NAFEMS

09.00	**REGISTRATION**

10.00	**KEY NOTE PRESENTATION** INTEGRATION OF OPTIMISATION AND SIMULATION FOR FLEXIBLE MANUFACTURING SYSTEMS ASHUTOSH TIWARI, CRANFIELD UNIVERSITY

BREAK

11.00	**SHAPE OPTIMISATION**	**PROCESS OPTIMISATION**

SHAPE OPTIMISATION

Geometry-Based Virtual Model Variants for Shape Optimization and CAD Refeed
Werner Pohl, FCMS GmbH

The Growth and Integration of Optimisation into UK Engineering
David Vickerman, GRM Consulting Ltd.

PROCESS OPTIMISATION

Strategic Application of Optimization Methods in Automotive Light Weight Construction
Johannes Siegmann, Adam Opel AG

Driving the Adoption of Simulation Based Optimisation
Stuart Nixon, SIMULIA UK

Robust Topology Optimisation Algorithms to Account for Material and Loading Uncertainty in Additively Manufactured Parts
Ewan Tarrant, TWI Ltd.

LUNCH

13.30	**KEY NOTE PRESENTATION** NO FREE LUNCH THEOREM FROM AN ENGINEERING PERSPECTIVE CARLO POLONI, UNIVERSITY OF TRIESTE & ESTECO

BREAK

14.30	**SHAPE OPTIMISATION**	**MULTI OBJECTIVE OPTIMISATION**

SHAPE OPTIMISATION

Adjoint Optimisation of Internal Turbine Cooling Channel using Node and CAD-based Automatic Parametrisation Methods
Rejish Jesudasan, Queen Mary University

CFD Topology Optimization of a Turbine Inlet Duct using TOSCA Fluid and Fluent
Massimo Damasio, Exemplar and Roberto Saponelli, UniMoRe & Protesa SpA

Weight Optimization of a Transmission Housing
Reinhard Helfrich, INTES GmbH

MULTI OBJECTIVE OPTIMISATION

Multiobjective Sizing Optimization of a Steel Girder Bridge
Mariapia Marchi, ESTECO SpA

Optimisation-Based Product Design: Enabling Tools and Culture Shift
Matteo Nicolich, ESTECO SpA

Comparison of Single and Multi-Objective Optimisation Methods for Turbine Assembly Optimisation using Discrete Event Simulation
Neha Prajapat, GE Power

BREAK

16.15	**SHAPE OPTIMISATION**	**MULTI OBJECTIVE OPTIMISATION**

SHAPE OPTIMISATION

Structural Optimization based on Fatigue Results
Klaus Puchner, Magna Powertrain

Sensitivity Analysis and Parametric Optimization as Powerful Tools for Industrial Product Development
Thomas Most, Dynardo GmbH

MULTI OBJECTIVE OPTIMISATION

Multi-objective Optimisation of a Novel Fastener-less Interlocking Joining Technology based on Surrogate Modelling Techniques
Michael Corbett, University of Limerick

Pultrusion Process Parameters Optimization
Sergey Morozov, DATADVANCE

Computational Fluid Dynamics Optimization of a Static Air Mixer
Guy Wills, Siemens Industry Software Ltd.

17.45	**END OF DAY 1**

08.30 | **KEY NOTE PRESENTATION**   **DESIGN TO CERTIFICATION FOR AEROSPACE ADDITIVE MANUFACTURING**   ROBERT YANCEY, ALTAIR ENGINEERING, INC.

09.15 | Metamodel Based Optimization of the Operation Characteristic of a Highly Stressed Centrifugal Compressor Impeller
Christoph Schemmann, Fachhochschule Dortmund

BREAK

10.00

TOPOLOGY OPTIMISATION

Structural Optimisation for Mass Customisation of High-Performance Bicycle Components, using Metallic Additive Manufacture (DMLS)
Steff Evans, Evotech CAE Ltd

Conceptual Design of Additively Manufactured Components using Layout and Geometry Optimisation
Matthew Gilbert, University of Sheffield

BREAK

Heatsink Topology Identification using a Simulation Based Additive Design Methodology
Robin Bornoff, Mentor Graphics Corp.

META MODEL BASED OPTIMISATION

Complex Parameter Reduction Optimisation & RSM Based Tool for Urban Growth
John Barnes, EnginSoft UK Ltd

Genetic Algorithm for Optimisation of Passive Fire Protection
Charles Hendry, MMI Engineering

Product and Process Optimization for Additive Manufacturing
Steven Ribeiro-Ayeh, Dassault Systemes Deutschland GmbH

Random Response & Fatigue Optimization in the Frequency Domain
Fatma Koçer, Altair Engineering, Inc.

LUNCH

13.00 | **KEY NOTE PRESENTATION**   **TURBOMACHINERY MDO APPLICATIONS**   SHAHROUK SHAHPAR, ROLLS ROYCE

BREAK

14.00

TOPOLOGY OPTIMISATION

Topology Optimization in CFD: Use of Innovative Techniques for Design Support in the Industry
Nicolas-Yoan Francois, VALEO Thermal Systems BG

Topology and Shape Optimization of Structures under Contact Conditions
Nils Wagner, INTES GmbH

Computational Fluid Dynamics Design Optimization using an Adjoint Sensitivity Analysis
Stuart Walker, Altair Engineering, Inc.

Putting Topology Optimization into the hands of the Designer
Guy Wills, Siemens Industry Software Ltd.

ROBUST DESIGN OPTIMISATION

Reliability and Robustness Based Design Optimisation of a Radial Compressor Concerning Fluid-Structure Interaction
Kevin Cremanns, Niederrhein University

Robust Design Optimization of a Free-Fall-Life-Boat (FFLB) Combining Fluid Structure Interaction and Kinematics Analyses
Ionnou Evangelia, BETA CAE Systems SA

Sensitivity and Robustness Analysis for Breaker Development
Thorsten Schindler, ABB AG

Design Optimisation under Uncertainty using Metamodels in a Trust Region Based Setting
Yury Korolev, Queen Mary University

16.15 | **FINAL COMMENTS / WRAP-UP**