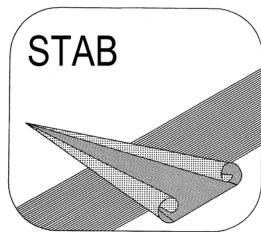


Programm des 24. DGLR-Fachsymposium der STAB

14. November 2024

OTH Regensburg | Galgenbergstr. 30 | 93053 Regensburg



**Deutsche Gesellschaft
für Luft- und Raumfahrt
Lilienthal-Oberth e.V.**



Uhrzeit

09:00-09:45	3. Plenarvortrag: Preisträger "STAB-Preis für Forschung und Entwicklung 2024", A001 Titel: „In-Line Particle Image Velocimetry“ M.Raffel, DLR Göttingen (AS-HEL)
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Raum	D001	D002	D003
	S15: Turbulenz und Transition Chair: C.Wagner	S16: Multidisziplinäre Optimierung Chair: N.Gauger	S17: Experimentelle Aerodynamik Chair: C.Breitsamter
09:50-10:10	Verhalten kritischer N-Faktoren bei Laminarhaltung durch Absaugung <u>H. Lüdeke</u> , P. Weigmann, R. von Soldenhoff DLR (Braunschweig) AS-TFZ	Parametric Aerodynamic Shape Optimization with Latent Diffusion <u>L. Chen</u> , J. Rottmayer, T. Kortus, E. Özkaya, N. Gauger, Y. Ye University of Kaiserslautern-Landau (RPTU)	Underwater Investigation of Stall Onset on an Elliptic Profile via Temperature-Sensitive Paint <u>M. Costantini</u> , B. Dimond, C. Klein, S. Sattler, M. Miozzi DLR (Göttingen) AS-EXV
10:10-10:30	Hitzdrahtmessungen in sequentiell abgesaugten Grenzschichten <u>R. von Soldenhoff</u> , P. Weigmann, H. Lüdeke, K. Thamm DLR (Braunschweig) - AS-TFZ	Adjoint-based aerodynamic shape optimization with free laminar-turbulent transition <u>D. Francois</u> , A. Krumbein DLR (Braunschweig) AS-CASE	Hot-Film Measurements on Rotor Tip Vortices in the High Pressure Wind Tunnel Göttingen (HDG) <u>E. Galli</u> , H. Bartzsch, A. Zanotti, C. Wolf, A. Gardner DLR (Göttingen) AS-HEL
10:30-10:50	Assessment and Adaptation of Transition Criteria for Non-Self-Similar Flows <u>N. Krimmelbein</u> , S. Helm, A. Krumbein DLR (Braunschweig) AS-CASE	Multidisciplinary Design Methods for Fixed-Wing UAVs and the Application to the Air Cargo Challenge 2024 <u>J. Frank</u> , Y. Schäfer, T. Stadel, G. Zwickl Universität Stuttgart	Experimental Investigation of the Aerodynamics of Maple Seeds in Native Free Fall and Controlled Autorotation Condition <u>L. Krenkel</u> , M. Rütten OTH Regensburg

