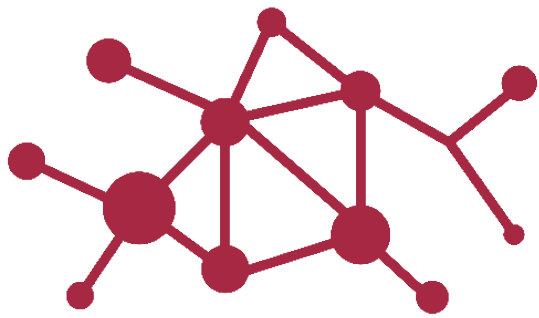


NAFEMS **AMERICAS** CONFERENCE

9-11 July 2024 | Louisville, KY



NAFEMS AMERICAS CONFERENCE

9-11 July 2024 | Louisville, KY

Innovate | Integrate | Inspire
Creating a
New Simulation Journey



NAFEMS

As the only non-profit international association dedicated to the analysis, simulation, and systems engineering community, NAFEMS has established itself as the leading advocate for establishing best practices in engineering simulation. More than 41 years later, industry end-users, software and hardware solutions providers, researchers, and academic institutions continue to recognize NAFEMS as a valued independent authority that operates with neutrality and integrity. NAFEMS Americas supports over 520 member companies located in the Americas region who are actively engaged in the analysis, simulation, and systems engineering community.

NAFEMS Americas Steering Committee Members

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Jack Castro	<i>The Boeing Company</i>
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Rep Alana Duma	<i>Enginesoft USA</i>
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Linda Knudsen	<i>Zimmer Biomet</i>
Laura Michalske	<i>Proctor & Gamble Company</i>
Bob G Tickel	<i>Cummins Inc.</i>
Bruno Purnode	<i>Owens Corning Science & Technology LLC</i>
Mahmood Tabaddor	<i>Accenture USA</i>
Karim Zouani	<i>Ford Motor Company</i>

From our NASC Leadership

Welcome to the 2024 NAFEMS Regional Conference on behalf of the NAFEMS Americas Steering Committee (NASC), Subcommittees, and all our volunteers. You will have the opportunity to network and learn together with leading visionaries, developers, and practitioners of engineering simulation.

With this conference we continue to deliver highlights about the latest trends, achievements, best-practices, and technologies in engineering simulation. The Conference schedule includes 4 keynote speakers, 8 parallel tracks with almost 100 presentations, several technical panel discussions and workshops, and 5 training courses.

Enjoy the Conference, which offers many opportunities for participative learning and professional networking!



Chair Mario J Felice



*Chair Elect
Frank Popielas*



*Immediate Past Chair
Rodney Dreisbach*

From our Planning Subcommittee

On behalf of the NAFEMS Americas Planning Subcommittee, we are delighted to welcome you to Louisville, KY.

We are thrilled to have you join us for what promises to be an engaging and insightful event, bringing together engineering simulation experts, innovators, vendors, and enthusiasts from both industries and academia. Throughout the conference, you will have the opportunity to participate in thought-provoking discussions, learn valuable insights from distinguished speakers, gain hands-on experience in workshops and network with peers who share your passion.

Our team has worked tirelessly to curate a diverse program that encompasses the latest trends, developments, and best practices. Whether you are a seasoned professional or a newcomer, there will be something for everyone to learn and explore.

We encourage you to take full advantage of the sessions, workshops, and networking opportunities available during the conference. Your active participation will not only enhance your own experience but also contribute to the collective knowledge and success of the event.



Jeff Wiersma
– **Miller Knoll**
Planning Subcommittee Chair



Max Monn
– **Saint-Gobain**
Planning Subcommittee Vice-Chair

Keynote Speakers



Application of Digital Engineering Methods and Virtual Environments in the Development and Certification of Small Unmanned Air Systems

Anthony Petrella

Associate Department Head, Mechanical Engineering Director, FEA Professional Graduate Program- Colorado School of Mine



*Engineering Design Optimization
Sporting Equipment*

John Steel

Senior Engineer, Louisville Slugger Research & Development



Simulation Data Driven Product Development

Alice Popescu-Gatlan

Global Manager, Crop Harvesting Solutions Product Verification and Validation, Retired - John Deere

*The Role of Higher Ed in the Pursuit of Business Value,
Innovation, and Governance in Engineering
Analysis & Simulation*

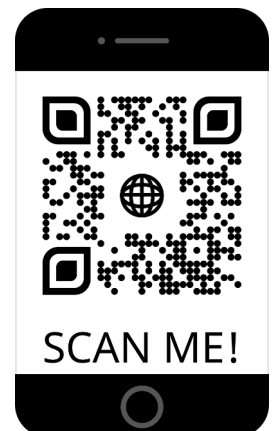
Gerardo Olivares

Senior Research Scientist, National Institute for Aviation Research



Digital Program

Scan the QR Code here for the most up-to-date agenda! There you will be able to find any last-minute changes, presenter information, training course and workshop details, and more information from our sponsors.



DE247
Digital Engineering

EMAS
Engineering Modelling,
Analysis & Simulation
THE NAFEMS JOURNAL

Louisville Bat Factory & Museum Tour

Get ready to step into the world of baseball dreams, big swings and home runs. This fantastic spot in Louisville is all about celebrating the game and the iconic Louisville Slugger bats that make it unique.



