



NWC25

NAFEMS WORLD CONGRESS

19-22 MAY 2025 | SALZBURG | AUSTRIA

A WORLD OF ENGINEERING SIMULATION



Agenda

Correct at May 18th 2025 - all times and dates are subject to change.

Tuesday 20th May 2025								
Track A	Track B	Track C	Track D	Track E	Track F	Track G	Track H	Track J
07:30 Registration Opens	07:30 Registration Opens	07:30 Registration Opens	07:30 Registration Opens	07:30 Registration Opens	07:30 Registration Opens	07:30 Registration Opens	07:30 Registration Opens	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 Recititt Benckiser Health Care								
09:05 Keynote								
Accelerating the Green Energy Revolution through Nano-to-Megawatt Scale Models								
Harri Kohvisto Ceres Power Limited								
09:35 Break	09:35 Break	09:35 Break	09:35 Break	09:35 Break	09:35 Break	09:35 Break	09:35 Break	09:35 Break
10:20 2A Business Impact	10:20 2B AI Assisted Optimisation	10:20 2C Assessing Welded Structures	10:20 2D Digital Twins 1	10:20 2E Acoustic Simulation	10:20 2F Additive Manufacturing 1	10:20 2G Battery Design 1	10:20 2H Simulation Data Management 1	10:20 2J Cloud Computing
10:20 Introduction	10:20 Introduction	10:20 Introduction	10:20 Introduction	10:20 Introduction	10:20 Introduction	10:20 Introduction	10:20 Introduction	10:20 Introduction
10:25 The 7 Practical Actions Organisations Should Take to Achieve their Product &... Andy Richardson Provenisim	10:25 AI-driven Design Optimization of Mechanical Structures in CAx-Processes Chains Ubin Mao Otfalte Hochschule F. Angew. Wissenschaften	10:25 Numerical and Experimental Analysis of Random Fatigue of Welded Connections Base... Vito Murgida Hitachi Energy	10:25 The Digital Twin of ESAs Large Space Simulator Remko Moeyss ESA/ESTEC	10:25 Vibro-acoustic Simulation of Impulsive Feedback from computer Mice Microswitches Luca Francesconi Logitech	10:25 Comparison between Incremental Layer Deposition and Material Property Manipulati... Ansa Yaghi TWI	10:25 Modelling the Structural Durability and Reliability of Electric Vehicle Batterie... Stephan Vervoort Hestinger Brueel & Kjaer	10:25 Simulation Data Management - Enabler for Credible Digital Twin Alexander Mahl PDTEC AG	10:25 Challenges and Opportunities in Cloud-Based Simulation - An Engineers Perspectiv... James Imrie Rescale
10:45 Engineering License Optimization: A Key to Maximizing Efficiency and ROI Signe Stenseth Open IT	10:45 Pioneering Virtual Calibration: The Role of AI in Performance Optimization Morgan Jenkins Secondmind	10:45 Stress Concepts for Weld Verification and Approaches to Automation Tim Kirchhoff IM Ingenieurgesellschaft	10:45 A Hybrid Framework for Defect Detection: Integrating 2D Synthetic data , Point C... Muhammad Saeed Arenaz036	10:45 Radiation Efficiency Varying Equivalent Radiated Power (revERP) Kristian Kuist Grundfos	10:45 The Calibration For DED Process Simulation On Part-scale For Ti6Al4V Arjan Wiegmanik NLR - Royal Netherlands Aerospace Centre	10:45 Optimization of Battery Module Production and Performance through CFD-Based Simu... Carsten Schmalhorst AVL Deutschland	10:45 AI in Engineering: Challenges and Successful Integration with Product Developmen... Marc Vidal CADFEM Germany GmbH	10:45 Modernizing CAE Applications: Migrating Legacy Desktop Solutions to Web-Based PL... Andres Rodriguez-Villa Tech Soft 3D
11:05 Streamlining Development of Customized Machines for Underground Mining with Unif... Manuel Morales Resemin	11:05 AI-driven 3D Design of Cables and Hoses Christos Schwarz Noesis Solutions NV	11:05 Notch Stress Approach for Welds using Superelements Christos Tegos BETA CAE Systems SA	11:05 Non-linear Real-Time Battery Digital Twins - Efficient and Explainable Surrogate... Dirk Hartmann Siemens	11:05 Development of Road Noise Spatial Sound and Sound Map Implementation Technology ... Daniil Bok Hyundai Motor Group	11:05 An Investigation into Using Surrogate Models for Fast Prediction of Results of a... George Scarlett Advanced Structures And Composites Center - The Un...	11:05 Conceptual Closed-loop Design of Fuel Cell Vehicle Powertrains Leveraging Reinfo... Johan Vanhuyse Siemens	11:05 A Web-based Framework for Efficient Sharing of Simulation World and Test Data Marianthi Dimoulari BETA CAE Systems	11:05 Scaling Beyond Traditional Boundaries of Simulation World with Cloud Computing Michael Schlenkerich Hexagon
