



International Symposium „Simulation of Wing and Nacelle Stall” Germany, Braunschweig, June 22nd - 23rd, 2010



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

Location: Haus der Wissenschaft, Pockelsstraße 11, 38106 Braunschweig, Seminar room, „Veolia/Weitblick“, 5th floor

Tuesday, June 22nd, 2010

FUNDAMENTALS OF STALL MODELLING - 1

09:30	Opening	R. Radespiel/N. Kroll
09:40	Advanced simulations for unsteady turbulent flows in applied aerodynamics	Sébastien Deck, ONERA Applied Aerodynamics Dep.
10:25	The prediction of separated turbulent flows with the anisotropy invariant Reynolds Stress Model (AIRSM)	Jovan Jovanovic, Universität Erlangen-Nürnberg
10:55	Investigation of turbulent airfoil flow and slat noise mechanisms	Wolfgang Schröder, RWTH Aachen
11:25	Transition modelling for aerodynamic flow simulations with a near-wall Reynolds Stress Model	Axel Probst, TU Braunschweig
11:55	Lunch time: Mensa 1, Katharinenstraße 1	

FUNDAMENTALS OF STALL MODELLING - 2

13:00	Experimental evaluations of stall characteristics of a two element high lift airfoil	David Hahn, TU Braunschweig
13:30	Grid coupling by means of Chimera interpolation techniques	Thorsten Schwarz, Deutsches Zentrum für Luft- und Raumfahrt (DLR)
14:00	Simulation of pressure and shock induced separation using DES implementations in the DLR-TAU Code	Sebastian Illi, Universität Stuttgart
14:30	Advanced Reynolds stress turbulence modeling of subsonic and transonic flows	René-Daniel Cecora, TU Braunschweig
15:00	Coffee break: Haus der Wissenschaft, 5 th floor, Terrace	

SIMULATION OF ATMOSPHERIC DISTURBANCES

15:30	Gust and turbulence simulation for design and certification of large aeroplanes - Industrial application of unsteady aerodynamics for loads	Wolfgang Weigold, Airbus Operations GmbH
16:15	A Chimera method to generate realistic vortices and to model their interaction with airfoils	Christoph Wolf, Deutsches Zentrum für Luft- und Raumfahrt (DLR)

16:45	Large-eddy simulations of realistic atmospheric turbulence with the DLR-TAU-code initialized by in-situ airborne measurements	Torsten Auerswald, TU Braunschweig
17:15	Comparison of two methods to provide highly resolved atmospheric turbulence data for simulations of wing and nacelle circulations	Carolin Helmke, Leibniz Universität Hannover
18:00	Evening Event/Dinner: Haus der Wissenschaft, 1 st floor, Foyer	

Wednesday, June 23rd, 2010

INLET AND ENGINE FLOWS

09:00	Hybrid LES approach for practical turbomachinery flows	Paul Tucker, University of Cambridge
09:45	Numerical investigation of a transonic axial compressor stage with inlet distortions	Andreas Lesser, Universität der Bundeswehr München
10:15	Analysis of the flow in stalling engine inlet models with different visualization and measurement techniques	Sonja Schulze, Universität der Bundeswehr München
10:45	Planning of a compressor rig test with advanced inflow distortion simulation	Jan Lieser, Rolls-Royce Deutschland
11:15	Coffee break: Haus der Wissenschaft, 1 st floor, Foyer	

APPLICATIONS IN HIGH-LIFT FLOWS

11:45	Experimental investigation of temporal and local flow separation on glider wings in thermal flight	Jürgen Frey, Technische Universität Dresden
12:15	Pilot numerical simulation study of a high lift wing configuration for performance optimization	Timo Kühn, Deutsches Zentrum für Luft- und Raumfahrt (DLR)
12:45	Experimental and numerical investigations of commercial transport aircraft aerodynamics during approach	Ulrich Jung, Technische Universität München
13:15	CFD prediction of the maximum lift effects on realistic high-lift commercial aircraft configurations within the European project EUROLIFT II	Niko Schade, Deutsches Zentrum für Luft- und Raumfahrt (DLR)
13:45	End of Symposium	