Special for NAFEMS Americas Conference Attendees

Attendees will leave the Omni Hotel on **Tuesday, July 9th, 2:30pm** to go to the Louisville Slugger Museum and Factory. We will have a **shuttle bus available for the 7 minute drive.**

We will hear a presentation from Matthew Bynum, Engineer and Product Development, with the Slugger facility followed by a tour of the facilities where each attendee will receive a replica Slugger Bat souvenir!

Instructions for Attending the Tour

We recommend dropping off unneeded bags, laptops, and other personal items to your room during the lunch break. There will be no time between the afternoon plenary session and departure to do so. Please keep your name tags on your person as they will be required for the tour. Shuttles will depart promptly at 2:15pm from the hotel door exiting onto W. Liberty Street. The shuttle ride is estimated to take 7 minutes to reach the factory. Please feel free to visit the Slugger gift shop to the left of the entry prior to taking the elevator to our meeting room. There will be NAFEMS staff onsite to offer direction. Last shuttle returning to the Omni will be between 5:30 and 5:45.

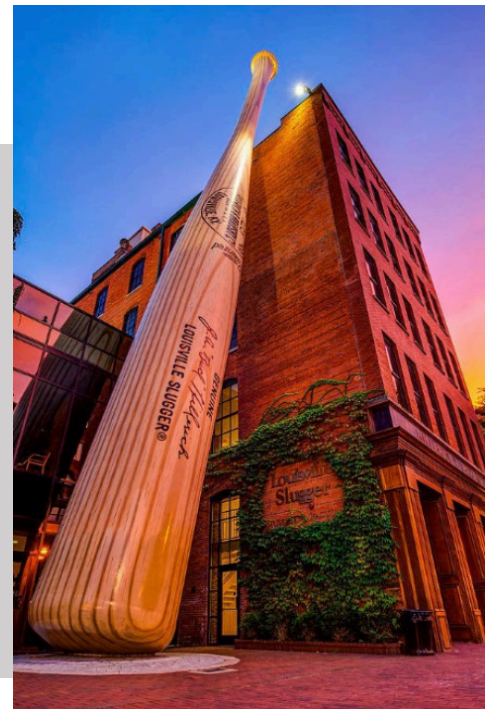


A New Approach to Customizing The Production of Wood Bats For the Professional Baseball Player

Matthew Bynum

Engineer and Product Development Hillerich & Bradsby Co.

Professional baseball provides an extremely unique environment for product design. Baseball players at the highest-level demand that their equipment display characteristics that have been designed around their specific requirements. This customization trend has caused a major shift in the way bat manufacturers view their products. The Louisville Slugger Brand was purchased by Wilson Sporting Goods from Hillerich & Bradsby Co. in 2014. The Hillerich & Bradsby Co. remains the OEM of all wooden Louisville Slugger baseball and softball bats for Wilson.



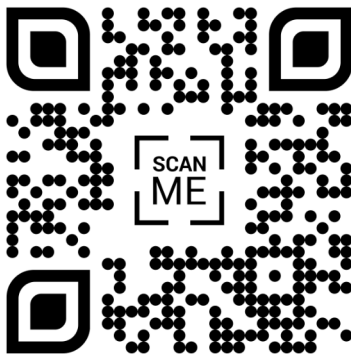
NAFEMS Americas Subcommittees



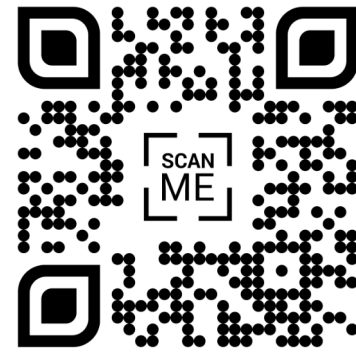
The NAFEMS Americas Region relies on the subcommittees to offer insight as to what our members want to see NAFEMS present. Each of our subcommittees provides a feedback loop on the content we display and what is current and relevant in the simulation engineering community. Scan the QR codes below to learn more about each of our subcommittees!