11:25 Invited Presentation: Driving Digital/MBE Realization in the Airframe Loads and ... Jack Castro The Boeing Company	11:25 Thickness optimization of a fuel tank using ML based physics model Anand Pathak SIMULIA India	11:25 Automated Weld Assessment Including One-sided Fillet Welds of Large Railway Stru... Wolfgang Krach CAE Simulation & Solutions Maschinenbau Ingenieur...	11:25 Performance Aided Design for Certification: Integrating Digital Twin Technology ... Michelle Quan Autodesk	11:25 Deep Learning Surrogate Models for Fan Performance and Acoustic Assessment Svetlana Jeronimo Dassault Systemes	11:25 Efficiency Improvement for the Simulation of Metal Additive Manufacturing Michael Roy TWI	11:25 Development of a Validated Simulation Model for All-Solid-State Batteries Maximilian Luczak Math2Market	11:25 Implementation of a simulation and process data management system: How can this ... Christopher Wolf GNS Systems	11:25 Safeguarding Engineering IP in the Cloud: Strategies for Secure Global Collabora... Navin Bagga Rescale
11:45 Lunch	11:45 Lunch	11:45 Lunch	11:45 Lunch	11:45 Lunch	11:45 Lunch	11:45 Lunch	11:45 Lunch	11:45 Lunch
13:00 Sponsor A Dassault Systèmes	13:00 Sponsor B Altair / 4a engineering	13:00 Sponsor C Esteco / Cadfem-Ansys	13:00 Sponsor D Siemens Digital Industries...	13:00 Sponsor E Hexagon	13:00 Sponsor F Rescale	13:00 Sponsor G RecurDyn / Viridien	13:00 Sponsor H Qarnot / TBC	13:00 Sponsor J Ricos
Introduction	Introduction	Introduction	Introduction	Introduction	Introduction	Introduction	Introduction	Introduction
Platinum Sponsor: Dassault Systèmes MODSIM: The Importance Of Being Unified	Silver Sponsors: Altair / 4a engineering 13:00 - 13:40 Altair: AI In Design And Engineering - Ready To Deploy 13:45 - 14:25 4a Engineering: The Accurate Representation Of Material Behavior In Finite Element Simulations ...	Silver Sponsors: Esteco / Cadfem-Ansys 13:00 - 13:40 Esteco: Democratizing Engineering Simulation With VEDA 13:45 - 14:25 Cadfem-Ansys: AI And Simulation In Digital Engineering	Gold Sponsor: Siemens Digital Industries Software - The Sound Of Science - A Digital Twin For The Große Festspielhaus Salzburg - From Manual Simulations To MBE - Altair, Siemens And The Future Of Simulation	Gold Sponsor: Hexagon AI Meets Engineering: The Future Is Predictive	Gold Sponsor: Rescale - Evolving The Modern Simulation Experience: Orchestrating Compute, Data, And AI for Accelerated Innovation - Pawel Disc: The Future Of CAE Workflow As Told By Industry Innovators - G. Oates (Rimac Technology); N. Beheshti (Intelligent Energy); M. Chung (Subsea7)	Silver Sponsors: RecurDyn / Viridien 13:00 - 13:40 RecurDyn: Discover RecurDyn: Multiphysics Solutions For Assemblies In Motion 13:45 - 14:25 Viridien: Tell Me Something Guys, Are You Happy In This Cloud-Base World?	Silver Sponsors: Qarnot / TBC 13:00 - 13:40 Qarnot: From Solver To Server: A Sovereign And Sustainable HPC Cloud Solution	Gold Sponsor: Ricos Get The Latest Information From Ricot
14:25 Break	14:25 Break	14:25 Break	14:25 Break	14:25 Break	14:25 Break	14:25 Break	14:25 Break	14:25 Break
15:00 3A Verification & Validation	15:00 3B AI Enabled Assisted Workflows	15:00 3C Reduced Order Modelling 1	15:00 3D Digital Engineering	15:00 3E NVH	15:00 3F Composites 1	15:00 3G Electric Vehicles	15:00 3H Connecting SDM and PDM/PLM	15:00 3J HPC
15:00 Introduction	15:00 Introduction	15:00 Introduction	15:00 Introduction	15:00 Introduction	15:00 Introduction	15:00 Introduction	15:00 Introduction	15:00 Introduction
15:05 Guidelines for Validation of Engineering Simulations: A new NAFEMS Publication Jean-Francois Imbert NAFEMS Technical Fellow	15:05 Graph Neural Networks for Semantic Feature Identification Tim Newman National Composites Centre	15:05 Machine Learning based Surrogate FEA Modelling Oliver Found TWI	15:05 Simulation Eco System For Effective Virtual Development Bernd Fachbach Fachbach Consulting	15:05 ML-based Tool to Improve NVH Performance of Body-car Structures Fabiola Cavallere SEAT	15:05 A Machine Learning-Based Robust Design Approach for Reliable Use of Recycled Sho... Moncef Salmi Hexagon	15:05 ML-Based System-Level Optimization of an EV Cooling System Radha Krishnan Daimler Automotive Deutschland	15:05 Transformation of an In-house CFD Development Process Automation Tool into a SPD... Matthias Grundner Porsche Engineering	15:05 An Industry Representative Benchmark Study on Current Capabilities for Parallel ... Adi Adumbratse Porsche Electric Performance
