NAFEMS Americas Conference 2026 – Preliminary Agenda (subject to change) – Produced: 25 May 2026

Day 1 — Wednesday, 27 May 2026

7:30 AM — Registration and Exhibit Hall Open

PLENARY

8:30 AM
Welcome
Tim Morris – NAFEMS

KEYNOTE

9:15 AM
Engineering Mobility Beyond Earth: Simulating Terrain and Reinventing Rover Wheels
Dr. Heather Oravec – NASA Glenn Research Center

10:00 AM — Networking Break in Exhibit Hall

Session 1 10:30 AM – 12:00 PM

Time	Room 101 1A – Manufacturing Process 1	Room 102 1B – Simulation Process and Data Management 1	Room 103 1C – Multiscale and Multiphysics	Room 105 1D – CFD 1	Jr Ballroom A 1E – Optimization 1	Jr Ballroom B 1F – Training Session	Jr Ballroom C 1G – Artificial Intelligence and Machine Learning 1	Jr Ballroom D 1H – Artificial Intelligence and Machine Learning 2	Prefunction N 1J – How to Navigate Your NAFEMS Membership
10:30 AM	**Advances In Super Plastic Forming Simulations** Landon Henson · The Boeing Company	**Enabling Digital Thread for Simulation: A PLM-Driven Framework to CAE Data Governance and Lifecycle Integration** Prasun Saha · Harsco Rail	**Accurate Simulation of a Hose with a Complex Reinforcing Outer Layer** Brant Ross · EnginSoft USA	**CFD plus FEA Applications in E-Vehicle Battery Chassis and BIW development and Innovative Manufacturing Tooling Process** Wen Zhang · Cosma	**Leveraging Adjoint Methods for Fluids and Thermal Design Improvements: A Workflow Comparison** Christian Windisch · Siemens Digital Industries Software	**Dynamic Analysis Training** Tony Abbey · FETraining	**From Raw Data to Intelligent Decisions: Building AI-Ready Simulation Workflows** Prasad Mandava · Visual Collaboration Technologies, Inc.	**Machine Learning'Enabled Prediction of Stress Response and Fatigue Life for a Parameterized Aerospace Lug** Jialun Han · Dassault Systemes SIMULIA Corp	**How to Navigate Your NAFEMS Membership** Craig Fahrenholz · NAFEMS Ltd.
11:00 AM	**Simulation-Driven and AI-Enabled Layer Time Optimization for Large-Format Additive Manufacturing** Bhagya Prabhune · Oak Ridge National Laboratory	**A Unit of Assurance for Continuous Credibility in MBSE and Digital-Twin Simulation Workflows** Vishnu Viswanathan · George Washington University	**Leveraging Mesh-Particle Multiphysics Simulation Technology to Enable LLM-based Engineering Workflows** James Crist · Dive Engineering Software, Inc	**Accelerating BMW CFD Thermal Management Simulation** Ian Pegler · NVIDIA	**Calibration of Ground Vehicle Simulation Models** Peter Wang · Dassault Systemes SIMULIA Corp		**A Finite Element-Inspired Approach to Physics-Informed AI for Industrial Engineering Applications** Derek Peeling · Maya HTT	**A Comparitive Study between Parametric and Historical approach for Conceptual Roof Crush Surrogate Models** Johann Koshy · CST of America (a Dassault Systèmes Simulia Company)	
11:30 AM		**Industry Examples of More Simulations in Less Time with Abstract Model powered SimAgents** Davis Evans · Novus Nexus	**Thermal-Fluid and Structural Analysis of the Mini-Channel Beam Dump (MCBD)** Raul Quispe-Abad · Facility for Rare Isotope Beams (FRIB)	**Optimization of Oil Immersion Quenching Process Using 3D CFD Simulation** Shanmugasundaram Chandrakesan · AVL - Simulation Technologies	**Topology Optimization, Generative Design, and Additive Manufacturing in the Energy Sector: Lessons from Two Industrial Deployments** Andy Fine · Fine Physics LLC		**Accelerating Aerodynamic Simulation Workflows Through AI-Driven Predictive Modeling and Real-Time Hyper-Realistic Visualization** Palash Waghmare · Synopsys	**CognaSIM Presentation** John Zinn · CognaSIM	