**NAFEMS Americas
Membership Subcommittees**



**NAFEMS Americas
Planning Subcommittee**



**NAFEMS Americas
PSE Subcommittee**

















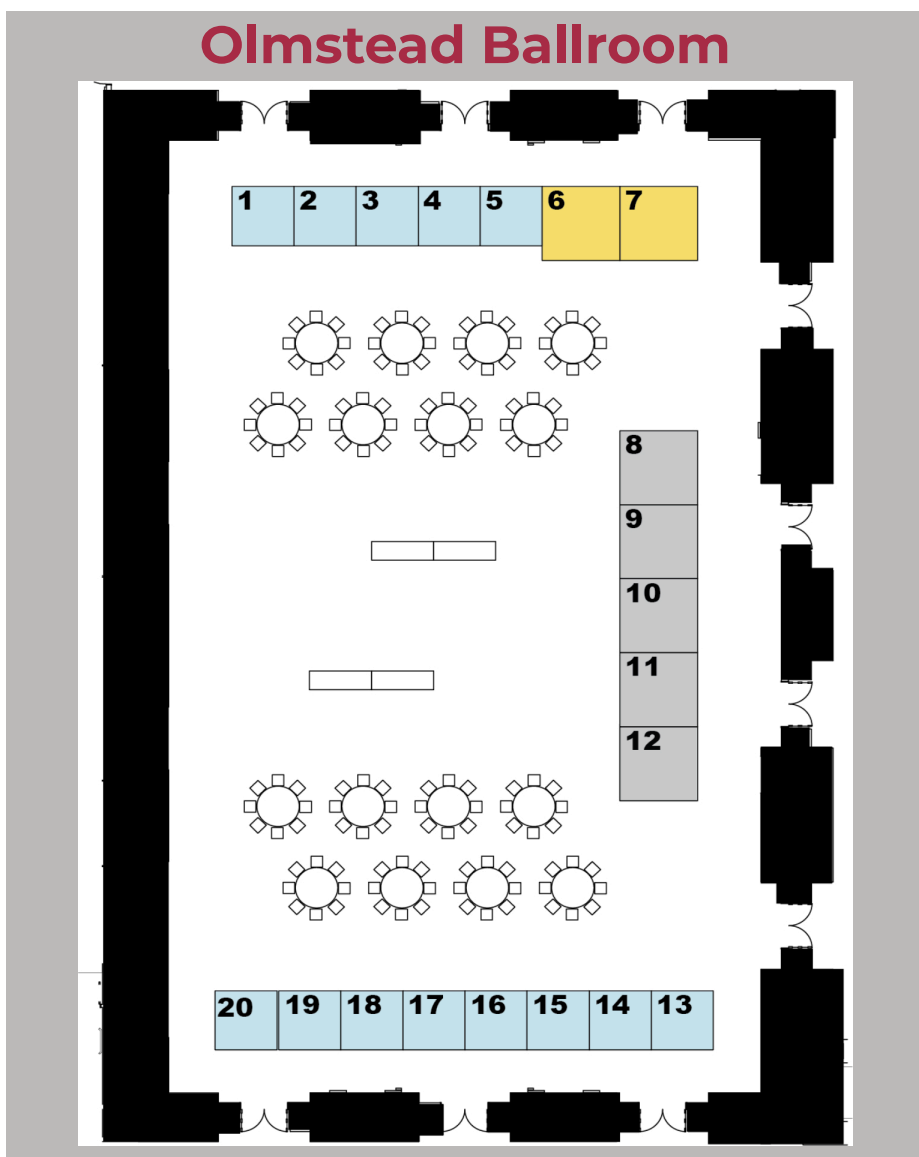
**NAFEMS Americas
Vendor Roundtable**



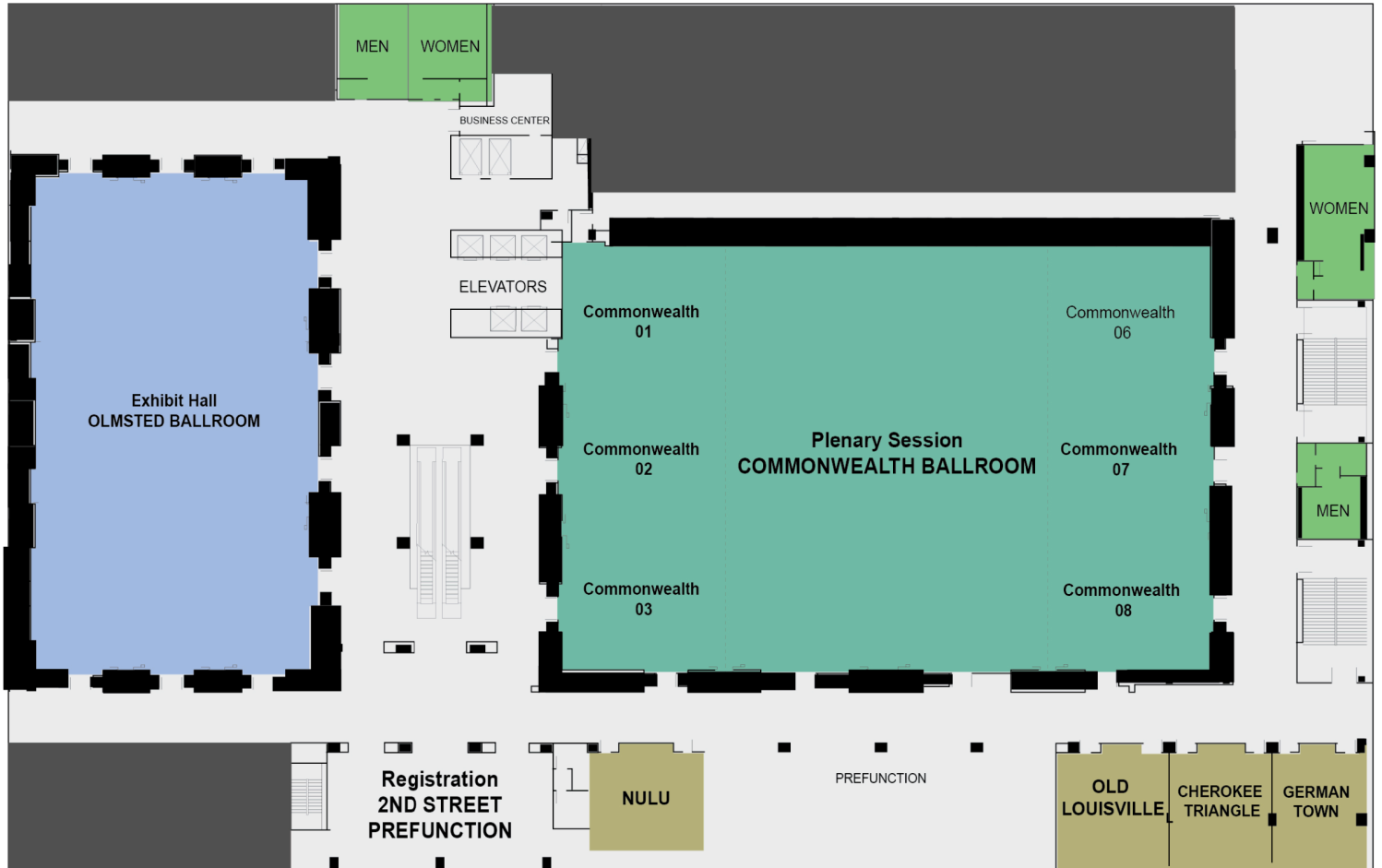
**NAFEMS Americas
Wise Subcommittee**

Exhibitors

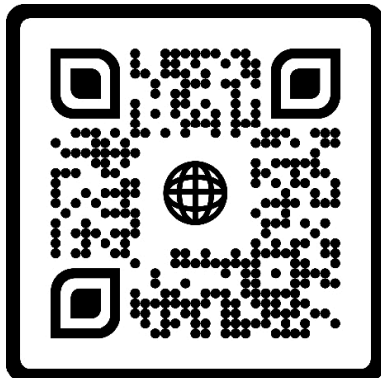
1.  **TATA TECHNOLOGIES**
2.  **RICOS**
3.  **coreform**
4.  **goengineer**
5.  **BETA**
SIMULATION SOLUTIONS
6. **SIEMENS**
7.  **DASSAULT SYSTEMES**
8.  **NAFEMS**
9.  **rescale**
10.  **ALTAIR**
11. **VIAS3D**
12. **Ansys**
13.  **ESTECO**
14.  **TotalCAE**
15. **VCOLLAB**
Actionable Simulation Insights
16.  **TECH SOFT 3D**
17. **kinetic vision**
18.  **ENGINSOFT USA**
19. **DEP MeshWorks**
20.  **INCOSE**



Venue Floor Plan



Digital Floor Plan



Get a closer look at our venue floor plan and other venue information here on our digital agenda!

DAY 1

Tuesday July 9th | 7:30am - 5:45pm

	Commonwealth 1 TRACK 1	Commonwealth 3 TRACK 2	Commonwealth 6 TRACK 3	Commonwealth 8 TRACK 4
7:30 am	Breakfast, Registration and Exhibit Hall Open			
8:30 am	Welcome- Tim Morris - NAFEMS CEO The Role of Higher Ed in the Pursuit of Business Value, Innovation, and Governance in Engineering Analysis & Simulation - Anthony Petrella - FEA Professional Graduate Program			
10:00 am	Break			
10:30 am	AI & Machine Learning - Chair Satheesh Kandasamy	Systems Modeling & Simulation - Chair Max Monn	Simulation Process and Data Management - Chair Todd Depauw	Multiscale & Multiphysics - Chair Tim Morris
