



International Symposium „Simulation of Wing and Nacelle Stall” Germany, Braunschweig, 21st - 22nd June 2012



Center for Computer
Applications in
AeroSpace Science
and Engineering

Conference Chairs: R. Radespiel, TU Braunschweig; N. Kroll, DLR Braunschweig

Location: Institute of Fluid Mechanics, Seminar room, Hermann-Blenk-Straße 37, 38108 Braunschweig, Germany

Thursday, 21st June 2012

MODELLING - 1

09:00	Capturing free-shear layers in hybrid RANS-LES simulation of separated flow	Johan Kok , National Aerospace Laboratory NLR Amsterdam
09:45	Reynolds stress modelling of separated turbulent flows with an instability-sensitive closure	Suad Jakirlic , TU Darmstadt
10:15	Implementation of a synthetic turbulence generator for RANS/LES interface in TAU-Code	Daniela Francois , TU Braunschweig
10:45	Coffee break: Institute of Fluid Mechanics, Foyer	
11:15	Application of chimera with hexahedral blocks in Solar meshes	Simone Crippa , DLR Braunschweig
11:45	On the capability of unsteady RANS and hybrid methods to predict transonic buffet	Sebastian Illi , Universität Stuttgart
12:15	Aerodynamic modelling for integrated loads analysis models	Thiemo Kier , DLR Oberpfaffenhofen
13:00	Lunch time: Cafeteria LBA, Hermann-Blenk-Straße 26	

MODELLING - 2

14:00	Stall behaviour of a two-element high-lift airfoil with disturbed inflow	David Hahn , TU Braunschweig
14:30	Numerical investigation of the DLR F15 two-element airfoil using the epsilon-h Reynolds stress model	Silvia Reuss , DLR Göttingen
15:00	Dynamics of a simplified wing-body junction flow	Fabien Gand , ONERA Meudon
15:30	Coffee break: Institute of Fluid Mechanics, Foyer	

SIMULATION OF ATMOSPHERIC DISTURBANCES

16:00	Turbulence characteristics of the atmospheric boundary layer and possibilities of replication	Simon Watkins , RMIT University
16:45	Numerical simulation of the turbulent flow around a wing	Torsten Auerswald , Eberhard Karls Universität Tübingen
17:15	Characterization of wind gusts using a large eddy simulation model	Christoph Knigge , Leibniz Universität Hannover
17:45	Experimental investigation of convective-scale atmospheric turbulence and its effect on glider wings in thermal flight	Jürgen Frey , TU Dresden
18:15	Evening Event/Dinner: Institute of Fluid Mechanics, Foyer	

Friday, 22nd June 2012

INLET AND ENGINE FLOWS

08:30	Reynolds-stress modelling of subsonic and transonic inlet stall compared to measurements	Axel Probst , DLR Göttingen
09:00	PIV Measurements in a Compressor Test Rig with Distorted Inflow	Rainer Hain , Universität der Bundeswehr München
09:30	Coupling of TAU and TRACE for parallel accurate flow simulations	Frank Spiering , DLR Braunschweig
10:00	Numerical investigation of the effect of different inflow distortions on a transonic axial compressor stage	Andreas Lesser , Universität der Bundeswehr München
10:30	Coffee break: Institute of Fluid Mechanics, Foyer	
11:00	Modification of a compressor test rig for measuring the influence of inlet distortions on the compressor flow	Fabian Wartzek , TU Darmstadt
11:30	Design of a fan-test-facility with axial flow and crosswind capabilities	Jan-Hendrik Krone , TU Braunschweig

APPLICATIONS IN COMPLEX FLOWS

12:00	Investigation of stall phenomena using zonal RANS-LES simulations	Koen Geurts , RWTH Aachen
12:30	Detached-eddy simulation of generic and complex helicopter fuselage geometries	Charles Mockett , TU Berlin
13:00	Lunch time: Cafeteria LBA, Hermann-Blenk-Straße 26	
14:00	Leading edge vortex system of the A380-800 at high angles of attack for take-off and landing configurations	Rolf Emunds , Airbus Operations GmbH Bremen
14:30	Maximum lift predictions of a realistic commercial aircraft in landing configuration	Niko Bier , DLR Braunschweig
15:00	End of Symposium	