12:00 PM — Networking Lunch in Exhibit Hall

PLENARY

1:00 PM
The Whys and Hows of the Professional Simulation Engineer Certification
Travis Stephens – Gulfstream Aerospace

KEYNOTE

1:15 PM
Pacing with the Exponential Progress of AI in the Food CPG Industry
Garrett Swindlehurst – General Mills

2:00 PM — **Networking Break in Exhibit Hall**

Session 2 2:30 PM – 5:00 PM

Time	Room 101 2A – Manufacturing Process 2	Room 102 2B – Simulation Process and Data Management 2	Room 103 2C – Optimization 2	Room 105 2D – CFD 2	Jr Ballroom A 2E – Simulation Driven Design 1	Jr Ballroom B 2F – Training Session	Jr Ballroom C 2G – Artificial Intelligence and Machine Learning 3	Jr Ballroom D 2H – Artificial Intelligence and Machine Learning 4	Prefunction N 2J – How to Navigate Your NAFEMS Membership
2:30 PM	**Improving Integrated Circuit Advanced Packaging Manufacturability with Thermomechanical Simulation** Tyler Ferris · Ansys, Inc.	**Streamlined and Semi'Automated FEA Workflow for Pipeline Integrity Assessment** Pier-Olivier Duval · Creaform	**A Physics-Informed, Data-Driven Framework for Resistance Spot Welding Performance Prediction and Optimization in Multi-Sheet BEV Joints** Zhendan Xue · ESTECO North America, Inc.	**Using Computational Fluid Dynamics to Assess and Optimize Laboratory Ventilation** Cassidy Strode · Chemistry & Industrial Hygiene, Inc.	**An Advanced Finite Element Analysis Methodology For Well Integrity Assessment Under Geomechanically -Induced Loads From The Reservoir Compaction Effect** Georgiy Makedonov · VIAS3D	**Applications of Probabilistic Analysis for Decision Making Training** David Riha · Southwest Research Institute	**AI-Driven Multi-Material Lattice Design and Optimization for Automotive Bumper Energy Absorbers** Bhagya Prabhune · Oak Ridge National Laboratory	**Agent-Driven Workflows in Engineering Simulation: Augmenting the Analyst in the Age of Autonomous Systems** Evan Kay · Navier AI	**How to Navigate Your NAFEMS Membership** Craig Fahrenholz · NAFEMS Ltd.
3:00 PM	**Stress Based FLD Approach for Accurate Failure Prediction in Multi-Step Sheet Metal Forming and Hydroforming: Validated Through FEA Simulation and Experimentation** Nilesh Gajjar · Caterpillar, Inc.	**Bridging the Gap: A Review of Engineering Simulation Interoperability** Hubertus Tummescheit · Model Based Innovation LLC	**Balancing Engineering Criteria and Human Expertise in Musical Horn Optimization** Yan Pozhanka · New Mexico Institute of Mining and Technology	**Full-Fidelity Aeroacoustic Simulation at Industrial Scale: A GPU-Native LES Architecture and Its Implications for Automotive, Turbomachinery and Propulsion Applications** Andy Fine · Fine Physics LLC	**Comparative Studies of Traditional Structural Design Optimization vs AI** Jami Shah · The Ohio State University		**Taming the Data Deluge: Storage Strategies for AI-Powered CAE Simulations** Rod Mach · TotalCAE	**A Generic Virtual Twin Workflow For Semiconductor Packaging: Real-Time AI/ML Prediction Grounded By High-Fidelity CAE** Zhenxiang Jiang · Dassault Systemes SIMULIA Corp	
3:30 PM		**Preserving and Applying Simulation Expertise: A Knowledge-Vault Architecture for CAE Organizations** Omar Ibrahim · Process Optimization Corporation		**Modeling Fuel'Water Separation Downstream of Coalescing Media** Adithya Gurumurthy · Donaldson Company, Inc.	**Finite Element Based Structural Assessment Of A Marine Terminal Fuel Storage Tank Under Fire And Blast Loading** Kevin Hayes · Genesis/Technip Energies		**SHIFT-Crash: A Physics AI Model for Full-Vehicle Crashworthiness Prediction** Riddhiman Raut · Luminary	**Comparing Human, AI, and Hybrid Human-in-the-Loop Workflows for Vibration-Based Fault Diagnosis in Rotating Machinery** Asparuh Stoyanov · Key Ward GmbH	
4:00 PM	**Agentic AI: Democratizing Simulation Workflows and Insights** Nachiket Kasarekar · ESTECO North America, Inc.	**Smarter Testing, Better Models: Moving Beyond Standards for Material Model Calibration** Mark Oliver · Veryst Engineering LLC	**Getting Started with HOOPS for CAE** Hunter Guerin · Tech Soft 3D	**Designing the Perfect Fireman Helmet with 3D Scanning, Reverse Engineering. Lattice Generation, Structural Analysis and 3D Printing - Who is GoEngineer & Our Advanced Simulation Team** Matthew Sherak · GoEngineer	**Accelerating AI-First Engineering: Agentic Workflows, AI Physics, and Compute Optimization for Modern R&D;** Bernardo Mendez · Rescale	**Manufacturing Process Simulation** Chris Abada · Dassault Systemes SIMULIA Corp	**Accelerating Simulation-Driven Design with Integrated Materials Intelligence** John Brown · Key to Metals North America	**HPC Unleashed: Overcoming CAE Simulation Bottlenecks with On-Prem, Cloud, GPU & AI** Rod Mach · TotalCAE	

