ESI FORUM GERMANY

AGENDA WEDNESDAY, NOVEMBER 6, 2019

	Plenary (Room Maritim I - C)
9 - 10.35 am	Opening - Dr. Cristel de Rouvray & Andreas Renner Dr. Ralph Sundermeier, Volkswagen* ESI and Volkswagen a development partnership in constant transition - from the 1st Polo to ID.3
10.35 am	Break & Demo Sessions
10.55 - 12.30 pm	Christoph Gümbel, Future Matters New challenges for CAE due to electrification, connectivity and autonomous driving Prof. Francisco Chinesta, ENSAM/ESI Hybrid Twin: data enriching physics and physics enriching data - the winning alliance Dr. Eberhard Haug From shock to crash - the path to POLO85
12.30 pm	Lunch

	Room Maritim I - C	Room Maritim I - B	Room Maritim I - A	Room Salon 4
	Automotive I	Automotive II	Aerospace	Industrial & Machinery
1.30 pm	**Dr. Michael Andres, Volkswagen** CAE Applications for Proper Generalized Decomposition	**Vladislav Kocián, TÜV SÜD Czech** Simulation based evaluation of autonomous vehicle behavioral competences	**Sören Callsen, Airbus Aircraft** Application of GSP module to describe TBL correlation for SEA aircraft models	**Dr. Fabian Haag, Georgfischer JRG** High-speed thermography and simulations for the casting of solid metal glasses
2 pm	**Joachim Küstner, AUDI** Continuous simulation of process chains at AUDI's Competence Center for Plant Equipment and Forming Technology (KCU)	**Alexandre Dumon, ESI Group** EU UPSCALE project: First steps towards the efficient virtual assessment of battery fire risk for EV crash	**Christian Leon Munoz, Deutsches Zentrum für Luft- und Raumfahrt (DLR)** Aircraft Ditching Simulation within a Multi-disciplinary Aircraft Design Process Chain	**Karl Knipfelberg, Kion** Introduction of VR Tools – IC.IDO - Change Management in R&D processes
2.30 pm	**Michael Linnepe, ThyssenKruppSteel** smartform® - new designed cold forming process in forming simulation	**Klaus Hofwimmer, Magna Powertrain** Connecting the two ends of the simulation chain: From manufacturing to durability analysis	**Fabian Fischer, PROSTEP** Mars Rover: Systems Engineering meets Simulation	**Ardeshir Sarmast, Fraunhofer Institute for Mechanics of Materials IWM** A numerical investigation on the effect of multi-layer repair welding on temperature history and residual stresses of S960QL and S355NJ2 weldments
3 pm	Break & Demo Sessions			
3.30 pm	**Maria Gonzalez Garcia, Volkswagen** VPS-SimulationX Coupling for Active Human Body Modelling	**Matthias Borsch, Opel Automobile** Simulation-based optimisation of bodyshop welding cells	**Dr. Ronald Klomp-de Boer, NLR - Netherlands Aerospace Centre** Experimental and numerical study of distortion of flat and L-shaped composite coupons	**Dr. Hermann Autenrieth, Bosch** Electro-magnetic-thermal 2D heat treatment simulation for steels
4 pm	**Prof. Steffen Peldschus, LMU München** Challenges in Virtual Testing of Human Body Modelling	**Dr. Markus Wagner, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS** Virtual development of customized laser-treated car body structures	**Silvio Facciotto, IFB Institut für Flugzeugbau Universität Stuttgart** Effect of infusion parameters and defects of the reinforcement on the generation of porosity in fiber reinforced composites	**Bertram Zeeh, AWEBA Werkzeugbau** Factors influencing the tool concept in forming technology
4.30 pm	**Dr. Bernd Harter, ZF Friedrichshafen** Calculation of induced axial forces on the planetary gear bearings of ZF's automatic 8-speed transmissions	**Dr. Sebastian Müller, ESI** End-to-end vitual prototyping of composite molding parts in VPS: link to manufacturing simulation and online homogenization	**Dr. Maxim Andreev, ESI** Simulation-based system reliability analysis of electrohydraulic actuator with dual modular redundancy	**Dr. Yannick Vincent, ESI** Weldability, Weld Quality and Distortion Engineering for Welded Assemblies using ESI Virtual Weld and Assembly Predictive Simulation Solution
5 pm	**Michael Abspoel, Tata Steel Europe** Easy to use advanced material models for forming and crash	**Alexander F. Walser, Automotive Simulation Center Stuttgart** OpenPROOF – Virtual Proof of Validation for Highly Automated Driving Functions	**Moritz Kuhtz, Technische Universität Dresden** Simulation of the deformation and failure behaviour of locally fibre-reinforced metal structures under highly dynamic loading conditions	
6 pm	Gala Dinner			

