reduced variation in suspension level performance using MORDO method <i>Jugal Pathak Mahindra & Mahindra</i>	Democratization of Virtual V&V for Casing Reconnect System through SPDMM <i>Sayan Banerjee SLB</i>	Motormojo: A Physics-based Tool for the Design and Simulation of Motors for Electric Vehicles <i>Srinivas Tangirala Pilabz Electro Mechanical Systems Pvt. Ltd.</i>
16:25	Multidisciplinary Design Optimization of a Typical Civil Aircraft Wing <i>Bharath Kanaparathi Dassault Systemes India Private Ltd.</i>	Facilitating Virtual Testing at an Industrial Level by Simulation Data Management <i>Harsh Sharma SCALEsdm India Pvt. Ltd.</i>	Advanced Equalization and Signal Integrity Simulation Techniques for High-Speed PCB Design <i>Vishal Mahajan MOBIS India Limited</i>
16:45	Design And Analysis Workflows For Topologically Optimized Lattice Structures Generation Conforming Duty Cycle And Printing Feasibility <i>Dheeraj Kapse CNH</i>		
17:05	Short Break for Turnaround		
17:15	Closing Session		
17:25	End of Conference		