5:00 PM — **Conference Dinner Reception & Bar**

Day 2 — Thursday, 28 May 2026

7:30 AM — Registration and Exhibit Hall Open

PLENARY — 8:30 AM
Housekeeping
Bel Hooley – NAFEMS

PLENARY — 8:45 AM
The NAFEMS ASSESS Initiative – An Update
Nick Appleyard – NAFEMS

PLENARY — 9:05 AM
HALO Overview
Addison Snell – Intersect360 Research

KEYNOTE — 9:15 AM
Accelerating Industrial Engineering: From Product Design to Manufacturing in the AI Supercomputing Era
John Linford – NVIDIA

10:00 AM — Networking Break in Exhibit Hall

Session 3 10:30 AM – 12:00 PM

Time	Room 101 3A – Simulation Quality Assurance	Room 102 3B – Electromagnetics	Room 103 3C – WG Roundtable Discussion	Room 105 3D – Simulation Driven Design 2	Jr Ballroom A 3E – Simulation Process and Data Management 3	Jr Ballroom B 3F – Training Session	Jr Ballroom C 3G – Artificial Intelligence and Machine Learning 5	Jr Ballroom D 3H – Artificial Intelligence and Machine Learning 6	Prefunction N 3J – How to Navigate Your NAFEMS Membership
10:30 AM	**When "Simple" Isn't: Lessons from an Accidental Benchmark of a Cantilever Beam** Gregory Westwater · Emerson	**Electromagnetic Co-existence at Full-Vehicle Fidelity: A Compressed Full-Wave Method of Moments Approach for Multi-System Antenna Analysis** Andy Fine · Fine Physics LLC	**How to Embed AI/Machine Learning into Engineering Workflow with Confidence**	**Scaling Simulations with Automation: A Modeling Tool for EV Battery Vent Selection** Rohit Singh · Donaldson Company, Inc.	**Toward a Consistent, Physics Grounded Development of Full Nonlinear Stress'Strain Curves for Aerospace Metals** G Robert Bennett · Gulfstream Aerospace Corporation	**Fatigue and Fracture Mechanics Training** Tony Abbey · FETraining	**Big Questions (and Answers) about the AI Market** Addison Snell · Intersect 360 Research	**AI-Driven Modeling of Coolant Channel Flow and Thermal Behavior for Battery Module Design** Devadatta Mukutmoni · DS Americas Corp.	**How to Navigate Your NAFEMS Membership** Craig Fahrenholz · NAFEMS Ltd.
11:00 AM	**Effect of Finite Element Type and Shape on In-Plane and Out-of-Plane Bending Stiffness** Brett Soltz · The Aerospace Corporation	**Considering New Green Function Methods as an Adjunct/Alternative to FDTD in Silicon Nanophotonics Simulation** Luke Voss · Mathematical Systems & Solutons, Inc.		**Simulation-Informed, Data-Driven Surrogate Model for Ball Impact Assessment of a Cell Phone Assembly** Pouya Shojaei · Synopsys	**Enhancing Workflow Quality and Efficiency for Dynamic Matching Parameter Optimization Tool** John Mersch · Sandia National Laboratories		**Instant Material Property Prediction for Simulation Using Machine Learning Trained on Large-Scale Materials Data** John Brown · Key to Metals North America	**AI Model Driven Optimization** Dheeraj Vemula · Luminary	
11:30 AM	**How to start your VVUQ journey (You've probably started already)** Gregory Westwater · Emerson	**Quantifying The Impact Of Eccentricity, Rotor Tilt, And Magnetization Variability On Electric Drive Unit NVH** Andrew Lawton · Smart Manufacturing Technology Limited		**Quantifying Structure'Borne Noise Risk Using a NVH Scorecard for Tractor Cab Suspension** Sachidanand Sasidharan · John Deere Waterloo	**An AI-First Architecture for CAE: From Simulation Data to Engineering Intelligence at Inference Speed** Jacob Surber · Rescale UK/Europe Office		**All About NAFEMS - Q&A; Session**	**Simulation as Infrastructure for the AI Era: Enabling Autonomous Engineering Workflows** Neel Kumar · Intact Solutions, Inc.	