10:50-11:20	Kaffeepause, Foyer-D
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10:50-11:20	Kaffeepause, Foyer-D
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Raum	D001	D002	D003
	S18: Turbulenz und Transition Chair: R.von Soldenhoff	S19: Numerische Aerodynamik Chair: C.Rossow	S20: Bio- und Mikrofluidmechanik / Versuchsanlagen Chair: L.Krenkel
11:20-11:40	A tracer particle's path through the turbulent energy spectrum <u>M. Mommert</u> , T. Käufer, C. Cierpka, C. Wagner DLR (Göttingen) AS-BOA	Development and assessment of an Immersed Boundary Method in an unstructured flow solver for steady and scale-resolving simulations <u>R. Sanchez-Ortiz</u> , J. Sánchez Gil, A. Probst, A. Schwöppe DLR (Göttingen) AS-CASE	High-resolution flow investigations in native membrane lungs for understanding shear-induced blood clot formation <u>M. Kranz</u> , D. Pointner, M. Wagner, M. Lubnow, K. Lehle, L. Krenkel OTH Regensburg, Department of Biofluid Mechanics
11:40-12:00	Investigation of different transition models under disturbed inflow over a laminar wing <u>B. Sarikaya</u> , C. Grabe, T. Lutz Universität Stuttgart	Numerical investigation of wall curvature effect on air cooling lines with tilted heat exchanger for Electrified Aero Engines <u>P. Singh</u> , S. Merbold DLR (Cottbus) - EL-ARA	Towards Experimental Validation of Models for Shear-Induced Aerosol Generation in the Human Respiratory System <u>J. Michel</u> , L. Krenkel OTH Regensburg, Department of Biofluid Mechanics
12:00-12:20	A spectral investigation of the transitional boundary layer flow during free flight in the convective atmosphere <u>U. Deck</u> , W. Würz Universität Stuttgart	The physics of spanwise gaps between lifting and control surfaces: An analysis using RANS and hybrid RANS/LES methods <u>L. Streher</u> , A. Probst DLR (Braunschweig) - AS-CASE	Entwicklung eines Kleinwasserkanals zum Einsatz optischer Messtechnik für Lehrzwecke <u>S. Risius</u> , A. Schaffarczyk, J. Kemper, W. Thielicke FH Kiel
12:20-12:40	Revisiting near-wall modeling of fully developed turbulent flow in concentric annuli N. Naik Burye, J. Medina Méndez, <u>M. Klein</u> , H. Schmidt, Brandenburgische Technische Universität (BTU)	Coupled CFD-FM Wing Unfolding with Chimera <u>F. Wilden</u> , M. Semprich MBDA Deutschland GmbH	Windkanal mit Sensor – Vergleich Experiment und CFD-Rechnung <u>W. Send</u> ANIPROP GbR

12:40-13:45	Mittagspause, Foyer-D
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13:45-14:30	4. Plenarvortrag, "STAB Fachgruppen stellen sich vor", A001 Titel: "Biofluid Mechanics Across Disciplines: Experimental and Numerical Approaches to Nasopharyngeal Flows, Artificial Lungs, and Lab-on-a-Chip Diagnostics" L.Krenkel, OTH Regensburg, Biofluidmechanik
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Raum	D001	D002	D003
	S21: Turbulenz und Transition Chair: M.Rütten	S22: Windenergie Chair: T.Lutz	
14:40-15:00	Numerical analysis of boundary-layer transition on a high-aspect ratio backward-swept laminar wing considering different mass cases <u>M. Schmalz</u> , M. Ritter, M. Fehrs DLR (Göttingen) AE-SIM	LES Investigation on Wind Turbine Trailing Edge Noise Modelling Parameters of the TNO-based Prediction Tool IAGNoise+ <u>S. Haubold</u> , T. Lutz, A. Beck Universität Stuttgart	
15:00-15:20	Quantitative comparison of results from DNS and nonlinear parabolized stability equations for the subharmonic transition process <u>F. Tocci</u> , S. Hein, P. Ströer DLR (Göttingen) AS-HGK	Evaluating the effect of a leading-edge slat on the aerodynamics of the NACA0018 airfoil J. Theron, L. Höning, <u>N. Manelil</u> Fraunhofer Institut für Windenergiesysteme, Oldenburg	
15:20-15:40	Validation and Analysis of the Reynolds-Stress Model SSG/LRR- ω for Wall-Bounded Flows with Mean-Streamline Curvature <u>S. Vellala</u> , T. Knopp DLR (Göttingen) AS-CASE	FSI simulations of IEA-15MW wind turbine under gust conditions <u>N. Manelil</u> , J. Theron, L. Höning, B. Stoevesandt Fraunhofer Institute for Wind Energy Systems	
15:40-16:00	Robust dynamic mode decomposition for the analysis of coherent flow structures A. Weiner, <u>J. Geise</u> TU Dresden (Fluid Mechanics)	Numerical investigation of the tower influence on the tip vortices of a model wind turbine <u>T. Weislein</u> , T. Lutz Universität Stuttgart	

16:00-17:00	Ende Konferenz - Abschiedskaffee, Foyer-D
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