NWC25

NAFEMS WORLD CONGRESS

19-22 MAY 2025 | SALZBURG | AUSTRIA

A WORLD OF ENGINEERING SIMULATION

Preliminary Agenda

Correct at April 16th 2025 - all times and dates are subject to change. Please do not base travel plans on these times and dates.

Monday 19th May 2025

Track A

08:00 | Registration Opens

09:30 | Short Training Course

Introduction

AI for Simulation Engineers
Max Kassera
YasAI

11:00 | Break

11:30 | Short Training Course

Introduction

An Introduction to Simulation V&V
Jean-Francois Imbert
NAFEMS Technical Fellow

13:00 | Lunch

16:15 | Break

17:00 | 1A | Simulation Supporting Certificati...

17:00 Introduction

17:05 Verification & Validation of CFD and Fluid-structure-interaction Simulation for ...
Christian Heinrich
Boeing Research Technology Europe

17:25 Enabling Model-Based Aircraft Certification
Stephen Cook
Northrop Grumman

17:45 Certification by Analysis: A Selection of Case Studies
Fabio Santandrea
Volvo Car Corporation

18:05 Fatigue Analysis of Floating Offshore Wind Structures
Oleg Ishchuk
SDC Verifier

18:25 | End of Presentations

18:30 | Get Together in the Exhibition Area

21:00 | End of Day 1

Track B

08:00 | Registration Opens

09:30 | Short Training Course

Introduction

How to Implement a Simulation Strategy
Andy Richardson
Phronesim

11:00 | Break

11:30 | Workshop

Introduction

Unlocking your Organisations Simulation Capability through Maturity Assessment
Andy Richardson
Phronesim

13:00 | Lunch

16:15 | Break

17:00 | 1B | LLMs in CAE

17:00 Introduction

17:05 Findings From 6 Years of Applied Research: A Foundation for AI Use Cases - Illus...
Christopher Woll
GNS Systems GmbH

17:25 CFD Workflow Automation with Generative AI and Specialized Approaches for Storin...
Maria Bonner
Siemens

17:45 Back to Basics for CAE: Demystifying Input Files for and with Generative AI
Subham Sett
Hexagon

18:25 | End of Presentations

18:30 | Get Together in the Exhibition Area

21:00 | End of Day 1

Track C

08:00 | Registration Opens

09:30 | Workshop

Introduction

Key Factors for Effective Engineering Virtualization
Bernd Fachbach
Fachbach-Consulting

11:00 | Break

11:30 | Workshop

Introduction

Arena2036 Workshop: DigiTain/TEF AI Matters
Muhammad Saeed
Arena2036

13:00 | Lunch

16:15 | Break

17:00 | 1C | Computational Structural Mechanic...

17:00 Introduction

17:05 Strength Analytical Methods Revisited, Focus on Plastic Bending
Milan Tasic
Airbus Operations

17:25 A Study on the Minimization of Braking Pull in the Early Design Stage of Leafspr...
Jung Hun Choi
Hyundai Motor Company

17:45 Numerical and Experimental Analysis of High-Stress Wire Connections in Offshore ...
Jörg Straub
Institute For Material Systems Technology Thurgau...

18:25 | End of Presentations

18:30 | Get Together in the Exhibition Area

21:00 | End of Day 1

Track D

08:00 | Registration Opens

09:30 | Short Training Course

Introduction

Fundamentals of MultiBody Dynamics Simulation
Patrick Morelle
Consultant

11:00 | Break

11:30 | Short Training Course

Introduction

Debugging Finite Element Models - A Systematic Methodology for Finite Element Mo...
Patrick Morelle
Consultant

13:00 | Lunch

16:15 | Break

17:00 | 1D | Integration of Analysis & Tes...

17:00 Introduction

17:05 Full Scale Validation Testing for Legacy Aircraft Finite Element Models
David Wieland
Southwest Research Institute

17:25 Building Simulation Models Credibility: What Gain can we Expect from Test-simula...
Florent Mathieu
ElkoSim

17:45 Bridging Theory and Practice: Gage Correlation and Load Case Development
Randy Bailey
DJH Engineering Center

18:25 | End of Presentations

18:30 | Get Together in the Exhibition Area

21:00 | End of Day 1

Track E

08:00 | Registration Opens

09:30 | Short Training Course

Introduction

Polymer Testing for Solid Mechanics FE Simulation
Sean Teller
Veryst Engineering

11:00 | Break

11:30 | Workshop

Introduction

The New AIAA Standard For Code Verification Of CFD, The Importance Of The Observ...
Steve Howell
NAFEMS Computational Fluid Dynamics Working Group

13:00 | Lunch

16:15 | Break

17:00 | 1E | Impact, Shock & Crash

17:00 Introduction

17:05 Innovative Front-end Structure Concepts for Improved Crash Compatibility
Wolfgang Wagner
Virtual Vehicle Research

17:25 Evendetection - Automatic Detection of Anomalies for Time History Curves in Cras...
Dominik Borsotto
SIDACT GmbH

17:45 Domain Knowledge-Guided Machine Learning for Enhanced Crash Dynamics Prediction
Niranjan Ballal
Fraunhofer High-Speed Dynamics, EMI

18:05 Shortening Airbag Model Validation Time using Reduced Order Modelling
Alain Tramecon
ESI Group

18:25 | End of Presentations

18:30 | Get Together in the Exhibition Area

21:00 | End of Day 1

Track F

08:00 | Registration Opens

09:30 | Short Training Course

Introduction

10 Steps to Successful Explicit Dynamic Analysis
Gino Duffett
NAFEMS Iberia

11:00 | Break

11:30 | Short Training Course

Introduction

Practical Introduction to Non-Linear Finite Element Analysis (FEA)
Gino Duffett
NAFEMS Iberia

13:00 | Lunch

16:15 | Break

17:00 | 1F | AI augmented MPS

17:00 Introduction

17:05 Simulation-Assisted AI Modeling for Glass Quality Prediction
Arnab Ghosh
CeSian Glass Solar Bv

17:25 Measure, Digitise, Execute: Streamlining Sustainable Packaging Design
Ross Blair
Blow Moulding Technologies

17:45 Data Based Manufacturing Simulation
Christoph Angermann
Scherdel Siment

18:05 Accelerating Sheet Metal Forming with AI
Eunju Park
GNS Systems

18:25 | End of Presentations

18:30 | Get Together in the Exhibition Area

21:00 | End of Day 1

Track G

08:00 | Registration Opens

09:30 | Short Training Course

Introduction

Introduction to Multiphysics
József Nagy
Eulerian-Solutions

11:00 | Break

11:30 | Short Training Course

Introduction

Getting Started with Smoothed Particle Hydrodynamics
Laurence Marks
Laurence Marks Consultant

13:00 | Lunch

16:15 | Break

17:00 | 1G | Automotive

17:00 Introduction

17:05 Efficient Joining Failure Assessment of Multi-material Car Bodies in Crash
Tony Porsch
Volkswagen

17:25 Contribution of the Virtual Validation in the Development of a 48V Electric Pow...
Riccardo Testi
Piaggio & C. S.P.A.