AGENDA THURSDAY, NOVEMBER 7, 2019

	Room Maritim I - C	Room Maritim I - A	Room Maritim I - B	Room Salon 3	Room Salon 4	Room Salon 2	Room Salon 7
	Virtual Performance Crash & Safety	Virtual Performance NVH & Acoustics	Sheet Metal Forming	Composites	System Modeling	Virtual Reality	
9 - 10 am	What's New in Virtual Performance Solution	What's New in NVH and Acoustics Solutions	What's New in Sheet Metal Forming Solution	What's New in Composite Solution	What's New in System Modeling	What's New in Virtual Reality	
10 am	**Prof. Thomas Pyttel, Technische Hochschule Mittelhessen** Constitutive Modelling of Polypropylen based Plastics	**Martin Lewit, Ford Werke** Improve SEA results calculation using BEM	**Dr. Sabrina Gastebois, ESI; Matthäus Kott, Opel Automobile** Thermo-mechanical modeling of multiple deep drawing strokes	**Benjamin Kaiser, Technische Hochschule Mittelhessen** A novel finite element with coupled inner structure unit cell model	**Dmytro Adamenko, University Duisburg-Essen** Structure of the digital twin of a wind turbine for lifecycle analyses with	**Anett Spormann, Daimler** Virtual Reality at the Mercedes Benz factory in Hamburg - Closing the gap between	
	Break & Demo Sessions						
11 am	**Tony Porsch, Karlheinz Kunter Volkswagen** Crack initiation at joints in crash simulation - The L2-Frameworkt at the Volkswagen Group	**Marc Burghardt, Audi** Reducing interior noise due snow impact using SEA	**Fabian Zgoll, Volkswagen** Virtual Die Spotting: Compensation of elastic behavior of stamping dies and presses by means of coupled stamping simulation	**Dennis Bublitz, TU München** A novel method for the evaluation of compression RTM process simulations	**Dr. Steffen Limmer, Honda Research Institute Europe** SimulationX Solver Setting Optimization via Automated Hyperparameter Tuning Approches	**Michael Günter, Audi** Multipurpose VR-Systems – Maximize Utilization and reduce Costs	
11.30 am	**Jean-Daniel Martinez, Audi** Model quality and HPC performance with VPS at AUDI	**Lean Maclean, Damen Shipyards Gorinchem** Validation and sensitivity study of the DWBu 2407 Lp and Lv validation with SEA	**Dr. Marco Gösling, Bilstein** Determination and validation of material parameters for TWIP900	**Matthias Beyrle, Deutsches Zentrum für Luft- und Raumfahrt (DLR)** Sensor-supported simulation of a thermoplastic RTM process using a digital twin for the optimized production of complex parts	**Torsten Schwan, EA Systems Dresden** Calibration of HVAC system models with monitoring data - Digital Twin meets measurement data	**Susanne Hellwig, Bombardier** „First Train" Concept – Digital validation prior to production at Bombardier	
12	**Dr. Matthias Schäfer, ESI** Possibilities & Applications of Fluid-Structur Interaction in VPS	**Thomas Hofmann, ESI** Powertrain NVH: An outline of ESI's solution portfolio from FEM to system simulation, illustrated by industrial use cases	**Niklas Rebbe, fischer Hydroforming** Project WiLeitNu – Production-oriented component development with Pam Stamp	**Dr. Miro Duhovic, Institut für Verbundwerkstoffe** Simulation of the resin infusion process for a CFRP fan impeller	**Oscar Andres Martinez Surata, Eon** Techno-economic assessment of a novel green hydrogen production facility supplied by an offshore wind farm	**Dr. Ulrich Häfner, imsys** Reproducible analysis of VR sessions	
12.30	Lunch						
