

Plenary Session: Auditorium

8:30-8:40	Welcome & Introduction (Mr. Mario Felice – Member of NAFEMS Council & Americas Steering Committee - Founder of virsolTech Engineering Consulting, LLC)
8:40-8:45	Platinum Sponsor Session: How Simulation is Accelerating E-Mobility Revolution (Mr. Joshua Lupu - Marketing Director - AVL)
8:45-9:30	Keynote: Electrification Thermal Development: Opportunities and Challenges (Dr. Yangbing Zeng - Technical Fellow, Electrochemistry & Battery Thermal - General Motors Corp.)

9:30-10:00 **Networking Break in the North & Main Lobby Sponsored by**



	Auditorium: Electrification / EV Battery	Room 101: Electrification / E-Motors	Room 102: Autonomous Vehicles & ADAS Simulation Technologies
	Chair: Tom Ramsay, Honda Development & Manufacturing of America	Chair: Sunil Patil, Ford Motor Co.	Chair: Emily Horn, John Deere
10:00-10:20	Multi-Scale Design of a Battery Thermal Management System (Aziz Abdellahi - Siemens Digital Industries Software)	Simulation-Based Electromagnetic Design and Thermal Analysis of Electric Machines (Anthony Lowther - Maya HTT)	High Fidelity Physics-Based Electromagnetics Simulation of Radar and Vehicle-to-Vehicle Connectivity Systems for Autonomous Vehicles (Ushe Chipengo - Ansys, Inc.)
10:20-10:40	Electro-Thermal Modeling and Co-Simulation of Lithium Ion Cells for High Performance Applications (Prashanth Ramesh - OSU Center for Automotive Research)	Optimization of a High-Power Electric Traction Machine (Adarsh Elango - ESTECO North America, Inc.)	ADAS Calibration Optimization by Deep Neural Networks (Jaimin Bai - Ford Motor Co.)
10:40-11:00	Conjugate Heat Transfer Analysis of a Cold Plate Cooled Battery Pack for Electric Vehicles Using CFD (Chiranth Srinivasan - Simerics, Inc.)	A Scalable System Modeling Approach for Electric Powertrains (John Batteh - Modelon, Inc.)	Edge Case Analysis in Adverse Weather Conditions Taking into Account Sensor Degradation (Simona Ottaiano - Siemens Industry Software NV)
11:00-11:20	Combining 1D and 3D Multi-Physics Modeling Methodologies for Thermal Runaway Propagation Analysis (Joe Wimmer - Gamma Technologies)	Digital Transformation of CAE Results Processing, Sharing, and Review in the Context of Automotive Electrification (Prasad Mandava - Visual Collaboration Technologies, Inc.)	Simulation of Real-World Events for ADAS - PCA Feature Validation (Abhay Bhivare - Ford Motor Co.)

11:20-12:30 **Lunch in Dining Room**

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12:30-1:15 **Keynote: Deploying World-Class Simulation Across Ford Software-Defined Vehicles**
(Dr. Justyna Zander - Director ADAS Simulation - Ford Motor Co.)

1:15-1:25 **Brief Transition**

	Auditorium: Electrification / EV Battery	Room 101: Electrification / E-Motors	Room 102: Autonomous Vehicles & ADAS Simulation Technologies
	Chair: Jose F. Magalhaes, John Deere	Chair: Mario Felice, NAFEMS Council & virsolTech Engineering Consulting, LLC	Chair: Karim Zouani, Ford Motor Co.
1:25-1:45	Integrated 1D and 3D Workflow for EV Battery System Development (Chin-Wei Chang - Dassault Systèmes SIMULIA Corp.)	What's Special About EV's? Development of a Flexible Digital Thread for System Performance Simulation at Toyota Motor Europe (Malcolm Panthaki - Aras Corporation)	Virtual Validation of Intelligent Lighting Features with Help of Simulation (Vijit Dubey - Ford Motor Co.)
1:45-2:05	Thermal Runaway Simulation of EV Batteries with CFD and 1-D Systems Model Co-simulation (Anup Paul - Hexagon Manufacturing Intelligence, Inc.)	Electric Drive Engineering: An Exercise in Collaboration and Integration (Steven Dom - Siemens Industry Software NV)	Model-Based Assessment of Fuel Economy Impact of ADAS Functions on Class 8 Trucks (Jonathan Zeman - Gamma Technologies)
2:05-2:25	Optimization of an Electric Machine Cooling System (Simon Gomboc - AVL Slovenia d.o.o.)	e-PowerTrain Electric Motor Gear Analysis (Sylvia Rissell - Dimensional Control Systems, Inc.)	V&V Best Practices and Solutions for Building Safe Autonomous Systems (Kenny Hoang - Applied Intuition)
2:25-2:45	A Fast and Intelligent Physics Informed Machine Learning Model for Optimizing the Locations of Sensors to Prevent Thermal Runaway in Lithium-Ion Batteries (Esmaeil Dehdashti - Predictive IQ)	Methods for Structural Durability Simulations and Vibration Fatigue in Electric Vehicles (Jon Aldred - nCode, HBK Inc.)	CFD Simulation of Ram Air to Protect AV Sensor During Rain (Navvab Khajehosseini - Ford Motor Co.)

2:45-3:15 **Networking Break in the North & Main Lobby Sponsored By**



Plenary Session: Auditorium

3:15-4:45

Panel Discussion: Simulation Solutions: Opportunities and Challenges for the Effective Delivery of Automotive Electrification and Autonomous Technologies

(Mr. Mario Felice - Member of NAFEMS Council & Americas Steering Committee - Founder of virsolTech Engineering Consulting, LLC)

4:45-6:00

Networking Reception in the North & Main Lobby

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