# WEDNESDAY, 2ND DECEMBER 2015

### EUROPEAN SPDM & CFD CONFERENCES - COMMON SESSION

Welcome and NAFEMS Introduction 09:45

- T. Morris (NAFEMS); M. Norris (Consultant); P. Bartholomew (Consultant); Members of the DACH CFD Advisory Board (CAB) 10:00 15 Years SPDM@BMW
- J. Reicheneder (BMW Group)
- SPDM for CFD@BMW 10:30 S. Jahnke (BMW Group)
- 11:00 Strategies to Increase CAE Quality through Simulation Data Management S. Billig, J. Morawski, T. Pohl (Adam Opel); Z. Petrovic, A. Schalon (Siemens PLM Software)
- 11:30 Lunch

# SPDM CONFERENCE SESSION 1

- 12:45 Handling the Constant Evolution of Simulation with SPDM Solutions M. Schlenkrich (MSC Software)
- 13:10 Concept and Implementation of a Central Knowledge Framework for Simulation Knowledge P. Kestel, T. C. Sprügel, S. Wartzack (Univ. Erlangen-Nürnberg); S. Katona (Technische Hochschule Nürnberg ); T. Lehnhäuser (Ansys Germany)
- Simulation Process and Data Management on Cloud: Create, 14:35 **Collaborate and Compute your Simulations on Cloud** S. Bhide (Ansys)
- 14:00 SPDM Overkill - Too Expensive, Too Difficult, Too Much Overhead and No Added Value ?!? E. Niederauer (Siemens PLM Software)
- 14.25 Coffee break

# SPDM CONFERENCE SESSION 2

- Managing Simulation Processes of Different Levels of Maturity 15:00 H. Wenzel, R. Illig (Dassault Systems Deutschland)
- 15:25 SPDM 3.0 is here: How to Succeed with Three Generations of SPDM M. Norris (Consultant)
- 15:50 Simulation Process and Data Management: How to Deploy SPDM and Support CAE Teams Efficiently S. Kleiner, M. Krastel (:em engineering methods)
- 16:15 The First Full-Cloud Design Space Exploration Platform A. Davydov, <u>S. Morozov</u>, N. Perestoronin, A. Prokhorov (Datadvance)
- 16:40 Coffee break

**Development Process** 

17:35 Simulation Data Mining as One

Integrate Multi-Disciplinary

**Optimization into the Product** 

M. Nicolich, M. Gazzin (Esteco)

Element of the Product-specific

SPDM SESSION 3:

**TECHNOLOGIES** 

17:10

18:00

18.25

18:50

### **CFD CONFERENCE SESSION 1**

Integration of the CFD Simulation in the Development Process of Competition Motorcycles G. Lindbichler, M. Perterer (KTM Technologies) Thermal Analysis of Heavy Duty Engine Exhaust

Manifold using CFD S. Eroglu, I. Duman (Ford Otosan)

The Mahle Behr CFD Wizards: HVAC Wizard and HEEX Wizard R. Stauch, G. Apostolopoulos, M. Weinmann, J. Schlottke, W. Kühnel (Mahle Behr)

Frontloading CFD in the Automotive Product **Development Process** M. Sabeur (Mentor Graphics) Coffee break

### **CFD CONFERENCE SESSION 2**

The Influence of Mesh Characteristics on OpenFoam Simulations of the DrivAer Model G. Fotiadis, V. Skaperdas, A. Iordanidis (BETA CAE Systems)

One click - Multiparts to 3D Mesh B. Kornberger, <u>M. Schifko</u> (ESS Engineering Software Steyr)

Improving Thrust Reverser Performance through Design Exploration with Optimate+ A. Engeländer, A. Godfrey, D. Rittenberg (CD-Adapco) Interpretation of Verification and Validation for Computational Fluid Dynamics NAFEMS AMWG, presented by

S. Duvall (International Nuclear Services UK)

# Coffee break

### OPTIONAL: CFD CONFERENCE: BMW WELT COMPACT TOUR

BMW Welt - a Place of Discovery and Amazement. BMW Welt is full of impressive facts and fascinating stories. Go on a discovery tour (40 min.). This tour covers all the main points of BMW Welt: you will find out interesting background information on the building, its special architecture and how it was created.

The BMW Welt Compact Tour also provides a glimpse behind the scenes, explaining the complex logistics of automobile delivery to customers from all over the world. Look forward to experiencing the various elements of BMW Welt and hearing interesting talks.

www.bmw-welt.com/en/

- 17:10 Bus coach from hotel entrance
- 18:00 Tour 1 + 2 (each group max. 30 persons)
- 18:50 Bus coach return to hotel

### Please note:

Limited places, registration required - first come, first serve!

SPDM 4: APPROACHES INCLUDING

The Role of Simulation in a Holistic

R. Illiq, H. Wenzel (Dassault Systemes

An Approach for the Development of

**Requirements-Oriented Simulation** 

FOR MEDIUM COMPANIES

**Engineering Environment** 

Deutschland)

The two conferences are held in

parallel. SPDM and CFD delegates have equal access to all sessions.