17:45 Accelerated Headlight Defrost using Modelling and Simulation
Svetlana Jeronimo
Dassault Systèmes Deutschland GmbH

18:05 Automotive Closures Optimization Employing Machine Learning
Konstantinos Rachoutis
BETA CAE Systems

18:25 | End of Presentations

18:30 | Get Together in the Exhibition Area

21:00 | End of Day 1

Track H

08:00 | Registration Opens

09:30 | Workshop

Introduction

Improving how we Teach FEA
Łukasz Skotny
Enterfea

11:00 | Break

11:30 | Workshop

Introduction

Is Engineering an Art or a Procedure
Łukasz Skotny
Enterfea

13:00 | Lunch

16:15 | Break

17:00 | 1H | Interoperability

17:00 Introduction

17:05 Achieving Digital Continuity Across Multiple PLM And SPDM Environments For Autom...
Marco Turchetto
Esteco SPA

17:25 Simulation-based Multi-organization Engineering: Specification Application
Romain Barbedienne
IRT-SystemX

17:45 Implementation of a Digital Twin for Wire Arc Additive Manufacture
Jinjiang Li
University Of Manchester

18:25 | End of Presentations

18:30 | Get Together in the Exhibition Area

21:00 | End of Day 1

Track J

08:00 | Registration Opens

09:30 | Short Training Course

Introduction

German FKM Guidelines – An Introduction
Klemens Rother
University Of Applied Sciences Munich

11:00 | Break

11:30 | Workshop

Introduction

An Open Multiphysics Working Group Meeting – Everybody is Welcome
Alfred Svobodnik
Mvoid Group

13:00 | Lunch

16:15 | Break

17:00 | 1J | GPU Accelerated Simulation

17:00 Introduction

17:05 GPU-accelerated Mesh Adaption for Structural Analysis
Marcus Stegemann
Fraunhofer IGD

17:25 Boundary Interface Caching As A Method To Accelerate Solver Performance For Indu...
Siddhartha Gautham A V
Siemens Digital Industries Software

17:45 Accelerating Scientific Workflows with Domain-Specific Hardware: GPUs, ARM Chips...
Sam Zakrzewski
Rescale

18:05 Reducing Time to Market of Differential Systems Using GPU-Accelerated CFD
Felix Pause
Dive Solutions

18:25 | End of Presentations

18:30 | Get Together in the Exhibition Area

21:00 | End of Day 1

14:00 | Welcome

Welcome & Introduction

14:15 | Keynote

Sustainable Skies: How Simulation Brings Flight to the X-66 Demonstrator
Jack Castro
The Boeing Company

14:45 | Sponsor Presentation

Platinum sponsor presentation by Dassault Systemes
Stephanie Bailey-Wood
Dassault Systemes

15:00 | Keynote

Simulations as a Design Guiding Tool: Reexamining the Role of the Simulation Eng...
Karlo Seleš
Rimac Technology

15:30 | Invited Presentation

ASSESS - Analysis, Simulation & Systems Engineering Software Strategies
Nick Appleyard
NAFEMS

15:45 | Invited Presentation

What's the Endgame for Engineering Simulation?
Jan Paul Stein
McKinsey Company

Tuesday 20th May 2025

Track A

07:30 | Registration Opens

08:30 | Welcome

Welcome to Day 2

08:35 | Keynote

How Simulation is Driving Innovation, Sustainability and Consumer-centric Design...

Tyler London
Reckitt Benckiser Health Care UK

09:05 | Keynote

Accelerating the Green Energy Revolution through Nano-to-Megawatt Scale Models

Harri Kovisto
Ceres Power Limited

09:35 | Break

10:20 | 2A | Business Impact

10:20 Introduction

10:25 The 7 Practical Actions Organisations Should Take to Achieve their Product &...
Andy Richardson
PHRONESIM LTD

10:45 Engineering License Optimization: A Key to Maximizing Efficiency and ROI
Anders Moe Lund
Aibel

11:05 Streamlining Development of Customized Machines for Underground Mining with Unif...
Manuel Morales
Resemin

11:45 | Lunch

13:00 | Sponsor A | Dassault Systèmes 1

Introduction

Platinum Sponsor: Dassault Systèmes
Stephanie Bailey-Wood
Dassault Systèmes

14:25 | Break

15:00 | 3A | Verification & Validation

15:00 Introduction

15:05 Guidelines for Validation of Engineering Simulations. A new NAFEMS Publication
Jean-Francois Imbert
NAFEMS Technical Fellow

15:25 Use of Documented Practices in Simulation Verification and Validation
Gregory Westwater
Fisher Controls International LLC

15:45 The Path to Virtual Product V&V Uncertainty Quantification of Test and S...
Frank Günther
Knorr-Bremse

16:25 | Break

17:00 | 4A | AI/ML Governance

17:00 Introduction

17:05 Safety of AI Systems in Modeling and Simulation
Young Lee
UL Solutions

Track B

07:30 | Registration Opens

09:35 | Break

10:20 | 2B | AI Assisted Optimisatation

10:20 Introduction

10:25 AI-driven Design Optimization of Mechanical Structures in CAx-Processes Chains
Libin Mao
Ostfalia Hochschule F. Angew. Wissenschaften

10:45 Pioneering Virtual Calibration: The Role of AI in Performance Optimization
Morgan Jenkins
Secondmind

11:05 AI-driven 3D Design of Cables and Hoses
Christine Schwarz
Noesis Solutions

11:25 Thickness optimization of a fuel tank using ML based physics model
Jayant Pawar
Dassault Systèmes

11:45 | Lunch

13:00 | Sponsor B | 4a engineering / Altair En...

Introduction

Silver Sponsors: 4a engineering / Altair Engineering

14:25 | Break

15:00 | 3B | AI Enabled Assisted Workflows

15:00 Introduction

15:05 Graph Neural Networks for Semantic Feature Identificaton
Tim Newman
National Composites Centre

15:25 Advanced AI driven Exploration Possibilities to Link Model Changes and Effects
Daniela Steffes-Lai
Fraunhofer SCAI

15:45 Empowering Organizations with Engineering Intelligence to Revolutionize Product ...
Paul Mc Grath
Neural Concept Ltd.

16:05 Methods and Applications of Image and Sound Processing in Engineering
Kambiz Kayvantash
Hexagon

16:25 | Break

17:00 | 4B | AI Enabled Automation

17:00 Introduction

17:05 Building Surrogate models for Physics Simulation using a no-code approach
Asparuh Stoyanov
Key Ward

Track C

07:30 | Registration Opens

09:35 | Break

10:20 | 2C | Assessing Welded Structures

10:20 Introduction

10:25 Numerical and Experimental Analysis of Random Fatigue of Welded Connections Base...
Vito Murgida
Hitachi Energy

10:45 Notch Stress Approach for Welds using Superelements
Christos Tegos
BETA CAE Systems

11:05 Stress Concepts for Weld Verification and Approaches to Automation
Tim Kirchhoff
Ihf Ingenieurgesellschaft MbH

11:25 Automated Weld Assessment Including One-sided Fillet Welds of Large Railway Stru...
Wolfgang Krach
CAE Simulation & Solutions Maschinenbau Ingenieurd...

11:45 | Lunch

13:00 | Sponsor C | Esteco / Cadfem-Ansys

Introduction

Silver Sponsors: Esteco / Cadfem-Ansys

14:25 | Break

15:00 | 3C | Reduced Order Modelling 1

15:00 Introduction

15:05 Machine Learning based Surrogate FEA Modelling
Oliver Found
TWI North East

15:25 Predicting Flow and Settling of Falling Particles
Ceyhun Sahin
Noesis Solutions

15:45 Integrating Reduced Model Handling in an SPDM Environment
Konstantinos Anagnostopoulos
BETA CAE Systems India Pvt. Ltd.

