GPPS | XI'AN21

Global Power & Propulsion

CFDWorkshop
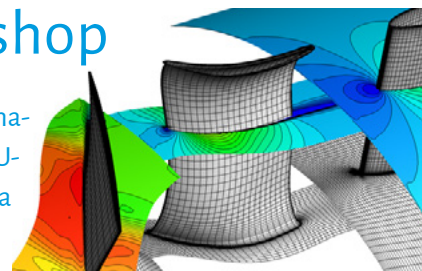
15th December 2021

GPPS 1st Turbomachinery CFD Workshop

During the Workshop we look forward to improving users' trust in RANS turbomachinery solvers by conducting a validation and verification (V&V) study on the TUDA-GLR-OpenStage transonic axial compressor. The TUDA-GLR-OpenStage is a state-of-the-art industrial-level machine that is challenging for RANS CFD.

Schedule

4:00 pm → → → 9:00 am → → →	**Introduction to the workshop** Welcome message by Prof. Hong Yan (Northwestern Polytechnical University)
4:05 pm → → → 9:05 am → → →	**Introduction to the Test Facility and Measurement Data** Including virtual lab tour and presentation paper 29 Fabian Klausmann (TU Darmstadt)
4:50 pm → → → 9:50 am → → →	**Summary of Participants' CFD results** Xiao He (Imperial College London)
5:30 pm → → → 10:30 am → → →	**Coffee Break**

Participant Presentations

5:45 pm → → → 10:45 am → → →	**Validation and Verification of RANS Solvers for TUDa-GLR-OpenStage Transonic Axial Compressor** Mingmin Zhu (Shanghai Jiaotong University)
6:00 pm → → → 11:00 am → → →	**Capabilities of Open-source Code SU2 on Turbomachinery Application** Chuanxiang Yan (Tsinghua University)
6:10 pm → → → 11:10 am → → →	**ASPAC and its validation on TUDa-GLR-OpenStage** Ziwei Wang (CARDC)
6:20 pm → → → 11:20 am → → →	**Simulation of TUDa-GLR-OpenStage by HGAE** Qingzhe Gao (Beihang University)

6:30 pm → → → 11:30 am → → →	**Steady RANS Simulations of the TUDa-GLR-OpenStage Using an In-house Code MAP** Haowei Zhou (Beihang University)
6:40 pm → → → 11:40 am → → →	**SU2 Analysis of Flow Field within the TUDa Transonic compressor** Qinglin Zhou (Northwestern Polytechnical University)
6:50 pm → → → 11:50 am → → →	**Validation and Verification of a RANS Solver for TUDa-GLR-OpenStage** Dongming Cao (Northwestern Polytechnical University)
7:00 pm → → → 12:00 pm → → →	**Validation and Verification of RNAS Solver with the Space-Time Gradient Method for TUDa-GLR-OpenStage Transonic Axial Compressor** Boqian Wang (Northwestern Polytechnical University)
7:10 pm → → → 12:10 pm → → →	**Open Discussions**
7:30 pm → → → 12:30 pm → → →	**Presentation data set: Beihang University** Guangfeng An
7:50 pm → → → 12:50 pm → → →	**Presentation data set: ETH** Alex Chasoglou
8:10 pm → → → 1:10 pm → → →	**Wrap-up and outlook (5 minutes)**

For more information please visit our event website. www.gpps.global/gpps-xian21