12:00 PM — Networking Lunch in Exhibit Hall

PANEL — 1:15 PM
Panel Discussion: Defining the Next Era of Simulation

2:45 PM Networking Break in Exhibit Hall

Session 4 3:15 PM – 5:00 PM

Time	Room 101 4A – Simulation Engineering Supported Topics	Room 102 4B – Structural Dynamics	Room 103 4C – All About NAFEMS - Q&A; Session	Room 105 4D – Simulation Driven Design 3	Jr Ballroom A 4E – Simulation in Food and Drink	Jr Ballroom B 4F – Training Session	Jr Ballroom C 4G – Artificial Intelligence and Machine Learning 7	Jr Ballroom D 4H – Artificial Intelligence and Machine Learning 8	Prefunction N 4J – How to Navigate Your NAFEMS Membership
3:15 PM	**Polymer Testing and Constitutive Modeling Applied to FE Simulation of Blow Molding Processes** Sean Teller · Veryst Engineering LLC	**Efficient Approach to Fatigue Analysis for Nonlinear Loads in Combination With Long Time Histories for a Hook Coupling** Rajivgandhi Kaveri · Magna Powertrain Driveline	**All About NAFEMS - Q&A; Session**	**Accelerating Product Development Through Simulation** Alistair Gill · Element Materials Technology	**Heated Lance Design for a THC Oil Spray** Kathleen Brown · Spraying Systems Co	**Nonlinear Analysis Training** Tony Abbey · FETraining	**Physics, AI and the Simulation Frontier: A Technical Assessment of Where the Boundaries Are Actually Moving** Andy Fine · Fine Physics LLC	**Accelerating Structural Assessment via Physics-Constrained ML: Singularity-to-Fillet Stress Mapping** Yan Pozhanka · New Mexico Institute of Mining and Technology	**How to Navigate Your NAFEMS Membership** Craig Fahrenholz · NAFEMS Ltd.
3:45 PM	**Tekprenticeship: Infusing Engineering Education with Job-Ready Skills Informed by Contemporary Industry Applications** Anthony Petrella · FEA Professional Graduate Program	**Structural Interactions in Rotor Dynamics Analysis** Kate Walgren · Collins Aerospace		**What is Upfront Simulation'** Nathan Wieland · Caterpillar, Inc.	**Mooving Forward: Inspiring Cow Comfort with Cutting-Edge CFD Technology** Ken Mansfield · Seneca Dairy Systems		**From Tools to Agents: How Agentic Engineering Workflows Are Reshaping Simulation-Driven Product Development** Nolan Halliday · SimScale GmbH	**From Silos to Scale: An Industrial Workflow for Integrating and Deploying Physics-based Surrogate Models on a Universal Engineering Data Platform** Asparuh Stoyanov · Key Ward GmbH	
4:15 PM	**RVE and FEA Analysis of Tibial Implants** Georgiy Makedonov · VIAS3D	**FEA Approach for Equivalent Static Modes** Tim G. Hunter · Wolf Star Technologies					**On Strategy For Innovation Of Numerical Simulation With AI** Peter Langsten · Predict change	**Zero Time Lost: Practical Agentic AI for Engineering Teams** Ram Seetharaman · Synera Technologies Inc	

