




Agenda | Tuesday, November 10, 2015

- 09:00  **Welcome and Introduction** | Dr. Andreas Uhlig, ITI
- 09:40  **KEYNOTE: Electrical Mobility vs Energy Efficiency – What One Has to Do with the Other** | Prof. Bernard Bäker, TU Dresden (IAD)
- 10:10  **KEYNOTE: The Future of Simulation Collaboration in the Auto Industry** | Dr. Bernd Faber, Ford

BREAK

AUTOMOTIVE

- 11:00 **Open Lock – Simulation is Pulling**
Dr. Daniel Zielinski, BMW
- 11:30 **Transmission Rattle Noise Prediction and Analysis with Focus on Test Correlation**
Björn Berthold, Getrag Ford Transmission
- 12:00 **Efficient Torsional Vibration Analysis of Commercial Vehicle Drivetrains Using Script-Controlled SimulationX Models**
Daniel Grimm, Daimler

MINING & HEAVY MACHINERY

- Determination, Evaluation and Reduction of the Post-Pulse Oscillation of a Bucket Wheel Reclaimer**
Kevin Hofmann, Takraf | ITI
- Software-in-the-Loop Simulation Speeds up Machine Control Tests**
Dr. Dirk Wehner, Hydrive Engineering
- Optimization of Hoist Layout by the Use of Hoist Simulation**
Cornelius Kurowsky, Kranbau Köthen

ENERGY TECHNOLOGY

- Heat Exchanger Design for the Energy Reduction of a Household AC System**
Alex Magdanz, ITI
- Design of a Domestic Heat Pump System Coupled to an Air-Handling Unit Using SimulationX and Simulink**
Chao Wang, Vaillant | TU Braunschweig (IFT)
- Energy-Efficient Design of a Research Greenhouse**
Torsten Schwan, EA Systems

LUNCH

AUTOMOTIVE

- 14:00 **Heat Pipe-based Cooling System**
Johannes Heydenreich, Brose
- 14:30 **NVH Related Driveline Simulation Using the Database Function in SimulationX**
Mario Schwalbe, IAV
- 15:00 **Energy Recovery Systems in Vehicles with a Hydrostatic Drive**
Prof. Andrzej Sobczyk, Technical University Cracow

MINING & HEAVY MACHINERY

- Emergency Braking of Fast Running Hoists in Handling Operations**
Prof. Stefan Vöth, TFH Georg Agricola (PROLAB)
- Road Performance of a Telescopic Handler**
Dr. Sebastian Repetzki, Management Center Innsbruck (Dep. Mechatronics)
- Analysis of Process-Loads on Center-Sizer by Co-Simulation of SimulationX and DEM**
Erik Frenzel, TU Dresden (IVMA)

FLUID POWER TECHNOLOGY

- Safety Related Development of an Electro-hydraulic Active Steering System**
Eric Fischer, TU Dresden (IFD)
- Dimensioning and Controlling of Complex Microfluidic Networks with SimulationX**
Mathias Busek, Fraunhofer Institute IWS
- Modelling and Simulation of Thermo Energetic Behaviour of Electrohydraulic Compact Drives**
Sebastian Michel, TU Dresden (IFD)

BREAK

AUTOMOTIVE

- 16:00 **Power Management Analysis of Light Duty Hybrid Electrical Vehicles**
Luca Bellini, Politecnico di Torino | Alberto Bolzoni, Politecnico di Milano
- 16:30 **Continuous Engineering – A Seamless Design Workflow from Systems Engineering into Simulation**
Peter Schedl, IBM
- 17:00 **Anticipatory Shifting – Optimization of a Transmission Control Unit for an 8HP Automatic Transmission through Advanced Driver Assistance Systems**
Michael Folie, IPG Automotive

INDUSTRIAL MACHINERY




- Co-Simulation Supports Controller Optimization and Set Force Determination for Multi-point Cushions in Sheet Metal Forming**
Christher Schenke, TU Dresden (IFD)
- Illustration and Simulation of a Coupled Planetary Transmission Using SimulationX Exemplary for an Orbital-Machining Center**
Tino Freigang, EMAG Leipzig Maschinenfabrik
- Dynamic Analysis of a hydraulic drive for a lifting bridge**
Uwe Grätz, ITI | Hunger Hydraulic UK