16:05 AI Sustainability in Engineering Design Optimization: A Guided Process for RSM a...
Danilo Di Stefano
Esteco

16:25 | Break

17:00 | 4C | Simulating the Welding Process

17:00 Introduction

17:05 Using FEA To Enhance Experiments In Thermal Processes
Michael Roy
TWI

Track D

07:30 | Registration Opens

09:35 | Break

10:20 | 2D | Digital Twins 1

10:20 Introduction

10:25 The Digital Twin of ESAs Large Space Simulator
Remko Mooys
ESA/ESTEC

10:45 A Hybrid Framework for Defect Detection: Integrating 2D Synthetic data , Point C...
Muhammad Saeed
ARENA2036

11:05 Non-linear Real-Time Battery Digital Twins – Efficient and Explainable Surrogate...
Dirk Hartmann
Siemens Industry Software

11:25 Performance Aided Design for Certification: Integrating Digital Twin Technology ...
Michelle Quan
Autodesk

11:45 | Lunch

13:00 | Sponsor D | Siemens Digital Industries...

Introduction

Gold Sponsor: Siemens Digital Industries Software
S. Ravi Shankar
Siemens Digital Industries Software

14:25 | Break

15:00 | 3D | Digital Engineering

15:00 Introduction

15:05 Simulation Eco System For Effective Virtual Development
Bernd Fachbach
Fachbach-Consulting E.U.

15:25 Towards Sustainable Engineering: The Link between Model Credibility and Risk Fac...
Joao Gregorio
National Physical Laboratory

15:45 Unlock the Full Potential of Technology Data Management - A Central Part in Prod...
Hardy Krappe
PDTec AG

16:25 | Break

17:00 | 4D | Digital Twins 2

17:00 Introduction

17:05 Digital Thread Foundations for Accelerated Multi-Disciplinary CAE Workflows
Navin Bagga
Rescale

Track E

07:30 | Registration Opens

09:35 | Break

10:20 | 2E | Acoustic Simulation

10:20 Introduction

10:25 Vibro-acoustic Simulation of Impulsive Feedback from Computer Mice Microswitches
Luca Francesconi
Logitech Europe

10:45 Radiation Efficiency Varying Equivalent Radiated Power (revERP)
Kristian Kvist
Grundfos DK A/S

11:05 Development of Road Noise Spatial Sound and Sound Map Implementation Technology ...
Dami Bok
Hyundai Motor Company

11:25 Deep Learning Surrogate Models for Fan Performance and Acoustic Assessment
Svetlana Jeronimo
Dassault Systèmes Deutschland GmbH

11:45 | Lunch

13:00 | Sponsor E | Hexagon

Introduction

Gold Sponsor: Hexagon
Keb Nande
Hexagon

14:25 | Break

15:00 | 3E | NVH

15:00 Introduction

15:05 ML-based Tool to Improve NVH Performance of Body-car Structures
Fabiola Cavaliere
SEAT

15:25 Integrated Testing and Simulation to Optimize and Streamline Development of Elec...
Mathieu SARRAZIN
Siemens Industry Software NV

15:45 Electromagnetic and NVH Analysis of PMSM with Eccentricity and Rotor Magnetizati...
Alain Tramecon
ESI Group

16:05 Optimal PMSM Rotor Notching Design Procedure for NVH Mitigation Across the Whole...
Sebastian Ciceo
Siemens Digital Industry Software

16:25 | Break

17:00 | 4E | Dynamics & Vibration

17:00 Introduction

17:05 Predicting Dynamic Response of Centrifugal Pumps using Idealized Loading and Loa...
Søren Thalund
Grundfos

Track F

07:30 | Registration Opens

09:35 | Break

10:20 | 2F | Additive Manufacturing 1

10:20 Introduction

10:25 Comparison between Incremental Layer Deposition and Material Property Manipulati...
Anas Yaghi
TWI

10:45 The Calibration For DED Process Simulation On Part-scale For Ti6Al4V
Arjan Wiegmink
NLR - Royal Netherlands Aerospace Centre

11:05 An Investigation into Using Surrogate Models for Fast Prediction of Results of a...
George Scarlat
University Of Maine

11:25 Efficiency Improvement for the Simulation of Metal Additive Manufacturing
Michael Roy
TWI

11:45 | Lunch

13:00 | Sponsor F | Rescale

Introduction

Gold Sponsor: Rescale
Karen Megarbane
Rescale

14:25 | Break

15:00 | 3F | Composites 1

15:00 Introduction

15:05 A Machine Learning-Based Robust Design Approach for Reliable Use of Recycled Sho...
Moncef Salmi
Hexagon

15:25 Modeling Cure-Induced Thermo-Mechanical Effects in Carbon-Fiber Polymer Structur...
Minh Hoang Nguyen
Digital Blue

15:45 Automated Generation of Anisotropic Material Models for the Simulation of Short-...
Wolfgang Korte
PART Engineering GmbH

16:05 ICME Predictive Solution for the Durability of Composite Laminates Under Fatigue...
Marieme El Ghezal
Hexagon

16:25 | Break

17:00 | 4F | Additive Manufacturing 2

17:00 Introduction

17:05 Numerical Analysis of a Repair on an Impeller Using Directed Energy Deposition: ...
Jos Vroon
NLR - Royal Netherlands Aerospace Centre

Track G

07:30 | Registration Opens

09:35 | Break

10:20 | 2G | Battery Design 1

10:20 Introduction

10:25 Modelling the Structural Durability and Reliability of Electric Vehicle Batterie...
Stephan Vervoort
Hottinger BrÃ¼el Kjaer

10:45 Optimization of Battery Module Production and Performance through CFD-Based Simu...
Carsten Schmalhorst
AVL Deutschland GmbH

11:05 Conceptual Closed-loop Design of Fuel Cell Vehicle Powertrains Leveraging Reinfo...
Johan Vanhuyse
Siemens Industry Software

11:25 Development of a Validated Simulation Model for All-Solid-State Batteries
Erik Glatt
Math2Market

11:45 | Lunch

13:00 | Sponsor G | RecurDyn / Viridian

Introduction

Silver Sponsors: RecurDyn / Viridian

14:25 | Break

15:00 | 3G | Electric Vehicles

15:00 Introduction

15:05 ML-Based System-Level Optimization of an EV Cooling System
Hendrik Dr. Schafstall
Detroit Engineered Products

15:25 MBD-CFD Coupling Simulation of Oil Cooling Performance Analysis for E-motor
WOOJIN SHIN
FunctionBay

15:45 Optimized EV Charging: AI-Driven Model Reduction
Florian Dirisamer
DAlve GmbH

16:05 Electric Drive Engineering Emphasizing Fluid and Thermal Analysis: A Case Study ...
Xavier Conqui
Siemens Digital Industries Software France

16:25 | Break

17:00 | 4G | Multiphysics 1

17:00 Introduction

17:05 Open Source Vibro-Acoustic Simulation for Real-world Applications
Antonio Baiano Svizzero
Undabit