	Additively Manufactured & AI Optimized Millimetre-Wave Waveguide Filter Design for Space Applications - The Journey from Design to Manufacturing	A Seamless Bridge: Integrating Cameo Systems Modeler into PLM	The Development of a Virtual Prototyping Review Process Using a Collaborative Immersive Approach to Enhance Processes, Awareness, and Delivery	Multiphysics time-dependent electro-mechanical simulations for dielectric elastomers using Abaqus User Elements (UEL) & FEniCSx
	Laila Salman - Ansys Canada Ltd.	Brian Schouten - Prostep Inc.	Alanzo Granville - SAIC	Kamalendu Ghosh - KLA
11:00 am	Acceleration of Stamping Simulation using an Advanced Artificial Intelligence Framework	Aligning Data Flow Between MBSE and PLM Systems at a Leading American Aerospace Company	Managing Key Parameters from Simulation Inputs and Results	Enhanced Implicit-Iterative Coupling Algorithms for Strong-Coupled Multiphysics
	Dylan Budnick - Xccelerate AI	Brian Schouten - Prostep Inc.	Leonel Garategaray - Inensia LLC	Sethu Subbarayalu - Dassault Systemes SIMULIA Corp
11:30 am	AI-Surrogates and Concept Engineering: Navigating Challenges and Solutions in Accelerated Product Development	A Methodology for Configurable System Simulation Models: Integration of SysML, SSP, and FMI	START FAST, START SMART: HOW TO BUILD A SOLID FOUNDATION FOR YOUR SPDM JOURNEY	Integrated Thermal Fluid Simulation Workflows for Electronic Cooling Applications
	Ashish Aggarwal - DS Americas Corp.	Juho Konno - University of Oulu	Leonel Garategaray - Inensia LLC	Devadatta Mukutmoni - Dassault Systemes SIMULIA Corp
12:30 pm	Lunch			
1:00 pm	Exhibit Hall Open			
1:15 pm	Engineering Design Optimization Sporting Equipment - John Steel Louisville Slugger R&D			
2:00 pm	Shuttle Loading and Departure			
2:15 pm	Shuttles depart at 2:15			
	Slugger Museum Tour			
5:45 pm	Shuttle Return to OMNI Hotel			