15:25 Use of Documented Practices in Simulation Verification and Validation Gregory Westwater Fisher Controls International	15:25 Advanced AI driven Exploration Possibilities to Link Model Changes and Effects Daniela Steffes-Lai Fraunhofer SCAI	15:25 Predicted Flow and Settling of Falling Particles Ceyhan Sahin Noesis Solutions NV	15:25 Towards Sustainable Engineering: The Link between Model Credibility and Risk Fac... Joao Gregorio National Physical Laboratory	15:25 Integrated Testing and Simulation to Optimize and Streamline Development of Elec... Mathieu Sarrazin Siemens	15:25 Modeling Cure-Induced Thermo-Mechanical Effects in Carbon-Fiber Polymer Structur... Minh Hoang Nguyen Digital Blue	15:25 MBD-CFD Coupling Simulation of Oil Cooling Performance Analysis for E-motor WOOJIN SHIN Functionbay	15:25 Streamlined Transition from CAD to CAE Structures for Optimized Product Developm... Spyros Tzamtzis BETA CAE Systems	15:25 Orchestrating Hybrid HPC Environments: Strategies for Data Gravity and AI-Ready ... Romani Klein Rescale
15:45 The Path to Virtual Product V&V Uncertainty Quantification of Test and Simulatio... Frank Günther Knorr-Bremse	15:45 Empowering Organizations with Engineering Intelligence to Revolutionize Product ... Paul Mc Grath Neural Concept	15:45 Integrating Reduced Model Handling in an SPDM Environment Konstantinos Anagnostopoulos BETA CAE Systems	15:45 Unlock the Full Potential of Technology Data Management - A Central Part in Prod... Mary Knappe PDTEC	15:45 Electromagnetic and NVH Analysis of PMSM with Eccentricity and Rotor Magnetizati... Alain Tramecan ESI Group	15:45 Automated Generation of Anisotropic Material Models for the Simulation of Short-... Wolfgang Korte PART Engineering	15:45 Optimized EV Charging: AI-Driven Model Reduction Florian Dirksamer Salvus	15:45 Enabling R&D Through Digital Democratization: A Case Study In The Global Food In... Leonel Garategarry Invenia	
16:05 Real Validation Case Study: Using CFD To Predict Mixing In A Large LNG Storage T... Steve Howell Abercru	16:05 Methods and Applications of Image and Sound Processing in Engineering Kambiz Kayavattash Hexagon	16:05 AI Sustainability in Engineering Design Optimization: A Guided Process for RSM a... Danilo Di Stefano Esteco	16:05 Optimal PMSM Rotor Notching Design Procedure for NVH Mitigation Across the Whole... Sebastian Ciceo Siemens	16:05 Optimal PMSM Rotor Notching Design Procedure for NVH Mitigation Across the Whole... Sebastian Ciceo Siemens	16:05 ICME Predictive Solution for the Durability of Composite Laminates Under Fatigue... Moncef Salmi Hexagon	16:05 Electric Drive Engineering Emphasizing Fluid and Thermal Analysis: A Case Study ... Xavier Conqui Siemens		
16:25 Break	16:25 Break	16:25 Break	16:25 Break	16:25 Break	16:25 Break	16:25 Break	16:25 Break	16:25 Break
17:00 4A AI/ML Governance	17:00 4B AI Enabled Automation	17:00 4C Simulating the Welding Process	17:00 4D Digital Twins 2	17:00 4E Dynamics & Vibration	17:00 4F Additive Manufacturing 2	17:00 4G Multiphysics 1	17:00 4H Simulation Data Management 2	17:00 4J Workshop
17:00 Introduction	17:00 Introduction	17:00 Introduction	17:00 Introduction	17:00 Introduction	17:00 Introduction	17:00 Introduction	17:00 Introduction	17:00 Introduction
17:05 Safety of AI Systems in Modeling and Simulation Young Lee UL Solutions	17:05 Building Surrogate models for Physics Simulation using a no-code approach Asparuh Stoyanov Key Word	17:05 Using FEA To Enhance Experiments in Thermal Processes Michael Roy TWI	17:05 Digital Thread Foundations for Accelerated Multi-Disciplinary CAE Workflows Navin Bagga Rescale	17:05 Predicting Dynamic Response of Centrifugal Pumps using Idealized Loading and Loa... Søren Thulund Grundfos	17:05 Numerical Analysis of a Repair on an Impeller Using Directed Energy Deposition: ... Jos Vroon NLR - Royal Netherlands Aerospace Centre	17:05 Open Source Vibro-Acoustic Simulation for Real-world Applications Antonio Balano Svizzera Unidat	17:05 Enhancing Engineering Efficiency: The Synergy of SPDM and PIDO Integration Laurent Chee Pison	ASSESS - Plans for 2025 Nick Appleyard NAFEMS