# AGENDA

# THURSDAY, 3RD DECEMBER 2015

### EUROPEAN SPDM & CFD CONFERENCES – COMMON SESSION

08:15 Introduction

- M. Norris (Consultant); P. Bartholomew (Consultant); Members of the DACH CFD Advisory Board (CAB)
- 08:30 Simulation Data Management and Process Chain at Audi A. J. Beck, K. Gruber (Audi)
- 09:00 MoSSEC: A Proposed Standard for Sharing Modelling and Simulation Information in a Collaborative Systems Engineering Context A. Murton (Airbus UK)
- 09:30 Virtual Process Chain Production: SIMAN Simulation Data Management@CONNECT J.-H. Theilen (Volkswagen)
- 10:00 Coffee break

### SPDM CONFERENCE SESSION 5

- 10:40 A Systems Engineering Middleware Concept Built for Incremental Collaboration <u>G. Staub</u>, J. Jaksch (PDTec)
- 11:05 LoCo An Innovative Process and Team Data Management Solution for Simulation <u>M. Thiele</u>, T. Landschoff (Scale); A. J. Beck (Audi)
- 11:30 Simulation Data Management in Pre- and Postprocessing <u>D. Katramados</u>, A. Roubies, D. Krontsos (BETA CAE Systems)
- 11:55 A Comparison and Synergies between SPDM and a Popular "Democratization" Platform J. Betts (Front End Analytics); D. Silver (EASA Software); S. Dewhurst (EASA)
- 12:20 Lunch

### SPDM CONFERENCE SESSION 6: STANDARDS OR NOT?

- 13:20 Standardization of CAE Data Management Collaborative CAD/CAE Integration with CAE Services J. Boy (Prostep); M. Krastel (:em engineering methods)
- 13:45 xMCF Standard for Documenting Connection Information ... and how SPDM can Benefit <u>C. Franke</u> (Prostep); G. Zhang (Volkswagen); M. Weinert (Ford Germany)
- 14:10 LOTAR Engineering Analysis and Simulation Initiative <u>A. Lévy</u>, J.-Y. Delaunay (Cimpa on behalf of Airbus); J. Draper, R. Zuray (Boeing)
- 14:35 Role-based Simulation Object Management as an Enabler for Democratisation in Collaborative Virtual Engineering <u>C. Hepperle</u>, C. Gnandt (Tesis DYNAware)
- 15:00 Coffee break

### SPDM CONFERENCE SESSION 7

- 15:30 Management of Material Data for a Mid-Size Simulation Work Group: Experiences and Recommendations R. Heimüller (MAN Truck & Bus)
- 15:55 Integrated Material Data Management <u>M. Betz</u>, L. Dann (thinkstep)
- 16:20 The Airbus A350 XWB Aircraft's Structural Detailed Analysis with a Common Shared Platform <u>C. Raick</u>, F. Berger (Siemens PLM Software); D. Fachetti (Airbus)
- 16:45 Wrap-up / Farewell M. Norris (Consultant); P. Bartholomew (Consultant)
- 17:00 End of SPDM Conference

# CFD CONFERENCE SESSION 3

The FlowSimulator— A Software Framework for CFD-related Multidisciplinary Simulations L. Reimer (DLR - German Aerospace Center)

Comparison of the ASMO Car Model with Experimental Data and Simulations <u>M. Gruetzmacher</u>, B. Marovic (Mentor Graphics) Aero-Vibro-Acoustics for Wind Noise Applications <u>M. Oswald</u> (Ansys Germany); S. Sovani (Ansys)

Simulation-ready CAD for Fast Turn-around Time in CFD and Optimization <u>M. Brenner</u>, S. Harries, J. Palluch (Friendship Systems)

### Lunch

### CFD CONFERENCE SESSION 4

Optimization Process for an Automotive Flap using an Automated FSI Workflow M. Ratzel, W. Dias, <u>B. Schnepf</u> (Altair Engineering) Numeca's Integrated CFD-Aero-Vibro-Acoustic Solutions for Intake-Duct-Exhaust Systems and Mufflers

P. Ferrante (Numeca International);

<u>F. Frey</u>, M. Cellarius (Numeca Ingenieurbüro) **Optimized Ship Design Using Heeds & STAR-CCM+** D. Tatum, D. Preston (Downey Engineering); N. Chase (Red Cedar Technology); T. Yen, <u>A. Engeländer</u> (CD-Adapco) **Workflow for an Efficient Usage of Open-Source Solver Technology for CFD and FEA** <u>U. Heck</u>, M. Becker (DHCAE Tools) **Coffee break** 

**CFD CONFERENCE SESSION 5** 

Automation for Efficient Application of OpenFOAM to Industrial Problems H. Kröger (Univ. of Rostock) Accelerating CFD Workflow Using GPU's M. Stanic, S. Adami (FluiDyna) Femzip-CFD: Taming of the Data Pile S. P. Müller, P. Sunil Banerjee (Sidact)

Wrap-up / Farewell Members of the DACH CFD Advisory Board (CAB) End of CFD Conference

#### SPDM Conference: Optional Pre-Conference Training Sessions on Tuesday, 1 December

Courses are not included in conference fee - registration required - seats limited - first come, first serve: 160 Euro + VAT (for three courses)

15:00 - 16:30: Introduction to SPDM by Peter Bartholomew

This session will provide an overview to the fundamentals of Simulation Data Management. It will serve equally well as a basic introduction to those that are new to the technology, and a refresher for those who already have an elementary understanding of the concepts. It will provide an excellent foundation for delegateswho want to learn more about SPDM.

16:30 - 17:30: Introduction to SPDM Solutions by Mark Norris

This session will provide an overview of the four generations of SPDM solutions, the types of suppliers of SPDM solution (PLM vendors, CAE Vendors, SDM vendors, Standards Solution Vendors,...) and the types of SPDM solutions available. This session is particularly relevant to delegates investigating the acquisition of an SPDM solution. 17:30 - 19:00: Introduction to Business Value from SDM – NAFEMS White Paper by Mark Norris

There are many strategies that companies can deploy when looking to implement an SDM solution. The NAFEMS SDM Working Group has developed and published a White Paper which has the clear objective of helping engineers to understand and to communicate the business value of SDM to their organization. This short training session will provide a summary of the White Paper and an interpretation of its key messages.

# \* Program subject to alterations.