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**Cherokee Triangle
TRACK 5**

**Old Louisville
TRACK 6**

**Germantown
TRACK 7**

**Nulu
TRACK 8**

Breakfast, Registration and Exhibit Hall Open

Welcome- Tim Morris - NAFEMS CEO
The Role of Higher Ed in the Pursuit of Business Value, Innovation, and Governance in Engineering Analysis & Simulation - Anthony Petrella - FEA Professional Graduate Program

Break

Simulation Engineering Supported Topics - Chair Alana Duma

Manufacturing process - Chair Steve Arnold

FETraining - Chair David Quinn

A Guide to Digitally Transform Product Innovation with High-Performance Computing

Predictive Modeling To Enable Innovation In Textile Bonding Adhesives

Nonlinear Analysis

Rodney Mach - Total CAE

Liangkai Ma - The Dow Chemical Company

Simulation Driven Design into the Appliances Product Development Process

Establishing and Maintaining the Digital Thread of Additively Manufactured Materials and Applications

Tony Abby

Julio Anaya - Controladora Mabe S.A. de C.V.

Brandon Hearley - NASA Glenn Research Center

Robustness and Reliability Studies for Weld Simulation

Gaurish Sharma - ESTECO North America, Inc.

Lunch

Exhibit Hall Open

Engineering Design Optimization Sporting Equipment - John Steel Louisville Slugger R&D

Shuttle Loading and Departure

Shuttles depart at 2:15

Slugger Museum Tour

Shuttle Return to OMNI Hotel

Platinum Sponsors



DAY 2

Wednesday July 10th | 7:30am - 6:30pm

	Commonwealth 1 TRACK 1	Commonwealth 3 TRACK 2	Commonwealth 6 TRACK 3	Commonwealth 8 TRACK 4
7:30 am	Breakfast, Registration and Exhibit Hall Open			
8:30 am	Welcome - Tim Morris - NAFEMS CEO A Lifetime Journey with Product Development Analysis and Simulation - Alice Popescu-Gatlan - John Deere (Retired)			
9:30 am	AI & Machine Learning - Chair Gregory Westwater Convergence of CAE, Data Science and HPC Fatma Kocer - Altair Engineering, Inc.	Systems Modeling & Simulation - Chair Dipak Patil System Modeling Bridging the Gap with Smart Systems Modeling (SSM) Alejandro Ayala - Estrag IA	Simulation Process and Data Management - Chair Bob Tickle Achieving Large Scale Detailed Component Level Structural Simulations Mark Taylor - The Boeing Company	Simulation Engineering Supported Topics - Chair Bruce Webster Simulation Techniques to Improve Productivity and Sustainability in Glass Fiber Manufacturing Bruno Purnode - Owens Corning Science & Technology
10:00 am	Demystifying AI for CAE Ian Pegler - NVIDIA	Leveraging MODSIM Techniques for enhanced engineering analysis: integration of SOLIDWORKS models with the 3DEXPERIENCE Platform Omar Zohni - Dassault Systemes SIMULIA Corp	Scale and democratize reduced order modeling techniques within an SPDM framework Nachiket Kasarekar - ESTECO North America, Inc.	Electromagnetic Heating Simulation of Medical Treatment for Infections After Knee Replacement Surgery Josh Thomas - AltaSim Technologies LLC
10:30 am	AI in Design Exploration Mike Sheh - INTES GMBH	Democratizing Simulation Methods to Collaborate Efficiently using the 3DEXPERIENCE Platform Gopi Lanka - Dassault Systemes UK	Solving Industry's Data and Process Challenges of Digital Engineering with R&D Clouds Edward Hsu - Rescale Headquarters	Validating Ansys Ceramic Chip Resistor Solder Fatigue Model Arvind Purushotaman - Ansys, Inc.
11:00 am	Break			
11:30 am	AI & Machine Learning - Fatma Kocer Deploying an AI Simulation Stack Across Engineering Teams - A Case Study Matt Bemis - SimScale GMBH	Systems Modeling & Simulation - Chair Peter Perivolarakis Machine Learning for Physics-Accelerated Design of Mixing Tank Processes Mustafa Kaddoura - Ansys, Inc.	Simulation Process and Data Management - Chair VamsiKrishna Pateel Leveraging Virtual Engineering for Faster Product Development and Cost Efficiency Prasad Mandava - Visual Collaboration Technologies, Inc.	Simulation Engineering Supported Topics - Chair Bruno Purnode Digital Twin for Operations - How to Enable Intelligent Operations Dheeraj Vemula - Altair
12:00 pm	Removing the Data science barriers to Deep Learning surrogates Maxime Bunel - Keyword GMBH	Building Digital Twins of Additive Manufacturing Parts for Fatigue Life Prediction Xueyong Qu - The Aerospace Corporation	Quick and reliable simulation process automation to reduce product development time and cost Karlheinz Peters - Novus Nexus	Simulating the viscoplastic-damage response for semicrystalline polymers. Jeff Weirsma - MillerKnoll
12:30 pm		Coupling Manufacturing and Component Design with Systems Engineering Tero Frondeilius - Wartsila Finland Oy	Parametric modeling of SOEC System in a Grid Energy Storage Application and Democratization for Wider Adoption Apurva Gokhale - ESTECO North America, Inc.	Designing for Space Using Modeling and Simulation Daniel Winton - The Aerospace Corporation
1:00 pm	Lunch			
2:00 pm	AI & Machine Learning - Liviu Georgescu Megacasting 2.0: Transforming the Industry with AI Integration Milan Raval - Altair Engineering, Inc.	CFD - Chair Erin Berry Simulation driven design of a BESS cooling system using CFD and parametric optimization Benjamin Becklynck - Optimec Consultants Inc	Simulation Process and Data Management - Chair Jeff Weirsma CAE CAD and CAE Abstract Models: two sides to the new Product Development Coin Bruce Webster - Novus Nexus	Simulation Engineering Supported Topics - Chair Leanne Campbell Connecting MBSE to spacecraft Engineering Modeling & Simulation Joshua Reicher - Ansys, Inc.
2:30 pm	AI-based optimization of sheet metal stamping for automotive applications Seokpum Kim - ORNL	Advanced Modeling of Filtration Processes: Integrating High-resolution Filter Matrix into CFD-DEM Simulation Ahmadreza Haghnegahar - Ansys, Inc.	Aerospace Structures Simulation Analysis Process and Data Management Kenneth Dang - The Boeing Company	SIMULATION BASED DESIGN OF ILLUMINATED KNOBS FOR APPLIANCES Carlos Chavez - Controladora Mabe S.A de C.V.
3:00 pm	Artificial Intelligence to Empower Engineering Organizations: Technology & Applications F Garret Reis - Neural Concept Ltd.	Gas flow simulation generated for Internal Arc Fault based on Digital Twins Mariana Bretado - Schneider Electric	Next Generation Workflow: A Graphical Workflow Interface to Increase Analysis Credibility and Integrate Expertise John Mersch - Sandia National Laboratories	
3:30 pm	Break			
4:00 pm	Milan Raval - Altair Sponsor Workshop - Dassault, Inc. Case Study of Seamless Modeling and Simulation for Electric Crive Engineering	Sponsor Workshop - Rescale Solving Industry's Data and Process Challenges of Digital Engineering with R&D Clouds	Sponsor Workshop - Ansys	Sponsorship Workshop - Beta CAE Enhancing CAE Modeling Efficiency and Predictive Analytics in Automotive Design
4:30 pm	Satheesh Kandasamy & Young-Chang Cho - Dassault Systems	Bernardo Mendez - Rescale Headquarters	Mustafa Kaddoura - Ansys, Inc.	Ravi Nimbalkar & Yugandhar Gopisetty - BETA CAE Systems USA, Inc.
5:00 pm -6:30 pm	Exhibit hall and reception			