	Virtual Performance Crash & Safety	Virtual Performance Process Automation	Sheet Metal Forming	Welding & Heat Treatment	System Modeling	Virtual Reality	Casting Session ECOTRE Valente
2 pm	**Christian Listner, Joyson Safety Systems Aschaffenburg** Fabric models „spun on" - detailed illustration of airbag fabric in PAM-CRASH	**Sergej Müller, ESI** Automated Conversion and Standardized Comparison of Material Cards in VPS	**Dr. Jonathan Jung, ESI** Effective Set Up of Tailor Rolled Blank Simulation	**Dr. Bastian Helldoerfer, Schaeffler Technologies** Hardening distortion analysis by means of coupled CFD and heat treatment simulations	**Dr. Siegfried Graser, Voith** Process optimization of the primary dewatering unit of a paper machine	**Andreas Werner, Advanced Realtime Tracking** IC.IDO and ART – 20 Jahre of common VR history	**Cordova Maurizio, Colosio, Lorenzo Valente, ECOTRE** Integrated casting simulation with ESI ProCAST: the virtual High-Pressure Die-Casting machine applied to a BMW pump housing
2.30 pm	**Christian Kleessen, Humanetics Europe** Crash Test Dummies For Autonomous Vehicles	**Abhishek Kulkarni, ESI** A generic joining tool built on a semi-automatic screwing process	**Martin Hörstge, Opel Automobile** Compensation methods to reduce the effects of elastic deformations in the forming process	**Josef Wegscheider, Palfinger Alexander Baumgartner, Palfinger** From the scratch to success - Implementation of welding simulation at PALFINGER	**Dr. Otto Borrmeister, Steffen Rietz, Kiwigrid** SimulationX as an agile, virtual laboratory for accelerated quality assurance of products in the context of the energy revolution	**Prof. Leif Goldhahn, Hochschule Mittweida** Virtual operations and process visualization of the training factory 4.0	**Enrico Prati, Bonomi Acciai, Pascal Rosselli, ECOTRE** Evaluation of die-life with the stress simulation and ESI ProCAST
3 pm	**Dr. Matthias Lich, Volkswagen** Increasing the Prediction Quality of Airbag Simulation Models	**Dr. Dominic Hühn, ESI** Automated Material Card Generation for endless FRP	**Dr. Gernot Trattnig, Voestalpine Stahl** Multistep hot forming process with phs-multiform	**Dr. Igor Varfolomeev, Fraunhofer-Institut für Werkstoffmechanik IWM** Microstructure and Residual Stress Simulation as a Basis for Fatigue Assessment of Weldments	**Yann Debray, ESI** Scilab & SimulationX - Electric Motor Optimization	**Prof. Christoph Runde, Virtual Dimension Center** XR 2019 - Where the journey may lead us - Future trends in market and technology	**Stephan Wallstab-Freitag, Federico Casarotto ECOTRE** Future of the foundry - Dimensional accuracy testing with GOM Inspect Professional of virtual simulations with ProCAST
3.30 pm	**Dr. Martin Kubicek, Smup-uq** Uncertainty Propagation for beam collapse with deeper statistical insight	**Dennis Schiel, iSi Automotive Berlin** Increasing CAE Productivity – Airbag Model Verification using Visual-Environment	**Dr. Martin Skrikerud, Skrikerud Engineering** Prototype production of a metallic bipolar plate with Pam-Stamp	**Christian Beschorner, LINDE + WIEMANN** AsWeProMiSED – Migration of forming and joining simulations	**Chris Penndorf, ESI** Innovative and fast simulation method for the electrical and mechanical ripple of DC machines	Virtual Reality DEMO SESSION	**Marco Giogoli, Agiometrix, Federico Casarotto - ECOTRE** Validation of casting simulations with ESI ProCAST thanks to the use of CT. Success story at FAM
4 pm	Best Presentation Award & Closing						