

# ISimT-17

## Symposium on Innovative Simulations in Turbomachinery

### Program



Monday, 20 November 2017

12:50	13:00	ISimQ-Team	Welcome
13:00	14:00	Dirk Nürnberger, Siemens	Experiences on Using High-Fidelity CFD for Gas Turbine Design in an Industrial Environment
14:00	14:30	Lorenzo Mazzei, Università degli Studi di Firenze	Impact of Realistic Turbine Inlet Aero-Thermal Conditions on High-Pressure Nozzle Guide Vanes
14:30	15:00	Oliver Velde, CFTurbo	Design and Optimisation of Contra-Rotating Fans
15:00	15:30		Break
15:30	16:00	Ernesto Casartelli, Hochschule Luzern	CFD Computation of Transients in Pump-Turbines
16:00	16:30	Gunther Treutz, MUNSCH Chemie-Pumpen	Various Methods for Calculating a Centrifugal Plastic Pump
16:30	16:45		Break

16:45	17:15	Thomas Hildebrandt, NUMECA Ingenieurbüro	Quantification of Manufacturing Uncertainties for an Axial Compressor in CFD
17:15	18:00	Georg Scheuerer, ISimQ	Quantification of Numerical Errors and Uncertainties in Turbomachinery Simulations
19:30			Symposium dinner

## Tuesday, 21 November 2017

09:00	10:00	Prof. Dr. Jörg Seume, Leibniz Universität Hannover	Using CFD to Improve the Yield of Experiments
10:00	10:30	Johannes Einzinger, ANSYS Germany	Automatic Optimisation of a Radial Compressor Map
10:30	11:00	Edward Bennett, Mechanical Solutions	The Aero-Acoustics Analysis of the Flow through a Real Gas Centrifugal Compressor
11:00	11:15		Break
11:15	11:45	Alessandro Arcidiacono, EnginSoft	Rapid Design of Secondary Flow Geometry Using a Flow Network Modelling Approach
11:45	12:15	Hannes Wolf, MTU Aero Engines	Scale-Resolving Simulations to Validate Penny Cavity Leakage Flow in High Pressure Compressor Vanes
12:15	13:15		Lunch
13:15	13:45	Brett Dewar, University of Portsmouth	Design Philosophy for Multivariable Optimisation in Centrifugal Compressor Design
13:45	14:15	Arianna Bosco, Siemens	Multi Blade-Row and Non-Linear Effects in Flutter and Forced Response
14:15	14:45	Mehrdad Zangeneh, Advanced Design Technology	Multipoint Optimisation of a Centrifugal Compressor Stage With Return Channel By Using 3D Inverse Design and ANSYS Workbench
14:45	15:00		Break

15:00	15:30	Rainer Andres, CFX Berlin Software	CFD Simulation of a Twin Screw Expander Including Leakage Flows
15:30	16:00	Johannes Schütz, Universität Duisburg-Essen	Numerical Investigation of Droplet Dispersion in Different Flow Conditions
16:00	16:50	Florian Menter, ANSYS Germany	A New Generalised k- $\omega$ Model - Adding Flexibility into Turbulence Models
16:50	17:00	ISimQ-Team	Wrap-Up & Outlook to ISimT-18