Track H

07:30 | Registration Opens

09:35 | Break

10:20 | 2H | Simulation Data Management 1

10:20 Introduction

10:25 Simulation Data Management – Enabler for Credible Digital Twin
Alexander Mahl
PDTec AG

10:45 AI in Engineering: Challenges and Successful Integration with Product Developmen...
Marc Vidal
CADFEM Germany GmbH

11:05 A Web-based Framework for Efficient Sharing of Simulation and Test Data
Marianthi Dimoliani
BETA CAE Systems

11:25 Implementation of a simulation and process data management system: How can this ...
Christopher Woll
GNS Systems GmbH

11:45 | Lunch

13:00 | Sponsor H | Qarnot / tbc

Introduction

Silver Sponsors: Qarnot / tbc

14:25 | Break

15:00 | 3H | Connecting SDM and PDM/PLM

15:00 Introduction

15:05 Transformation of an In-house CFD Development Process Automation Tool into a SPD...
Matthias Grundner
Denso Automotive Deutschland

15:25 Streamlined Transition from CAD to CAE Structures for Optimized Product Developm...
Spyros Tzamtzis
BETA CAE Systems SA

16:25 | Break

17:00 | 4H | Simulation Data Management 2

17:00 Introduction

17:05 Enhancing Engineering Efficiency: The Synergy of SPDM and PIDO Integration
Laurent Chec
PSeven

Track J

07:30 | Registration Opens

09:35 | Break

10:20 | 2J | Cloud Computing

10:20 Introduction

10:25 Challenges and Opportunities in Cloud-Based Simulation - An Engineers Perspectiv...
James Imrie
Rescale

10:45 Modernizing CAE Applications: Migrating Legacy Desktop Solutions to Web-Based Pl...
Andres Rodriguez-Villa
Techsoft 3D

11:05 Scaling Beyond Traditional Boundaries of Simulation World with Cloud Computing
Michael Schlenkrich
Hexagon Manufacturing Intelligence

11:25 Safeguarding Engineering IP in the Cloud: Strategies for Secure Global Collabora...
Navin Bagga
Rescale UK/Europe Office

11:45 | Lunch

14:25 | Break

15:00 | 3J | HPC

15:00 Introduction

15:05 An Industry Representative Benchmark Study on Current Capabilities for Parallel ...
Adi Adumitroaie
Porsche EBike Performance

15:25 Orchestrating Hybrid HPC Environments: Strategies for Data Gravity and AI-Ready ...
Romain Klein
Rescale

16:25 | Break

17:00 | 4J | Workshop

Introduction

ASSESS - Plans for 2025
Nick Appleyard
NAFEMS

17:25
Simulation Governance: Strategy or Way-of-working?
Peter Langsten
Predict Change

17:45
AI/ML in Simulation: Practical Observations and Thoughts on Simulation Governanc...
Gregory Westwater
NAFEMS Simulation Governance & Management Working...

18:05
Open Discussion: AI/ML in Simulation: Practical Observations and Thoughts on Sim...
Gregory Westwater
NAFEMS Simulation Governance & Management Working...

17:25
Reshaping Simulation Data for an AI Future
Sam Zakrzewski
Rescale

17:45
Accelerating R&D Processes with AI-Driven CAE
Simon Mayer
DAIve GmbH

18:05
Autonomous 3D-CAE Agents – Rethinking complex 3D-simulation workflows
Dirk Hartmann
Siemens

17:25
Machine Learning Assisted Induction Welding Simulations of Thick Unidirectional ...
Niels Van Hoorn
NLR - Royal Netherlands Aerospace Centre

17:45
Enhancing Laser Welding Predictions Through AI-Driven Physics Modelling
Leszek Pecyna
The Manufacturing Technology Center

18:05
Numerical Analysis of Laser Welding Parameters to Enhance Battery Tab Strength a...
Sonu Mishra
Dassault Systemes

17:25
From Idea to Reality – Unlocking the Business Value of Digital Twins Throughout ...
Sebastian Poulheim
Altair Engineering

17:45
Hybrid Simulation and Data Analytics Health Monitoring Method for SMART Class Ma...
Zhi Hang Zhang
NING Research

17:25
Design Optimization of Rubberlike Materials for Complex Dynamic Systems and Appl...
Armin Amindari
Beko

17:45
Managing Uncertainties in Mechanical Properties of Materials for Seismic Testing...
Ivan Čehil
Koncar Instrument Transformers

17:25
Computationally Efficient Model for Induction Preheating of Moving Wire in Wire-...
Ruofeng Cao
Cranfield University

17:45
Calibration of Numerical Models of Laser Powder Bed Fusion with Melt Pool Measur...
Anas Yaghi
TWI

18:05
Finite Element Analysis of Large Evolving Deformation Caused by Inter-layer Mech...
Yongle Sun
Cranfield University

17:25
Flames in the Concrete Jungle: Modelling the Real Threats of EV Battery Fires
Zhi Wei Lim
NING Research

17:45
Multiphysics Optimization of a Power Module Cooling Solution
John Parry
Siemens Digital Industries Software

17:25
Levering Simulation Knowledge to Improve Product Design
Wouter Dehandschutter
Siemens Industry Software

17:45
Enhancing Collaboration on Multibody Dynamics Simulations with Simulation Data M...
Marko Thiele
Scale

18:05
User-Friendly Application Integration in Advanced SDM Infrastructures
Markus Weinberger
Hexagon Manufacturing Intelligence

18:25 | End of Presentations

19:00 | Zistelalm Dinner (Optional - Purchase ...

19:45 | Mozart Concert (included in Congress f...

Wednesday 21st May 2025

Track A

07:30 | Registration Opens

08:30 | Welcome

Welcome to Day 3

08:35 | Keynote

Make Healthcare Better with Computational Modeling and Simulation

Cheryl Liu
Stryker Orthopaedics

09:05 | Keynote

A Central Hub for Data Management and Process Automation – Ready for Virtual Cer...

Frank Bauer
BMW

09:35 | Break

10:30 | 5A | Simulation Governance

10:30 Introduction

10:35 Safety Comes First: How to Do the Minimum Quality Assurance in Finite Element Mo...
Alexandru Macovei
Fokker Aerostructures

10:55 Advances in Credibility of Modeling and Simulation: A Generic Framework Approach...
Mohamed Besher Baradi
Robert Bosch GmbH

11:15 Evolution of the Simulation Quality Standards Landscape
Martin Krammer
Knorr-Bremse SfS GmbH

11:35 Credibility of Simulation Models: A Brick-by-Brick Approach
Florent Mathieu
EikoSim

11:55 | Lunch

13:10 | 6A | Solvers & Methods

13:10 Introduction

13:15 From Traditional to Transformational: Cloud-Native Deployment of Established Non...
David Heiny
SimScale

13:35 Meshing-Free Isogeometric Analysis: The Flex Representation Method in Engineerin...
Michael Scott
Coreform LLC

13:55 Reverse Engineering in Simulation - Bridging Meshes and CAD for Seamless Integra...
Gerd Schwaderer
ESI Germany

14:15 Application of High Performance Computing to Structural Acoustics Predictions
Kuangcheng Wu
NSWCCD

14:35 | Break

15:20 | 7A | Probabilistic Methods

15:20 Introduction

15:25 A Study on Probabilistic Analytical Target Cascading for Robust Vehicle R&H Deve...
Jin Jung
Hyundai Motor Group