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Creating a New Simulation Journey



Cherokee Triangle TRACK 5	Old Louisville TRACK 6	Germantown TRACK 7	Nulu TRACK 8
Breakfast, Registration and Exhibit Hall Open			
Welcome - Tim Morris - NAFEMS CEO A Lifetime Journey with Product Development Analysis and Simulation - Alice Popescu-Gatlan - John Deere (Retired)			
Brian O'Keefe	Bio-Medical - Chair Jack Castro	Mentoring Workshop - Chair Erin Berry	FETraining - Chair David Quinn
How to Effectively Communicate Innovative Ideas	FE Simulations for Medical Devices: Applying Solution Verification Procedures to Nitinol and PLLA Stents		Dynamic Analysis
Brian O'Keefe - Artculus LLC	Sean Teller - Veryst Engineering LLC	Erin Berry - Collins Aerospace	Tony Abbey
	Constitutive modeling of Human Sigmoid Colons using Neural Networks	Leanne Campbell - The Boeing Company	
	Aashish Ahuja - BD Technologies and Innovation	Peter Perivolarakis - GE Aerospace	
	Evaluation of heterogeneity and load dependence of mechanical properties of pharmaceutical tablets	Todd Depauw - The Boeing Company	
	Alex Fok - Minnesota Dental Research Center for Biomaterials and Biomechanis		
Break			
Discrete element Method & Bulk Materials - Chair Brian Albright	Simulation in Food and Drink - 1 - Chair Tyler London	NAFEMS Membership Session	Stochastics Working Group - Chair Alexander Karl
Considering uncertainty in the development of a bulk material simulation	Using the Latest 3D Printing Technology to Accelerate the Digital-First Process	Do you know about all of the benefits of NAFEMS membership? Do you have questions about the different benefits? Learn all about your personal and professional growth opportunities within NAFEMS!	Making the most of small data in an age of big data: the epistemic uncertainty challenge problems
Ian Paulson - Rockford Engineering Works Ltd.	Brent Vorst - Kinetic Vision		David Riha - Southwest Research Institute
DEM and iDEM Modeling of Triaxial Tests on Ottawa Sand	ASEPTIC FILL PACKAGE DEVELOPMENT USING BIPATH® AND FEA		SWG Training Session
Travis Shoemaker - University of Illinois Urbana-Champaign	Jay Juan - Stress Engineering Services, Inc.	Courtney Lane - NAFEMS Staff	
Developing Efficient Dust Removal Systems for Solar Panel Installations Using EM-DEM Coupled Simulations Approach	Line-Convey and Vending Modeling in PepsiCo: Beverage Packaging R&D		
Ahmadreza Haghnegahar - Ansys, Inc.	Muhammed Imam - Pepsi Co Beverage R&D		
Lunch			
Brian O'Keefe	Simulation in Food and Drink - 2 - Chair Stacie Tibos	PSE Workshop - Amit Trivedi	FETraining - Chair David Quinn
How to Effectively Display Inovative Ideas	Leveraging Simulation for R&D, Innovation and Sustainability in Consumer Packaged Goods	Do you have questions about the PSE application process? Are you interested in some in depth assistance in learning more about it? Then, this workshop is for you!	Fatigue and Fracture Analysis
Brian O'Keefe - Artculus LLC	Tyler London - Reckitt	Jo Potts - NAFEMS Staff	Tony Abbey
	Discussion Panel		
	Brent Vorst - Kinetic Vision Jay Juan - Stress Engineering Services, Inc Muhammed Imam - Pepsi Co Beverage R&D Tyler London - Reckitt	Amit Trivedi - Honda Development & Manufacturing of America	
Break			
Sponsor Workshop - Vcollab	Sponsorship Workshop - Seimens	Sponsorship Workshop - Enginesoft	Sponsorship Workshop - Altair
VCollab's Smart Automation & Rapid Results Review	eDrive Engineering - A connected end-to-end design process		Next Generation CAE for Faster Design Cycles
	Sudhi Uppuluri - Siemens		
Sumit Jai Singh & Evan Brennan - Vcollab Technologies	Unleash innovation with AI/ML and Simcenter	Brant Ross - Enginesoft	Fatma Kocer - Altair Engineering
	Mayank Vaish - Siemens		
Exhibit hall and reception			