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Wednesday 21st May 2025								
Track A	Track B	Track C	Track D	Track E	Track F	Track G	Track H	Track J
07:30 Registration Opens	07:30 Registration Opens	07:30 Registration Opens	07:30 Registration Opens	07:30 Registration Opens	07:30 Registration Opens	07:30 Registration Opens	07:30 Registration Opens	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	09:35 Break	09:35 Break	09:35 Break	09:35 Break	09:35 Break	09:35 Break	09:35 Break	09:35 Break
10:30 5A Simulation Governance	10:30 5B AI Supported Postprocessing	10:30 5C Fatigue 1	10:30 Sponsor Dassault Systèmes	10:30 5E Optimisation 1	10:30 5F MPS - Injection Moulding	10:30 5G Battery Design 2	10:30 5H Democratisation	10:30 5J Workshop
10:30 Introduction	10:30 Introduction	10:30 Introduction	Introduction	10:30 Introduction	10:30 Introduction	10:30 Introduction	10:30 Introduction	Introduction
10:35 Safety Comes First: How to Do the Minimum Quality Assurance in Finite Element Mo... Alessandro Macovei Fokker Aerostructures	10:35 Interactive Search of Crash Deformation Patterns in a Database Comprising Severa... Stefan Müller SiDACT GmbH	10:35 From The Paris Law To The 'Total-Life' Method: An Extensive Review Of Fatigue Cr... Andrew Halfpenny HBK	Platinum Sponsor: Dassault Systèmes From IDEA TO PRODUCT: SIMULIA Fluids Portfolio for Designers And Analysts To Accelerate Product Innovation	10:35 High Voltage Circuit Breaker Design with Multi-Objective Optimization Algorithms Wilhelm Thümler Hitachi Energy	10:35 Cooling Strategy Evaluation and Optimization for the Injection Molding Process U... Yi Di Boon TE Connectivity	10:35 Adapting To Meet The Electrification Challenge Graham Hill Caterpillar	10:35 Automation and Democratization of High Fidelity Thermal Simulations of Electroni... Kim Nilsen Grundfos	Standardisation for Manufacturing Process Simulation Sjoerd Van Der Veen Airbus Operations
10:55 Advances in Credibility of Modeling and Simulation: A Generic Framework Approach... Mohamed Beshar Baradi Robert Bosch GmbH	10:55 Leveraging LLMs for Automated Post-Processing of HPC Simulation Output Logs James Imrie Robert Bosch GmbH	10:55 Simulation-based Design Process For Metallic Structures Mathilde Laporte DLR - Deutsches Zentrum Für Luft Und Raumfahrt		10:55 Distributed Multi-disciplinary Design Optimization of Complex Engineering System... Hunor Erdelyi Siemens	10:55 Non-Intrusive Structural Prediction of Stretch Blow Moulded Bottles Liam McGovern Queen's University Of Belfast	10:55 Real-time prediction for an EV Battery Thermal Management Ajikumar Jayakumar NorusScale	10:55 Democratization of Engineering Simulation: Enabling Technologies and Organizatio... Bruce Webster Norus Nexus	
11:15 Evolution of the Simulation Quality Standards Landscape Martin Krammer Knorr-Bremse SIS GmbH	11:15 Applied research on contextual graph databases: What are the findings for AI use... Christopher Wolf GNS Systems	11:15 Fatigue Analysis as Solver Integrated Standard Task for Part and Assembly Design Michael Klein Intes		11:15 Unified Non-Parametric Optimization Of Multiple Design Variable Types Pratik Upadhyay Dassault Systèmes	11:15 Development of Gap & Flush Analysis Technology for Automotive Lamps Hyuck-Moon Gil SL Corporation	11:15 Battery Simulation - Synergies by Combining 1D & 3D Simulation Eric Link Siemens	11:15 Development of an Automated and Democratised Simulation Process to Predict the B... Tobias Gloesstein Esteco	
11:35 Credibility of Simulation Models: A Brick-by-Brick Approach Florent Mathieu Elscom	11:35 Reimagining the Simulation Environment by Creating a Knowledge Database to Enhan... Prasad Mandava Visual Collaboration Technologies			11:35 Enhanced Non-Parametric Topology-, Shape- And Sizing-Optimization Using Non-Line... Anton Jurinic Dassault Systèmes	11:35 Numerical Simulation of Filling and Cooling Phenomena in Injection Molding Ahmane Thelbi Fabrication Saharien Preform	11:35 Revolutionizing Battery Cold Plate Design Paul Mc Grath Neural Concept		
11:55 Lunch	11:55 Lunch	11:55 Lunch	11:55 Lunch	11:55 Lunch	11:55 Lunch	11:55 Lunch	11:55 Lunch	11:55 Lunch