15:45 Machine Learning in Simulation - Ensuring Robust and Reliable Products
Jochen Kinzig
Cenit

16:05 Cross Domain Applications of Fragility Surfaces
Roland Niemeier
Ansys Germany

Track B

07:30 | Registration Opens

09:35 | Break

10:30 | 5B | AI supported Postprocessing

10:30 Introduction

10:35 Interactive Search of Crash Deformation Patterns in a Database Comprising Severa...
Stefan Müller
Sidact

10:55 Leveraging LLMs for Automated Post-Processing of HPC Simulation Output Logs
James Imrie
Rescale

11:15 Reimagining the Simulation Environment by Creating a Knowledge Database to Enhan...
Prasad Mandava
Visual Collaboration Technologies

11:35 Applied research on contextual graph databases: What are the findings for AI use...
Christopher Woll
GNS Systems

11:55 | Lunch

13:10 | 6B | Data Based Modelling

13:10 Introduction

13:15 Cloud-Enabled Generative AI for Preliminary Engineering Design
Nima Ameri
Rolls Royce

13:35 Method For Determining Operating Loads On Rail Vehicles Using AI Tools
Mathilde Laporte
DLR - Deutsches Zentrum fÃ¼r Luft- Und Raumfahrt

13:55 Generative-AI for Preliminary Engineering Design
Yashwant Liladhar Gurbani
Rolls-Royce Group PLC

14:15 Empowering Syringe Designers to Assess Device Performance with Physics-based Mac...
Sunil Sutar
Dassault Systemes

14:35 | Break

15:20 | 7B | Workshop

Introduction

Speaking of Simulation Live – Machine Learning
Marton Groza
NAFEMS

Track C

07:30 | Registration Opens

09:35 | Break

10:30 | 5C | Fatigue 1

10:30 Introduction

10:35 From The Paris Law To The 'Total-Life' Method: An Extensive Review Of Fatigue Cr...
Andrew Halfpenny
HBK

10:55 Simulation-based Design Process For Metallic Structures
Mathilde Laporte
DLR - Deutsches Zentrum Für Luft Und Raumfahrt (DL...

11:15 Fatigue Analysis as Solver Integrated Standard Task for Part and Assembly Design
Michael Klein
INTES GmbH

11:35 Service Life Assessment of a Transportation-damaged Pipe
Božo Damjanović
Numikon

11:55 | Lunch

13:10 | 6C | Fatigue 2

13:10 Introduction

13:15 Predicting The Fatigue Life Of Adhesive And Hybrid Joints: An Effective Approach...
Cristian Bagni
HBK

13:35 Virtual Testing for Fatigue Prediction in Variable Loading Scenarios Using CDM a...
Javier Domingo Lopez
Airbus Defence And Space

13:55 Fatigue Life Analysis as Part of the Design Optimization Process for Welded Stru...
George Korbetis
BETA CAE Systems

14:15 The Fatigue Benchmarking Repository Project: Objectives and Its Relevance to NAF...
Jan Papuga
Czech Technical University

14:35 | Break

15:20 | 7C | Joints & Connections

15:20 Introduction

15:25 Nonlinear Cohesive Zone Modeling for Adhesives
Tobias Waffenschmidt
3M Deutschland GmbH

15:45 Multidisciplinary Mesh-independent Approach for Damage and Failure Simulation of...
Patrick Wurm
Magna Steyr Fahrzeugtechnik

16:05 Techniques for Inverse Calibration of Cohesive Zone Models
Mark Oliver
Veryst Engineering

Track D

07:30 | Registration Opens

09:35 | Break

10:30 | Sponsor | Dassault Systèmes 2

Introduction

Platinum Sponsor: Dassault Systèmes
Stephanie Bailey-Wood
Dassault Systèmes

11:55 | Lunch

13:10 | 6D | System Level Simulation

13:10 Introduction

13:15 Systems Simulation for the Evaluation and Down Selection of Fusion Engineering B...
James Bailey
UKAEA

13:35 Impact Assessment Of Road Safety Measures - Developing Guidelines For Simulation...
Peter Wimmer
Virtual Vehicle Research

13:55 Enhancing System Modeling Workflows with Knowledge Graphs and Generative AI
Kai Liu
Siemens Digital Industries Software

14:15 Determining the Accuracy and Efficiency of Robot Performance in a Non-Idealized ...
Brant Ross
EnginSoft USA

14:35 | Break

15:20 | 7D | Reduced Order Modelling 2

15:20 Introduction

15:25 Systems Simulation For Fusion Using Novel Augmented CMS Reduction Techniques
Tom Deighan
UK Atomic Energy Authority

15:45 High-Fidelity Simulation of Electric Vehicle based on Reduced Order Models to Ad...
Eric Link
Siemens Industry Software GmbH

16:05 Using Machine Learning For Advancements Beyond Traditional Reduced Order Modelli...
Markus Wagner
Ansys Deutschland GmbH

Track E

07:30 | Registration Opens

09:35 | Break

10:30 | 5E | Optimisation 1

10:30 Introduction

10:35 High Voltage Circuit Breaker Design with Multi-Objective Optimization Algorithms
Wilhelm Thunberg
Hitachi Energy

10:55 Distributed Multi-disciplinary Design Optimization of Complex Engineering System...
Hunor Erdelyi
Siemens Industry Software

11:15 Unified Non-Parametric Optimization Of Multiple Design Variable Types
Pratik Upadhyay
Dassault Systemes Deutschland GmbH

11:35 Enhanced Non-Parametric Topology-, Shape- And Sizing-Optimization Using Non-Line...
Anton Jurinic
Simulia Scandinavia

11:55 | Lunch

13:10 | 6E | Discrete Element Method

13:10 Introduction

13:15 A Novel Multi-scale Multi-physics Computational Framework for Predicting Process...
Ali Nassiri
Ohio State University

13:35 What Makes a Model Good? A Review Of Applications Across Industries
Augusto Moura
DCS Computing

13:55 A Study on the Damage of Dump Truck Loading Box Based on Dynamic Behavior of Agg...
Seunghun Ryu
Hyundai Motor

14:35 | Break

15:20 | 7E | Topology Optimisation

15:20 Introduction

15:25 Bionic Carbody: Lightweight Rail Car Development - From Topology Optimization to...
Robert Nedelik
Siemens Mobility Austria GmbH

15:45 Efficient Generative Design Process with FEM Based Topology Optimization
Nils Wagner
INTES GmbH

16:05 Topology Optimization of Submodels using Voxel Based Engineering Approach
Thomas Reiher
Hexagon Manufacturing Intelligence GmbH

Track F

07:30 | Registration Opens

09:35 | Break

10:30 | 5F | MPS - Injection Moulding

10:30 Introduction

10:35 Cooling Strategy Evaluation and Optimization for the Injection Molding Process U...
Yi Di Boon
TE Connectivity Germany

10:55 Non-Intrusive Structural Prediction of Stretch Blow Moulded Bottles
Liam McGovern
University Of Belfast

11:15 Development of Gap & Flush Analysis Technology for Automobile Lamps
Hyuck-Moon Gil
SL Corporation

11:35 Numerical Simulation of Filling and Cooling Phenomena in Injection Molding
Atmane Thelib
Fabrication Saharien Preform