FLUID POWER TECHNOLOGY

- The Selection of Pneumatic Actuator Based on Exergy Analysis**
Elvira Rakova, TU Dresden (IFD)
- Detailed Modeling of Heat Exchangers**
Michael Schiefer, ITI
- Methodological Approaches for Model-Based Development of an Energy Management System Using the Example of an Automotive Test Center**
Michal Hasenkopf, ZF

EVENING EVENT

Agenda | Wednesday, November 11, 2015

- 09:00  **KEYNOTE: Nabtesco's Hydraulic and Pneumatic Product Development Using SimulationX** | Masashi Kuwano, Nabtesco
- 09:40  **FMI 2.0 and New Technologies in SimulationX 3.7** | Thomas Neidhold, ITI
- 10:10  **KEYNOTE: enerMAT – Toolchain for the Design and Optimization of Building Energy Management Systems** | Edgar Liebold, NSC

BREAK

ENERGY MANAGEMENT – ENERMAT

- 11:00 **Modelling, Simulation and Validation of Building Models as a Basis for the Design Process for Holistic Energy Management Systems in Buildings**
Jörg Hohlfeld, FASA
- 11:30 **Design and Optimisation of Building Energy Management Systems**
Stephan Seidel, Fraunhofer Institute IIS EAS
- 12:00 **Virtual Commissioning and Testing of Energy Management Systems for Buildings in SimulationX and ViciOne**
Bastian Binder, ITI

EFFICIENT ALGORITHMS, PROCESSES & INTERFACES

- New Concept of a Permanent Interactive Analysis-Synthesis-Parameter-Adjustment (ASPA) for Nonlinear Drive Assemblies**
Stefan Heinrich, TU Chemnitz (IFMT)
- Design of a Hybrid Powertrain Model and Optimization by a Sensitivity Analysis**
Markus Schmidt, Technische Hochschule Nürnberg | Dynardo
- SimulationX goes BeagleBoard & Co - Model Based Design of a Two Wheeled Vehicle**
Torsten Blochwitz, ITI

LUNCH

EDUCATION & SCIENCE

- 14:00 **Academic Teaching of Modelica System Modeling and Simulation Based on a Case Study About a Multi-Domain Railway Model Using SimulationX**
David Meinel, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAPS)
- 14:30 **Requirement meets validation – Coupling of modeling and simulation via SysML**
Felix Rodig, TU Dresden | Knorr Bremse
- 15:00 **Traditional and Modern Tools for XCAFIRO Propeller-Gear Loads**
Prof. Karl Reiling, University of Applied Sciences Landshut

SAFETY & RELIABILITY

- Simulation of Wear and Ageing in Mechatronic Systems**
Sebastian Fraulob, Johnson Electric
- Coupling Model-Based System Simulation and Fault Tree Analysis with SimulationX**
Armin Troy, ITI
- Energy Harvesters Based on Magnetic Shape Memory Alloys - A Simulation Study**
Leonardo Riccardi, ETO Magnetic

BREAK

STRUCTURE & SYSTEM ANALYSES

- 16:00 **Simulation Based Analysis of a Seamless Shift**
Dr. Mathias Lutz, hofer-pdc
- 16:30 **Real-time Simulation of Helicopter Flight Dynamics within SimulationX – An Example of Multi-body Simulation Application**
Lionel Belmon, Global Crown Technology
- 17:00 **Analysis and Comparison of Most Commonly Used Long-Wall Scraper Conveyor Power Transmission Devices**
Pawel Mendyka, AGH University Cracow

FMI, TOOL INTEGRATION & REALTIME

- FMI Surface Response Creation in Optimus for Data Exchange with SimulationX**
Amaud Froidmont, Noesis Solutions
- Design of a Dual Suspension Kinematics for a Highly Dynamic Driving Simulator**
Thomas Tüschen, TU Dresden (IAD)
- Co-Simulation with MFBD (Multi Flexible Body Dynamics) Simulation Software Using FMI**
Taero Cha, FunctionBay

17:30

FINAL DISCUSSION & BEST PAPER AWARD