13:10 6A Solvers & Methods	13:10 6B Data Based Modelling	13:10 6C Fatigue 2	13:10 6D System Level Simulation	13:10 6E Discrete Element Method	13:10 6F MPS - Metals	13:10 6G Cosimulation	13:10 6H Automated Workflows	13:10 6J Short Training Course
13:10 Introduction	13:10 Introduction	13:10 Introduction	13:10 Introduction	13:10 Introduction	13:10 Introduction	13:10 Introduction	13:10 Introduction	Introduction
13:15 From Traditional to Transformational: Cloud-Native Deployment of Established Non-... David Heiny SimScale	13:15 Cloud-Enabled Generative AI for Preliminary Engineering Design Nima Ameri Rolls-Royce	13:15 Predicting The Fatigue Life Of Adhesive And Hybrid Joints: An Effective Approach... Cristian Bagul Hettinger Bräse & Kjaer	13:15 Systems Simulation for the Evaluation and Down Selection of Fusion Engineering B... James Bailey UKAEA	13:15 A Novel Multi-scale Multi-physics Computational Framework for Predicting Process... Ali Nasrini The Ohio State University	13:15 A Cost-effective Cold Roll-Forming FE Model for Industrial Applications Timothy Senart CBM Group	13:15 A Novel Two-Scale Co-Simulation Approach for Solder Joint Modeling in Shock and ... Henan Mao Ansys	13:15 Integration of a Structural Mechanics Module (SMM) into a Collaborative Engineer... Oliver Kunc DLR - Deutsches Zentrum Für Luft Und Raumfahrt	All You Need to Know about Design Optimisation (almost) Gino Duffett NAEFEMS
13:35 Meshing-Free Isogeometric Analysis: The Flex Representation Method in Engineerin... Greg Vernon Conform	13:35 Method For Determining Operating Loads On Rail Vehicles Using AI Tools Mathilde Laporte DLR - Deutsches Zentrum Für Luft Und Raumfahrt	13:35 Virtual Testing for Fatigue Prediction in Variable Loading Scenarios Using CDM a... Javier Domingo Lopez Airbus Defence & Space	13:35 Impact Assessment Of Road Safety Measures - Developing Guidelines For Simulation... Peter Wimmer Virtual Vehicle Research	13:35 What Makes a Model Good? A Review Of Applications Across Industries Augusto Moura DCS Computing	13:35 Design Exploration of Hot Ironing Process Using Finite Element Method Bulent Acar Replon Machine And Tool Industry And Trade	13:35 Accurate Modeling Of Power Electronics Effects In Electric Aviation Through Co-s... Philipp Wolfrum Siemens	13:35 Automation of the CFD Simulation Workflow in the Industrial Application Tomasz Plusa Valero	
13:55 Reverse Engineering in Simulation - Bridging Meshes and CAD for Seamless Integra... Gerd Schwaderer ESI Germany GmbH	13:55 Generative-AI for Preliminary Engineering Design Yashwant Lladhar Gurbani Rolls-Royce	13:55 Fatigue Life Analysis as Part of the Design Optimization Process for Welded Stru... George Korbelits BETA CAE Systems	13:55 Enhancing System Modeling Workflows with Knowledge Graphs and Generative AI Maria Bonner Siemens	13:55 A Study on the Damage of Dump Truck Loading Box Based on Dynamic Behavior of Agg... Sungmin Ryu Hyundai Motor	13:55 Advancing Stability and Accuracy in 2D Metal Cutting Simulations: An Expanded AL... Andreas Nemetz Johannes Kepler Universität Linz	13:55 MBS - FEA Co-Simulation approach applied to a coupled Vehicle-Tire in an Abuse L... Bruno Passonne Dassault Systèmes	13:55 Cloud-based Automated CFD Design Tools Using the Example of the Heat Treatment o... Ulrich Heck HPC4E Tools	
14:15 Application of High Performance Computing to Structural Acoustics Predictions Kuangcheng Wu NSWCDD	14:15 Empowering Syringe Designers to Assess Device Performance with Physics-based Mac... Benedikt Koenig Dassault Systèmes	14:15 The Fatigue Benchmarking Repository Project: Objectives and Its Relevance to NAF... Jan Papuga Czech Technical University	14:15 Determining the Accuracy and Efficiency of Robot Performance in a Non-idealized ... Brant Ross EnginSoft			14:15 The Introduction of Recent Developments in Multibody Dynamics and Their Applicat... Sangtae Kim Functionbay	14:15 Integrated Multi-Physics Optimization of Automotive Road Wheels Using Advanced M... Marco Evangelos Biancolini University Of Rome 'Tor Vergata'	
14:35 Break	14:35 Break	14:35 Break	14:35 Break	14:35 Break	14:35 Break	14:35 Break	14:35 Break	14:35 Break