11:55 | Lunch

13:10 | 6F | MPS - Metals

13:10 Introduction

13:15 A Cost-effective Cold Roll-Forming FE Model for Industrial Applications
Timothy Senart
CRM Group

13:35 Design Exploration of Hot Ironing Process Using Finite Element Method
Bulent Acar
Replon Machine And Tool Industry And Trade

13:55 Advancing Stability and Accuracy in 2D Metal Cutting Simulations: An Expanded AL...
Andreas Nemetz
University Of Linz

14:35 | Break

15:20 | 7F | Materials 1

15:20 Introduction

15:25 Automotive Applications of the Crystal Plasticity Finite Element Method for Pred...
Hoyoung Lee
Hyundai Motor Company

15:45 Extending a Material Master System by Multi CAE Material Information
Uwe Diekmann
Matplus

16:05 AI-Driven Design, Simulation And Optimization Of Novel Meta-Materials For Heat T...
Alessia Perilli
FVmat

Track G

07:30 | Registration Opens

09:35 | Break

10:30 | 5G | Battery Design 2

10:30 Introduction

10:35 Adapting To Meet The Electrification Challenge
Graham Hill
Caterpillar Inc

10:55 Real-time prediction for an EV Battery Thermal Management
Ajitkumar Jeyakumar
SimScale

11:15 Battery Simulation - Synergies by Combining 1D & 3D Simulation
Eric Link
Siemens Industry Software GmbH

11:35 Revolutionizing Battery Cold Plate Design
Paul Mc Grath
Neural Concept Ltd.

11:55 | Lunch

13:10 | 6G | Cosimulation

13:10 Introduction

13:15 A Novel Two-Scale Co-Simulation Approach for Solder Joint Modeling in Shock and ...
Henan Mao
Ansys

13:35 Accurate Modeling Of Power Electronics Effects In Electric Aviation Through Co-s...
Philipp Wolfrum
Siemens

13:55 MBS - FEA Co-Simulation approach applied to a coupled Vehicle-Tire in an Abuse L...
Bruno Passone
Dassault Systèmes

14:35 | Break

15:20 | 7G | CFD Supporting Design

15:20 Introduction

15:25 Importance of CFD for Design of Heat Ventilation Air Condition Unit (HVAC) For P...
Petr Nekolny
Valeo

15:45 Cross-wind Aerodynamic Analysis of Electric Cargo Scooter Designs using the Unif...
Pranav Shinde
Revolta Motors

16:05 Modelling Aero-Optical Turbulent Effects On The European Solar Telescope Using C...
Mahy Soler
Instituto De AstrofÃsica De Canarias

Track H

07:30 | Registration Opens

09:35 | Break

10:30 | 5H | Democratisation

10:30 Introduction

10:35 Automation and Democratization of High Fidelity Thermal Simulations of Electroni...
Kim Nielsen
Grundfos

10:55 Enabling R&D Through Digital Democratization: A Case Study In The Global Foo...
Leonel Garategaray
INENSIA LLC

11:15 Democratization of Engineering Simulation: Enabling Technologies and Organizatio...
Bruce Webster
Novus Nexus

11:35 Development of an Automated and Democratised Simulation Process to Predict the B...
Tobias Gloesslein
Esteco Software

11:55 | Lunch

13:10 | 6H | Automated Workflows

13:10 Introduction

13:15 Integration of a Structural Mechanics Module (SMM) into a Collaborative Engineer...
Oliver Kunc
DLR - Deutsches Zentrum Für Luft- Und Raumfahrt

13:35 Automation of the CFD Simulation Workflow in the Industrial Application
Tomasz Plusa
Valeo

13:55 Cloud-based Automated CFD Design Tools Using the Example of the Heat Treatment o...
Ulrich Heck
DHCAE Tools

14:15 Integrated Multi-Physics Optimization of Automotive Road Wheels Using Advanced M...
Marco Evangelos Biancolini
RBF Morph

14:35 | Break

15:20 | 7H | Computational Electromagnetics

15:20 Introduction

15:25 Non-Linear Magnetisation Architecture for Improved Magnetic Performance
Oliver Found
TWI North East

15:45 Signal Detection of Metallic Microwires Within Carbon-Fibre Composites by Numeri...
Wolfgang Krach
CAE Simulation & Solutions Maschinenbau Ingenieurd...

16:05 How Machine Learning is changing Electromagnetic Compatibility Simulation
Jan Hansen
Technische UniversitÃ¤t Graz

Track J

07:30 | Registration Opens

09:35 | Break

10:30 | 5J | Workshop

Introduction

Standardisation for Manufacturing Process Simulation
Sjoerd Van Der Veen
NAFEMS Manufacturing Process Simulation Working Gr...

11:55 | Lunch

13:10 | 6J | Short Training Course

Introduction

Process Integration and Design Optimization - A Practical Guide
Gino Duffett
NAFEMS Iberia

14:35 | Break

15:20 | 7J | Workshop

Introduction

Simulation-Driven Product Validation Strategies
Frank Günther
Knorr-Bremse SfS GmbH

16:25
Overview and Application of Different Modeling Techniques for Structural Adhesiv...
Alexander Schowtjak
3M Deutschland GmbH

16:25
Enhancing Design Efficiency for Pressurized Components Through An Automated Vert...
Mads Nymann
Grundfos

16:25
A High-Fidelity, Multi-Disciplinary Framework for Wind Turbine Aero-acoustic and...
Claus Pedersen
Dassault Systemes Deutschland

16:25
Automatic Mesh Adaptation for Electromagnetic Simulations in Material Processing
Jesus Garcia
Transvalor

16:45 | Break

17:20 | 8A | Uncertainty Quantification

17:20
Introduction

17:25
Machine Learning for Uncertainty Quantification in Crash Simulations
Gabriel Curtosi
SEAT

17:45
Normalizing Uncertainty in Computer-Aided Engineering: A Case Study
Fabio Santandrea
Volvo Car Corporation

18:05
Applications of ML and ROM for Robust Optimization
Kambiz Kayvantash
Hexagon Manufacturing Intelligence

18:45 | End of Presentations

19:00 | Working Group/Steering Committee Meet

20:00 | Gala Dinner in Salzburg Congress (Euro...

16:45 | Break

17:20 | 8B | CAE in the Design Process

17:20
Introduction

17:25
Optimization of Profile Extrusion Dies using 3-D Finite Element Simulation of Po...
Mahesh Gupta
Kennesaw State University

17:45
CFD-Proven Design of Positive Displacement Machines by Automated Data Exchange
Andreas Spille
CFX Berlin Software

18:05
Democratizing A Box Compression Test Of A Corrugated Fiberboard Package
Janne Ranta
Dassault Systemes

18:45 | End of Presentations

19:00 | Working Group/Steering Committee Meet

20:00 | Gala Dinner in Salzburg Congress (Euro...

16:45 | Break

17:20 | 8C | Contact & Adhesives

17:20
Introduction

17:25
Effective Way To Handle Contact Nonlinearities In Random Response Simulations
Maciej Majerczak
Valeo

17:45
Accurate and Fast Consideration of Interference Fits in Flexible Multibody Dynam...
Wolfgang Witteveen
FH OÖ – Forschungs- Und Entwicklungs

18:05
Simulation and Validation of Contact Forces in Impact Systems for Developing an ...
Sascha Hasenoehrl
Karlsruher Institut Für Technologie (KIT)

18:25
Injection Adhesives for Lightweight Vehicles: Validation of a Simulation Method ...
Massimo Galbiati
Particleworks Europe

18:45 | End of Presentations

19:00 | Working Group/Steering Committee Meet

20:00 | Gala Dinner in Salzburg Congress (Euro...

