*Programme may be subject to change

Welcome to 'Advanced CAE solutions for next-generation propulsion system design'

Provisional programme

Friday 19 September 2025

12:00 (JST)	Arrival for buffet lunch Reception area

	Presentations
12:30 (JST)	**Keynote address** Chris Hopper, Managing Director, Realis Simulation Inc. Nick Tiney, Product Management Director, Realis Simulation Inc.
13:00	**Pressure relief valve simulation of a Battery Electric Vehicle (BEV) battery pack** Taketo Yamada, Honda Motor Co. Ltd.
13:30	**Accelerated accurate detailed kinetics in 3D CFD VECTIS simulations** Detailed chemistry is crucial in internal combustion engine (ICE) simulations to capture fuel composition effects and pollutant formation. However, high computational costs limit its use. A new feature in VECTIS introduces a chemical clustering method that groups cells with similar thermo-chemical states, dramatically accelerating source term computation by up to 10 times, and cutting overall simulation time by up to 2.5 times. This breakthrough enables practical, high-fidelity fuel and emissions modelling across a broader range of powertrain development workflows. Evgeniy Shapiro, Senior Product Manager Fluid Dynamics, Realis Simulation Ltd. Fabian Mauss, Lars Seidel, Anders Borg, LOGEsoft.
14:00	**TBC** TBC

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14:30	**Driving efficiency through ring pack optimisation with RINGPAK and modeFRONTIER** Lubor Buric, Development Manager, Structural Mechanics, Realis Simulation s.r.o.
15:00	**Tea break**
15:15	**From feedback to functionality: Delivering customer requested enhancements in FEARCE-Vulcan** Jan Hynous, FEARCE Product Manager, Realis Simulation s.r.o.
15:45	**Using SABR to concept an EV transmission with minimal gear whine** This study works through a concept phase electric vehicle transmission design using SABR. The concept is a parallel axis single speed transmission, and the variables which are covered are centre distance tuning, bearing selection, ratio selection and gear macro geometry design. Multiple differing concepts are chosen to be compared for metrics such as weight, deflection, gear misalignment and ultimately gear NVH performance. SABR has many tools to allow rapid evaluation of different concepts, for durability, stiffness, and NVH excitation. The software also guides the user with these tools to make quick directional decisions during concept design and helps avoid introducing problems which are harder to rectify at the detailed design stage. Lubor Buric, Development Manager, Structural Mechanics, Realis Simulation s.r.o.

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16:15	**A Model Based Development approach to motorcycle hybrid powertrains using IGNITE** This presentation introduces a model-based approach to developing and calibrating control strategies for hybrid motorcycle powertrains. Using a CAE toolchain combining IGNITE and Simulink, the methodology enables early-stage evaluation of vehicle longitudinal behaviour and powertrain architecture selection. Once the architecture is established a focus is placed on control calibration tasks such as throttle-to-torque mapping and ICE/EM torque blending, which significantly affect drivability under low-speed and transient conditions. Using Model-in-the-Loop (MiL) simulation, the control logic can be iteratively tuned in realistic driving scenarios, allowing engineers to evaluate calibration trade-offs prior to physical testing. Vratislav Ondrak, IGNITE Product Manager, Realis Simulation s.r.o.
16:45	**Cloud HPC and data-driven engineering pave the way for next-generation research and development** Rescale has evolved from traditional cloud HPC resource provisioning to launch a new solution that supports the management and utilization of simulation data. This accelerates the entire process of creating value from data and powerfully promotes data-driven research and development. By automatically organizing vast amounts of simulation data and managing it with appropriate metadata, searchability and reusability of data are improved. This powerfully supports the work efficiency of designers and researchers. Hiroki Shimizu, Rescale Japan K.K.
17:15	**What's New in 2025** Nick Tiney, Product Management Director, Realis Simulation Inc.

18:00 (JST)	Evening buffet, networking and drinks reception Reception area Meet our team of experts, an opportunity to network and ask questions.
20:00	Close