15:20 7A Probabilistic Methods	15:20 7B Topology Optimisation	15:20 7C Joints & Connections	15:20 7D Reduced Order Modelling 2	15:20 7E Workshop	15:20 7F Materials 1	15:20 7G CFD Supporting Design	15:20 7H Computational Electromagnetics	15:20 7J Short Training Course
15:20 Introduction	15:20 Introduction	15:20 Introduction	15:20 Introduction	Introduction	15:20 Introduction	15:20 Introduction	15:20 Introduction	Introduction
15:25 A Study on Probabilistic Analytical Target Cascading for Robust Vehicle R&am... Jin Jung Hyundai	15:25 Bionic Carbody: Lightweight Rail Car Development - From Topology Optimization to... Robert Nedelik Siemens	15:25 Nonlinear Cohesive Zone Modeling for Adhesives Tobias Welfschmidt 3M Deutschland	15:25 Systems Simulation For Fusion Using Novel Augmented CMS Reduction Techniques Tom Delghan UK Atomic Energy Authority	Speaking of Simulation Live – Machine Learning Marton Groza NAEFEMS	15:25 Automotive Applications of the Crystal Plasticity Finite Element Method for Pred... Petr Nekolny Valero	15:25 Importance of CFD for Design of Heat Ventilation Air Condition Unit (HVAC) For P... Petr Nekolny Valero	15:25 Non-Linear Magnetisation Architecture for Improved Magnetic Performance Oliver Foud TWI	German FKM Guidelines – An Introduction Klemens Rother University Of Applied Sciences Munich
15:45 Machine Learning in Simulation - Ensuring Robust and Reliable Products Jochen Kinsig Cenit	15:45 Efficient Generative Design Process with FEM Based Topology Optimization Nils Wagner Intes	15:45 Multidisciplinary Mesh-independent Approach for Damage and Failure Simulation of... Patrick Wurm Magna Steyr	15:45 High-Fidelity Simulation of Electric Vehicle based on Reduced Order Models to Ad... Eric Link Siemens		15:45 Extending a Material Master System by Multi CAE Material Information Uwe Diekmann Matplus GmbH	15:45 Cross-wind Aerodynamic Analysis of Electric Cargo Scooter Designs using the Unif... Srikrishna Chittur Dassault Systèmes	15:45 Signal Detection of Metallic Microwires Within Carbon-Fibre Composites by Numeri... Wolfgang Krach CAE Simulation & Solutions Maschinenbau Ingenieurb...	
16:05 Cross Domain Applications of Fragility Surfaces Roland Niemeier Ansys	16:05 Topology Optimization of Submodels using Voxel Based Engineering Approach Thomas Rehner Hexagon	16:05 Techniques for Inverse Calibration of Cohesive Zone Models Mark Oliver Veryst Engineering	16:05 Using Machine Learning For Advancements Beyond Traditional Reduced Order Modell... Markus Wagner Ansys Deutschland GmbH		16:05 AI-Driven Design, Simulation And Optimization Of Novel Meta-Materials For Heat T... Alessia Perilli Pimat	16:05 Modelling Aero-Optical Turbulent Effects On The European Solar Telescope Using C... Matty Soter Principia Ingenieros Consultores	16:05 How Machine Learning is changing Electromagnetic Compatibility Simulation Jan Hansen Technische Universität Graz	

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Track A	Track B	Track C	Track D	Track E	Track F	Track G	Track H	Track J
08:00 Registration Opens	08:00 Registration Opens	08:00 Registration Opens	08:00 Registration Opens	08:00 Registration Opens	08:00 Registration Opens	08:00 Registration Opens	08:00 Registration Opens	08:00 Registration Opens
09:00 9A Generative Design	09:00 9B Buckling	09:00 9C CFD Methods	09:00 9D Aero Optimisation	09:00 9E Materials 2	09:00 9F Multiscale	09:00 9G VMAP	09:00 9H Simulation Enabling the Hydrogen ...	09:00 9J Workshop
09:00 Introduction	09:00 Introduction	09:00 Introduction	09:00 Introduction	09:00 Introduction	09:00 Introduction	09:00 Introduction	09:00 Introduction	Introduction
09:05 3D Generative Design Through Free-Form Geometry and Embedded Simulation Data	09:05 The Nature of Interframe and Global Collapse Modes of Submarine Pressure Hulls	09:05 Efficient Hybrid Approach for Vehicle Soiling Simulations	09:05 Advancing CAD-Based Wing Geometry Optimization Using High-Accuracy Sensitivity A...	09:05 Effect of Material Model Temperature and Time Dependence on Numerical Model Pred...	09:05 Accelerating and Optimization of Foam Production and Product Quality using a Dig...	09:05 VMAP Workshop - Vendor-Neutral Standard for CAE Data Storage	09:05 Derisking the Hydrogen Supply Chain Using Simulation	How to Model What We Don't Know: Probabilistic Foundations of Uncertainty Quanti...