16:45 | Break

17:20 | 8D | Systems Engineering

17:20
Introduction

17:25
Validation of a Multibody Simulation Model for the Optimization of a Railway Bog...
Danijel Obadic
Siemens Mobility Austria

17:45
Machine Learning Meets Set-Based Design: A Practical Approach to Overcoming Comp...
Morgan Jenkins
Secondmind

18:05
What Do Simulation Engineers Need To Know About Systems Engineering And MBSE
Alexander Busch
NAFEMS-INCOSE Systems Modeling And Simulation Work...

18:25
Streamlining Complex Product Development: Integrating Systems Engineering and SD...
Marko Thiele
Scale

18:45 | End of Presentations

19:00 | Working Group/Steering Committee Meet

20:00 | Gala Dinner in Salzburg Congress (Euro...

16:45 | Break

17:20 | 8E | Optimisation 2

17:20
Introduction

17:25
Exploitation of Multi-Fidelity Efficient Global Optimization in an Engineering ...
Ceyhun Sahin
Noesis Solutions

17:45
Optimization of Air-Cooled Heat Exchangers with Diamond Triply Periodic Minimal ...
Landong Martua
Engineering Cluster, Singapore Institute Of Techno...

18:05
Optimizing MOSFET Power Modules: A Multi-Domain Simulation Framework for Enhance...
Thibault Jacobs
Noesis Solutions NV

18:45 | End of Presentations

19:00 | Working Group/Steering Committee Meet

20:00 | Gala Dinner in Salzburg Congress (Euro...

16:45 | Break

17:20 | 8F | Material Characterisation

17:20
Introduction

17:25
On The Characterization And Calibration Of Alloy Materials Used In Additive Manu...
Vincent Suske
Dynamore

17:45
Combining Pretrained AI Models with a Transfer Learning Approach for Accurate En...
Moncef Salmi
Hexagon

18:05
Comparison of Calibration Strategies for Material Models of Polymers, Foam, and ...
Daniel Campos Murcia
DatapointLabs Technical Center For Materials

18:25
Rate and Pressure-Dependent Failure Modeling of Thermoplastics
Sean Teller
Veryst Engineering

18:45 | End of Presentations

19:00 | Working Group/Steering Committee Meet

20:00 | Gala Dinner in Salzburg Congress (Euro...

16:45 | Break

17:20 | 8G | Multiphysics 2

17:20
Introduction

17:25
Multi-physics Simulations for Advanced Beamline Instrumentation at European XFEL
Fan Yang
European XFEL GmbH

17:45
A Multiphysics Computational Method For Coupled Simulations Of Tribological Syst...
Volker Gravemeier
AdCo Engineering GW GmbH

18:05
Design Of Landing Gears Using Multiphysics CAE Simulations And Machine Learning ...
Randhir Swarnkar
TimeTooth Technologies

18:25
Multiphysics Simulation-Driven Design of Hydrostatic Rotary Table
Markel Alaña
Ideko S Coop

18:45 | End of Presentations

19:00 | Working Group/Steering Committee Meet

20:00 | Gala Dinner in Salzburg Congress (Euro...

16:45 | Break

17:20 | 8H | Electronics

17:20
Introduction

17:25
System-level Signal Integrity and Power Integrity Co-Simulation for PCBs
Shruthi G S
TE Connectivity India

17:45
Finite Element Based Validation of Printed Circuit Board Assemblies Considering ...
Walter Hinterberger
Magna Powertrain Engineering Center Steyr

18:05
Advanced FEM Warpage Simulation of IC Substrates with Embedded Components, Valid...
Cem Özgür Kösemek
ATS

18:25
A Novel Workflow for Efficient Large BGA Solder Reflow Simulation in Advanced El...
Henan Mao
Ansys

18:45 | End of Presentations

19:00 | Working Group/Steering Committee Meet

20:00 | Gala Dinner in Salzburg Congress (Euro...

16:45 | Break

17:20 | 8J | Workshop

Introduction

Validation of Engineering Simulations
Gregory Westwater
NAFEMS Simulation Governance & Management Working...

18:45 | End of Presentations

19:00 | Working Group/Steering Committee Meet

20:00 | Gala Dinner in Salzburg Congress (Euro...

Thursday 22nd May 2025

Track A

08:00 | Registration Opens

09:00 | 9A | Generative Design

09:00 **Introduction**

09:05 **3D Generative Design Through Free-Form Geometry and Embedded Simulation Data**
Yashwant Liladhar Gurbani
Rolls-Royce Group PLC

09:25 **Multiphysics Optimization for Electrical Machines considering Multiple Operation...**
Claus Pedersen
Dassault Systemes Deutschland

09:45 **Generative Machine Learning for Topology Optimization**
Daniel Ulrich
Universität Stuttgart IKTD

10:05 **Deep Generative Design: Revolutionizing Engineering Design through Generative AI**
Namwoo Kang
Narnia Labs

10:25 | Break

11:10 | 10A | Data Analysis/Postprocessing/Vis...

11:10 **Introduction**

11:15 **Explorative In-Situ Analysis of Turbulent Flow Data Based on a Data-Driven Appro...**
Christian Gscheidle
Fraunhofer SCAI

11:35 **New Developments in a Vector Field Approach to use Finite Element Stress Results...**
Donald Kelly
New South Wales University

11:55 **Build, Monitor, and Run a Digital Twin with Scientific Visualization Tools**
Francois Mazen
Kitware Inc

12:15 **Simulation Data Management as the Basis for Advanced Post-processing and Data An...**
Andreas Nicklaß
GNS Systems GmbH

12:35 | Lunch

Track B

08:00 | Registration Opens

09:00 | 9B | Buckling

09:00 **Introduction**

09:05 **The Nature of Interframe and Global Collapse Modes of Submarine Pressure Hulls**
Jack Reijmers
Nevesbu

09:25 **Optimization of Lightweight Structures: Integrating Eigenfrequency and Load Fact...**
Nils Wagner
Intes

09:45 **Numerical Analysis and Optimization of Interference Fits of Interlocked Rotor Co...**
Emre Baris Yildiz
Universität Stuttgart IKTD

10:05 **How to Modify a Design to Avoid Nonlinear Buckling due to Contact**
Michael Klein
INTES GmbH

10:25 | Break

11:10 | 10B | Civil Engineering

11:10 **Introduction**

11:15 **Structural Analysis Of A Dam Wagon Gate**
Hervandil Sant'Anna
Petrobras

11:35 **A Coupled Simulation Approach to Urban Climate Temperature Prediction With Movin...**
Sacha Jelic
ThermoAnalytics

12:35 | Lunch

Track C

08:00 | Registration Opens

09:00 | 9C | CFD Methods

09:00 **Introduction**

09:05 **Efficient Hybrid Approach For Vehicle Soiling Simulations**
Kevin Posch
Magna Steyr Fahrzeugtechnik

09:25 **Hybrid Volume of Fluid to Lagrangian CFD Modell for Jet Breakup and Spray Transp...**
Ulrich Heck
DHCAE Tools