Optional – Boeing James S. McDonnell Prologue Room Tour – Pre-booking essential

Day 3 — Friday, 29 May 2026

7:30 AM — Registration and Exhibit Hall Open

PLENARY

8:30 AM
Housekeeping
Bel Hooley – NAFEMS

KEYNOTE

8:45 AM
IV&V; at The Aerospace Corporation in Support of U.S. Space Force Programs
Brett Soltz – The Aerospace Corporation

9:30 AM — Networking Break in Exhibit Hall

Session 5 10:00 AM – 11:30 AM

Time	Room 101 5A – Simulation Driven Design 4	Room 102 5B – Systems Modeling and Simulation	Room 103 5C – Simulation Engineering Supported Topics 2	Room 105 5D – Durability and Damage Tolerance	Jr Ballroom A 5E – Structural Dynamics 2	Jr Ballroom B 5F – Training Session	Jr Ballroom C 5G – Artificial Intelligence and Machine Learning 9	Jr Ballroom D 5H – Artificial Intelligence and Machine Learning 10	Prefunction N 5J
10:00 AM	**Implicit, Generated, Printed: Why Modern Geometry Demands a New Analysis Paradigm** Neel Kumar · Intact Solutions, Inc.	**Quantifying Simulation ROI Through Usage Data: Lessons from Formula One'Style Constraints** Heinrich Bartels · Open iT	**Simulation For Compliance/Certification in Industrial Applications** Dr. Terrence Alger · UL Solutions	**Ductile Metallic Material Stress-Strain Curve Modeling and Practical Results Interpretation for Aerospace Nonlinear Elastic-Plastic FEA** Travis Stephens	**Redesign of a Legacy Ejection Seat Using Explicit Dynamics FEA to Mitigate Spinal Injury Risk** Pier-Olivier Duval · Creaform	**Testing and Modeling of Polymers for Solid Mechanics Simulations** Sean Teller · Veryst Engineering LLC	**SHIFT-Battery : A PhysicsAI Model for Optimizing Battery Pack Cold Plates** Saakaar Bhatnagar · Luminary	**Physics and Geometry Aware Generative AI for Engineering Design Exploration** Matt Ellis · Neural Concept	
10:30 AM	**Integrated Modeling and Simulation Approach for Bipolar Plate Flow Channel Design, Optimization and Design for Manufacturing** Qiyong Chen · DS Americas Corp.	**Nuclear Waste Processing Management Using Discrete Event Simulation** Steven Huston · DBD International	**Integrating Meshing-Free Isogeometric Analysis Into Existing Finite Element Solvers** Christopher Whetten · Coreform LLC	**Meshing Strategy Studies for vibration induced Fatigue screening and comparing with the Steinberg Method for PCB Components** Derek Peeling · Maya HTT	**Introduction to Drop Test Impact Analysis** Randy Bailey · DJH Engineering Center, Inc.		**Reducing RFQ Design Optimization Time in E-Machine Development Through Governed Surrogate Modeling Workflows** Filippo Boscolo Fiore · Key Ward GmbH	**Soon Every Second Engineer Will be an AI Agent: Where Can You Harness Their Real Added Value'** Ram Seetharaman · Synera Technologies Inc	
11:00 AM	**Chemical Mechanical Planarization (CMP) Process Modeling Using Finite Element Analysis** Romil Tanov · Dassault Systemes SIMULIA Corp		**Effect of Shell-to-Solid Element Connection Method on In-Plane and Out-of-Plane Bending Stiffness** Brett Soltz · The Aerospace Corporation				**From Raw Data to Intelligent Decisions: Powering Next-Generation Engineering Simulation with Automated AI-Ready Pipelines** Prasad Mandava · Visual Collaboration Technologies, Inc.	**Multi Agent Systems For Finite Element Analysis** Rui Aguiar · Cosmon, Inc	

11:30 AM — Closing Session and Raffle

NAFEMS AMERICAS CONFERENCE
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