Yashwant Liladhar Gurbani Rollo-Royce	Jack Reijmers Nerevbu	Kevin Pesch MAGNA STEYR Fahrzeugtechnik GmbH Co KG	Lenmart Toenjes DLR - Deutsches Zentrum Für Luft Und Raumfahrt	Felipe Robles Poblete Advanced Structures And Composites Center - The Un...	Dariusz Niedziela Fraunhofer ITWM	Klaus Wolf Fraunhofer SCAI	Ajitkumar Jayakumar SimScale	Frank Günther Kronm-Bremer
09:25 Multiphysics Optimization for Electrical Machines considering Multiple Operation...	09:25 Optimization of Lightweight Structures: Integrating Eigenfrequency and Load Fact...	09:25 Hybrid Volume of Fluid to Lagrangian CFD Model for Jet Breakup and Spray Transp...	09:25 Development of an Aerodynamic Housing for Bogies of High-Speed Trains including ...	09:25 Numerical Modeling of Stitching-Enhanced Wood-Based Laminates for High-Performan...	09:25 The NECTO Structure: A New Approach to Sustainable Ultra-lightweight Design with...	09:25 Enhancing Simulation Workflows: Leveraging VMAP, META, and ANSA for Optimized Re...	09:25 Cryogenic Hydrogen Systems Simulation for Aeronautic Fuel Cell	
Claus Pedersen Dassault Systemes Deutschland GmbH	Nils Wagner Intes	Ulrich Heck DHCAE Tools	Thomas Moshhammer Siemens Mobility Austria	Markus Wagner Technische Universität Graz	Michael Probst CAIQ	Athanasios Fasaki BETA CAE Systems	Marc Hazenbiller Test-Fuchs	
09:45 Generative Machine Learning for Topology Optimization	09:45 Numerical Analysis and Optimization of Interference Fits of Interlocked Rotor Co...	09:45 Computational Aeroacoustic Analysis of a Complex Pipeline	09:45 Collaborative Design and Optimization of the Aircraft Wing Geometry	09:45 Universal Machine Learning System for Material Properties Prediction	09:45 Leveraging Multiscale Modeling for the Prediction of Composite Material Response	09:45 VMAP - A Vendor-Neutral Standard for Semantic Information Management in CAX Doma...	09:45 Effect of Eulerian Multi-phase Models on Water Transport in Porous Media of PEM ...	
David Ulrich Astel	Enno Boris Yildiz KITD - University Of Stuttgart	Erika Quaranta Former Student Contacts	Nina Moelle PSeven	Daniel Frost Key To Metals AG	Yorgalis Polakiotakis BETA CAE Systems SA	Priyanka Gubbi Fraunhofer SCAI	Barbara Neuhert Siemens	
10:05 Deep Generative Design: Revolutionizing Engineering Design through Generative AI	10:05 How to Modify a Design to Avoid Nonlinear Buckling due to Contact		10:05 Tire Wake Analysis Through Unsteady Aerodynamics Simulations			10:05 Open Discussion	10:05 Simulation-aided Development of a Liquid Hydrogen Evaporator for Hydrogen-powere...	