09:45 **Computational Aeroacoustic Analysis of a Complex Pipeline**
Erika Quaranta
Former Student Contacts

10:25 | Break

11:10 | 10C | Computational Fluid Dynamics

11:10 **Introduction**

11:15 **Twins, Pyramids and Environments: Unifying Approaches to Virtual Testing**
Louise Wright
National Physical Laboratory

11:35 **Combining Computational Chemistry And 3D CFD To Simulate CO2 Membrane Separation...**
Barbara Neuhierl
Siemens Digital Industries Software

11:55 **Modeling External Aerodynamics with a Decomposable and Multi-scale Neural Operat...**
Rishi Ranade
NVIDIA

12:15 **Utilization of a Fluid-Structure Interaction Simulation Methodology for Biomedic...**
József Nagy
Eulerian-Solutions

12:35 | Lunch

Track D

08:00 | Registration Opens

09:00 | 9D | Aero Optimisation

09:00 **Introduction**

09:05 **Advancing CAD-Based Wing Geometry Optimization Using High-Accuracy Sensitivity A...**
Lennart Toenjes
DLR - Deutsches Zentrum Für Luft- Und Raumfahrt

09:25 **Development of an Aerodynamic Housing for Bogies of High-Speed Trains including ...**
Thomas Moshammer
Siemens Mobility Austria GmbH

09:45 **Collaborative Design and Optimization of the Aircraft Wing Geometry**
Nina Moello
PSeven

10:05 **Tire Wake Analysis Through Unsteady Aerodynamics Simulations**
Alejandro Martinez Navarro
Dassault Systemes

10:25 | Break

11:10 | 10D | Multibody Simulation

11:10 **Introduction**

11:15 **Application of Load and Displacement Boundary Conditions on Flexible Multibody S...**
Tobias Ulmer
Airbus Operations

11:35 **Multi Body Dynamics Simulation of Disc Brakes with Frictional Heat**
Fumio Nakayama
FunctionBay

11:55 **Developing motion simulators using CAE at Dynisma**
Laurence Vaughn
Dynisma

12:15 **Development of a Simulation Tool to Address the Requirements of the STURDY Act**
Alan Wegienka
Design Simulation Technologies, Inc

12:35 | Lunch

Track E

08:00 | Registration Opens

09:00 | 9E | Materials 2

09:00 **Introduction**

09:05 **Effect of Material Model Temperature and Time Dependence on Numerical Model Pred...**
Felipe Robles Poblete
University Of Maine

09:25 **Numerical Modeling of Stitching-Enhanced Wood-Based Laminates for High-Performan...**
Markus Wagner
Technische UniversitÄ¤T Graz

09:45 **Universal Machine Learning System for Material Properties Prediction**
Daniel Trost
Key To Metals

10:25 | Break

11:10 | 10E | Composites 2

11:10 **Introduction**

11:15 **Virtual Allowables For Composite Laminates Via FE-Based High-Fidelity Stochastic...**
Minh Hoang Nguyen
Digital Blue

11:35 **Optimizing the Crashworthiness of Plastic Components by Utilizing the Injection ...**
Panagiotis Fotopoulos
BETA CAE Systems SA

11:55 **Signal Converter Enclosure Multiple Verification Through Simulation As Per Milit...**
Govindaraju MD
TE Connectivity India

12:15 **Fatigue Design of Long-Fiber-Reinforced Polymer Components Using the Example of ...**
Matthias Kabel
Fraunhofer ITWM

12:35 | Lunch

Track F

08:00 | Registration Opens

09:00 | 9F | Multiscale

09:00 **Introduction**

09:05 **Accelerating and Optimization of Foam Production and Product Quality using a Dig...**
Dariusz Niedziela
Fraunhofer ITWM

09:25 **The NECTO Structure: A New Approach to Sustainable Ultra-lightweight Design with...**
Michael Probst
CAIQ GmbH

09:45 **Leveraging Multiscale Modeling for the Prediction of Composite Material Response**
Vangelis Palaiokastritis
BETA CAE Systems

10:25 | Break

11:10 | 10F | Code Coupling

11:10 **Introduction**

11:15 **A Multi-Physics Simulation Framework For Maxwell's Equations**
Jürgen Zechner
Tailsit

11:35 **The Introduction of Recent Developments in Multibody Dynamics and Their Applicat...**
Sangtae Kim
FunctionBay

11:55 **A Coupled Simulation Approach to 3D Battery Thermal Runaway Cell To Cell Propaga...**
Vishnuvardhan Ranganathan
ThermoAnalytics

12:15 **Revolutionizing Engineering Analysis With Automated Electromagnetic And Structur...**
Tobias Bernarding
Dassault Systemes Deutschland

12:35 | Lunch

Track G

08:00 | Registration Opens

09:00 | 9G | VMAP

09:00 **Introduction**

09:05 **VMAP Workshop - Vendor-Neutral Standard for CAE Data Storage**
Klaus Wolf
Fraunhofer SCAI

09:25 **Enhancing Simulation Workflows: Leveraging VMAP, META, and ANSA for Optimized Re...**
Athanasios Fassas
BETA CAE Systems

09:45 **VMAP - A Vendor-Neutral Standard for Semantic Information Management in CAX Doma...**
Priyanka Gulati
Fraunhofer SCAI

10:25 | Break

11:10 | 10G | Upfront Simulation

11:10 **Introduction**

11:15 **Democratization, Upfront Simulation and the Role of the Simulation Expert**
Bob Tickel
Cummins Engine Company - Technical Center

11:35 **A Study into Satellite Model Build Automation**
Sunit Mistry
AWE

11:55 **Pre-dimensioning Methodology for Nacelle using Multibody Simulation**
Mohamed Ben-Tkaya
Safran Nacelles (Le Havre)

12:35 | Lunch

Track H

08:00 | Registration Opens

09:00 | 9H | Simulation Enabling the Hydrogen ...

09:00 **Introduction**

09:05 **Derisking the Hydrogen Supply Chain Using Simulation**
Naghman Khan
SimScale

09:25 **Cryogenic Hydrogen Systems Simulation for Aeronautic Fuel Cell**
Marc Hazenbiler
Test-Fuchs

09:45 **Effect of Eulerian Multi-phase Models on Water Transport in Porous Media of PEM ...**
Barbara Neuhierl
Siemens Digital Industries Software

10:05 **Simulation-aided Development of a Liquid Hydrogen Evaporator for Hydrogen-powere...**
Tom Elson
Element Digital Engineering

10:25 | Break

11:10 | 10H | Workshop

Introduction

PSE (Professional Simulation Engineer) Certification
Gino Duffett
NAFEMS Iberia

12:35 | Lunch

Track J

08:00 | Registration Opens

09:00 | 9J | Workshop

Introduction

How to Model What We Don't Know: Probabilistic Foundations of Uncertainty Quanti...
Frank Günther
Knorr-Bremse

10:25 | Break

12:35 | Lunch

13:30 | Awards

NAFEMS NWC25 Awards
Manfred Zehn
TU Berlin - Vice-Chair NAFEMS Council

13:45 | Keynote

Are We Ready for Foundational Models?
Astrid Walle
Siemens Energy Global

14:15 | Workshop

SDM and AI/ML - Panel Discussion
Albrecht Pfaff
Consultant

15:00 | Closing

Closing Remarks
Manfred Zehn
Manfred W. Zehn

15:10 | End of Congress