Silver Sponsors



DAY 3

Thursday July 11th | 7:30am - 1:30pm

	Commonwealth 1 TRACK 1	Commonwealth 3 TRACK 2	Commonwealth 6 TRACK 3	Commonwealth 8 TRACK 4
7:30 am	Breakfast, Registration and Exhibit Hall Open			
8:30 am	Durability and Damage Tolerance - Chair Sean Teller	Multiscale & Multiphysics - Chair Kyle Koppenhoffer	Simulation Quality Assurance - Chair Michael Balchanos	Simulation Driven Design - Chair Matt Sederberg
	Crack Driving Force Burst Pressure Analysis of Piping Bend Custom Shape Surface Cracks Using 3D Crack Meshes in Elastic-Plastic FEA	Multiphysics Design and Analysis of Silver-Based Low-Emissivity Coating Technology	An Interactive Decision Support Environment for Race Car Setup Selection using Predictive Lap Simulation Methods	Integrated Modeling and Simulation for Data-Driven Product Design
	Greg Thorwald - Quest Integrity Group	Laila Salman- Ansys Canada Ltd.	Mario Zarate Villazon - Georgia Institute of Technology	Manish Barlingay - Inceptra
9:00 am	The Crucial Role of Nonlinear Contact Analysis in Engineering Applications	Thermo-Mechanical Analysis of System Level Effects on Electronic Packages	Validating real-time robotics models through high-fidelity simulation	Simulation for everybody at all stages of the design
	Mike Sheh - INTES GMBH	Arvind Purushotaman - Ansys, Inc.	James Crist - EnginSoft USA	Girish Mudigonda - Altair Engineering, Inc.
9:30 am	Use of Hot-Spot Stress Method in Estimating Weld Fatigue in Rail Equipment.	The Philosophy of Co-simulation	Scenarios and Validation of Drill Bit Simulation in the Oil and Gas Industry	Isogeometric analysis for rapid simulation of fully-featured CAD models
	Dipak Patil - Harsco Rail Michael Scott - Coreform LLC Sumeet Singh - EMWorks	Philip Top - Lawrence Livermore National Laboratory	Mahabub Alam - Ultera Drilling Technologies	Michael Scott - Coreform LLC
10:00 am	Break			
10:30 am	Durability and Damage Tolerance - Chair Liangkai Ma	Multiscale & Multiphysics - Chair Jeff Weirsma	Simulation Quality Assurance - Chair Leanne Campbell	Simulation Driven Design - Chair Barry Dietz
	Calibrating Cohesive Zone Models for Impact Simulations	Simulation of Green Energy Thermal Battery System for Improved Design	A Cross-Society Collaboration Project, Mapping Consistency Confirmation Frameworks	Shifting Left: How Simulation for Designers Complements Traditional Simulation To Achieve a Better Design Faster
	Sean Teller - Veryst Engineering LLC	Josh Thomas - AltaSim Technologies LLC	Alexander Karl - Rolls-Royce Corporation	John Shew - Maya HTT
11:00 am	Material Calibration and Progressive Damage Modeling of 3D Woven Textile Composites (3DWTCs) in a Multiscale Framework	High Fidelity Multiphysics Simulation- Based Reliability Assessment and Design of a 77 GHz Radar Sensor for Advanced Driver Assistance Systems	AUTOMATED ROBUSTNESS EVALUATION PROCESS FOR AUTOMOTIVE SEAT STRUCTURE INTEGRITY AND OCCUPANT INJURY USING DESIGN OF EXPERIMENTS	Democratization of CAE - using colors to shift left
	Deepak Kumar Patel - Dassault Systemes SIMULIA Corp	Ushemadzoro Chipengo - Ansys, Inc.	Santosh Patil - BETA CAE Systems USA, Inc.	Ramana Kappagantu - Siemens
11:30 am	Digital Twin for Durability - How to Schedule Maintenance the Smart Way	Enhanced Prediction of Multiple Shot Impacts using a FEA-CFD-DEM Modeling	Design Exploration Study of Vehicle Cab Floor Under Extreme Loading Conditions using Advanced Simulations	A Blend of Analysis. Every Discipline. One Product Development
	Dheeraj Vemula - Altair	Ahmadreza Haghnegahar - Ansys, Inc.	Shawn Freeman - VIAS3D	Robert Warren - Go engineer
12:30 pm -1:30 pm	Application of Digital Engineering Methods and Virtual Environments in the Development and Certification of Small Unmanned Air Systems - Gerardo Olivares - National Institute for Aviation Research			
	Lunch will be available during the Plenary Session			