Namwook Kang Narnia Labs	Michael Klein Intes		Aljandro Martinez Navarro Dassault Systemes			Klaus Wolf Fraunhofer SCAI	Steve Summerhayes Element Digital Engineering	
10:25 Break	10:25 Break	10:25 Break	10:25 Break	10:25 Break	10:25 Break	10:25 Break	10:25 Break	10:25 Break
11:10 10A Sim. Governance - Supp. Certific...	11:10 10B Data Analysis/Postprocessing/Vis...	11:10 10C Computational Fluid Dynamics	11:10 10D Multibody Simulation	11:10 10E Composites 2	11:10 10F Code Coupling	11:10 10G Upfront Simulation	11:10 10H Civil Engineering	11:10 10J Workshop
11:10 Introduction	11:10 Introduction	11:10 Introduction	11:10 Introduction	11:10 Introduction	11:10 Introduction	11:10 Introduction	11:10 Introduction	Introduction
11:15 Simulation For Compliance/Certification	11:15 Explorative In-Situ Analysis of Turbulent Flow Data Based on a Data-Driven Appro...	11:15 Real-world Surrogate Medical Device Inputs to Explore Complex Rheological CFD ML...	11:15 Application of Load and Displacement Boundary Conditions on Flexible Multibody S...	11:15 Virtual Allowables For Composite Laminates Via FE-Based High-Fidelity Stochastic...	11:15 A Multi-Physics Simulation Framework For Maxwell's Equations	11:15 Democratization, Upfront Simulation and the Role of the Simulation Expert	11:15 Structural Analysis Of A Dam Wagon Gate	PSE (Professional Simulation Engineer) Certification
Dirk Mueller UL Solutions	Christian Gschelidde Fraunhofer SCAI	Oliver Marshall Crua Product Design	Tobias Ulmer Airbus Operations GmbH	Minh Hoang Nguyen Digital Blue	Jürgen Zechner TatSoft	Bob Tichel Cummins Engine Company - Technical Center	Hervandil Sant'Anna Petrobras	Gino Duffett NAFEMS
11:35 Invited presentation: Future Systems Depend Increasingly Upon Close Interactions...	11:35 New Developments in a Vector Field Approach to use Finite Element Stress Results...	11:35 Combining Computational Chemistry And 3D CFD To Simulate CO2 Membrane Separation...	11:35 Multi Body Dynamics Simulation of Disc Brakes with Frictional Heat	11:35 Optimizing the Crashworthiness of Plastic Components by Utilizing the Injection ...	11:35 A Coupled Simulation Approach to 3D Battery Thermal Runaway Cell To Cell Propaga...	11:35 A Study into Satellite Model Build Automation	11:35 A Coupled Simulation Approach to Urban Climate Temperature Prediction With Movin...	
Twan De Wit NXT GEN Hightech	Donald Kelly University Of New South Wales	Barbara Neuhert Siemens	Fumio Nakayama FunctionBay K.K.	Panagiotis Fotopoulos BETA CAE Systems	Vahnuvardhan Ranganathan ThermoAnalytics	Sunit Mistry AWE	Sacha Jelic ThermoAnalytics	
11:55 Certification By Simulation: An Example Of Where Confidence In Simulation Based ...	11:55 Build, Monitor, and Run a Digital Twin with Scientific Visualization Tools	11:55 Modeling External Aerodynamics with a Decomposable and Multi-scale Neural Operat...	11:55 Developing motion simulators using CAE at Dynisma	11:55 Signal Converter Enclosure Multiple Verification Through Simulation As Per Milit...	11:55 Revolutionizing Engineering Analysis With Automated Electromagnetic And Structur...	11:55 Pre-dimensioning Methodology for Nacelle using Multibody Simulation		
Steve Howell Abercys	Francois Mazen Kivare	John Lifford Novidia	Laurence Vaughn Dynisma	Gordindarjio MD TE Connectivity	Tobias Bernarding Dassault Systemes	Mohamed Ben-Thaya SAFRAN NACELLES (Le Havre)		
12:15 Simulation Data Management as the Basis for Advanced Post-processing and Data An...	12:15 Utilization of a Fluid-Structure Interaction Simulation Methodology for Biomedic...		12:15 Development of a Simulation Tool to Address the Requirements of the STURDY Act	12:15 Fatigue Design of Long-Fiber-Reinforced Polymer Components Using the Example of ...				
Andreas Nicklaß GNS Systems	József Nagy Eulerian-Solutions		Alan Wegienka Design Simulation Technologies	Matthias Kabel Fraunhofer ITWM				
12:35 Lunch	12:35 Lunch	12:35 Lunch	12:35 Lunch	12:35 Lunch	12:35 Lunch	12:35 Lunch	12:35 Lunch	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 Wallé Siemens Energy								
14:15 Workshop								
Panel Discussion: Will AI Together with SDM Change the Future of Engineering Met...								
More Details And Panelists Will Be Announced Soon								
15:00 Closing								
Closing Remarks								
Manfred Zehn TU Berlin - Vice Chair NAFEMS Council								
15:10 End of Congress	15:10 End of Congress	15:10 End of Congress	15:10 End of Congress	15:10 End of Congress	15:10 End of Congress	15:10 End of Congress	15:10 End of Congress	15:10 End of Congress