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Cherokee Triangle TRACK 5	Old Louisville TRACK 6	Germantown TRACK 7	Nulu TRACK 8
Breakfast, Registration and Exhibit Hall Open			
Physical Test & Numerical Simulation Integration - Chair Todd Depauw	Electromagnetics - Chair Peter Perivolarakis	Engineering Data Science Working Group - Chair Vladimir Balbanov	
Building Bridge: Fostering Collaboration between Test Engineers and Analysts	A Connected, Performance-driven Electric Drive Development Process	Hear from the Experts: Status and Future of AI/ML for CAE	
Erin Berry - Collins Aerospace	Young-Chang Cho - Dassault Systems	Fatma Kocer - Altair Engineering, Inc.	
Combining Physical Test with Structural FEA to Develop Package-Specific Failure Models for Electronic Components	High-Fidelity Physics-Based Electromagnetics Simulation for Advanced Driver Assistance Systems	EDSWG Discussion Panel	
Tyler Ferris - Ansys, Inc.	Ushemadzoro Chipengo - Ansys, Inc.	Vladimir Balbanov	
Integrated Experimental and Numerical Approaches to Optimize Heat Blocking Efficiency in Intumescent Coatings.	Propulsion Systems#NVH, e-motors, Electric Vehicles, E-Propulsion System, electromagnetic computation, Optimization, Design Process Efficiency		
Taher Hafiz - Case Western Reserve University	Sumeet Singh - EMWorks		
Break			
Structural Dynamics - Chair Jack Castro	Optimization - Chair Steve Arnold	Simulation Engineering Supported Topics	
Advanced flexible body technologies for multi-body system simulation	Leveraging Adjoint and Design Exploration Methods for Fluids and Thermal Design Optimization: A Workflow Comparison		
Sethu Subbarayalu - Dassault Systemes SIMULIA	Christian Windisch - Siemens Digital Industries Software		
FEA Simulation based Ride Index Evaluation of Rail Track Maintenance Equipment	Optimization of Bearing Lubrication in Large-Scale Wind Energy Gearboxes with Smoothed Particle Hydrodynamics (SPH)		
Dipak Patil - Harsco Rail	Felix Pause - DIVE Solutions GMBH		
Seismic Certification of BESS Using Response Spectrum Analysis	ROM Technique for attenuating Structural Vibration & Weight Optimization at BIW level		
Rejean Belliveau - Optimec Consultants Inc	Vidya Shankar - Detroit Engineered Products		
Application of Digital Engineering Methods and Virtual Environments in the Development and Certification of Small Unmanned Air Systems - Gerardo Olivares - National Institute for Aviation Research			
Lunch will be available during the Plenary Session			

Slugger Museum Sponsors



Upcoming Events

**September
16 - 19, 2024**

"How to Effectively Communicate Innovative Ideas" with **Brian O'Keefe**

**October
7 - 11, 2024**

"Verification and Validation in Engineering Simulation" with **Jean-Francois Imbert and Philippe Pasquet**

**October
21 - 25, 2024**

"Verification, Validation and Uncertainty Quantification in Scientific Computing" with **William Oberkampf and Christopher Roy**

**March
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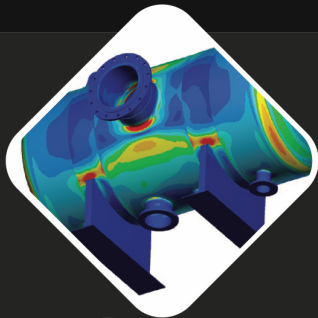
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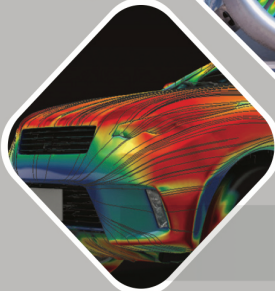
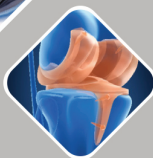
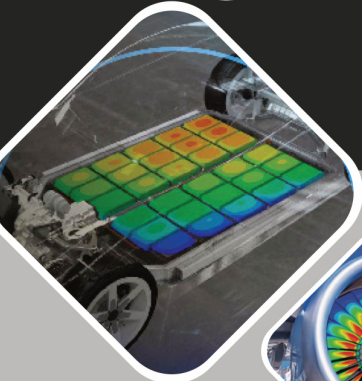


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