

# Schriftenverzeichnis

*Prof. Dr.- Ing. Ewald Krämer*

.....  
bitte klicken:

- |                            |                        |                        |
|----------------------------|------------------------|------------------------|
| ➤ <a href="#">vor 2004</a> | ➤ <a href="#">2010</a> | ➤ <a href="#">2016</a> |
| ➤ <a href="#">2005</a>     | ➤ <a href="#">2011</a> | ➤ <a href="#">2017</a> |
| ➤ <a href="#">2006</a>     | ➤ <a href="#">2012</a> | ➤ <a href="#">2018</a> |
| ➤ <a href="#">2007</a>     | ➤ <a href="#">2013</a> | ➤ <a href="#">2019</a> |
| ➤ <a href="#">2008</a>     | ➤ <a href="#">2014</a> | ➤ <a href="#">2020</a> |
| ➤ <a href="#">2009</a>     | ➤ <a href="#">2015</a> | ➤ <a href="#">2021</a> |

---

## VOR 2004

- [1] Hertel, J., Krämer, E., Wagner, S.: Theoretische Untersuchungen zur transsonischen Rotorblatt-Aerodynamik. *4. BMFT-Statusseminar*, München, 1986.
- [2] Krämer, E., Hertel, J., Wagner, S.: Computation of Subsonic and Transonic Helicopter Rotor Flow Using Euler Equations. *13<sup>th</sup> European Rotorcraft Forum*, Arles, Paper Nr.2-14, 1987.  
Außerdem veröffentlicht in:  
*Vertica*, Band 12, Nr.3, S.279-291, 1988.
- [3] Hertel, J., Krämer, E., Wagner, S.: Euler Solutions for Steady Flow of a Helicopter Rotor. *2<sup>nd</sup> International Conference on Rotorcraft Basic Research*, College Park, Maryland, 1988.
- [4] Krämer, E., Hertel, J., Wagner, S.: The Study of the Wake Influence of a Helicopter Rotor Blade on the Following Blades Using Euler Equations. *Proc. 14<sup>th</sup> European Rotorcraft Forum*, Mailand, Paper Nr.6, 1988.
- [5] Wagner, S., Krämer, E., Hertel, J.: Anwendung der Eulergleichungen zur Berechnung stationärer Rotorströmungen unter Berücksichtigung des Nachlaufeinflusses auf das nachfolgende Blatt. *Jahrbuch 1988 I der DGLR*, S.333-344, 1988.
- [6] Wagner, S., Krämer, E., Hertel, J.: Berechnung des Strömungsfeldes eines mehrblättrigen Hubschraubers mit Hilfe eines Euler-Verfahrens unter Einbeziehung des Nachlaufes. *6. DGLR-Fachsymposium*, Braunschweig, DGLR-Bericht 88-05, 1988.
- [7] Krämer, E., Hertel, J., Wagner, S.: Euler Procedure for Calculation of the Steady Rotor Flow with Emphasis on Wake Evolution. *AIAA, 8<sup>th</sup> Applied Aerodynamic Conference*, Portland, OR, AIAA-Paper 90-3007, 1990, DOI: 10.2514/6.1990-3007.

- [8] Hertel, J., Krämer, E., Wagner, S.: Complete Euler-Solution for a Rotor in Hover and a Propeller in Forward Flight. *Proc. 16<sup>th</sup> European Rotorcraft Forum*, Glasgow, Paper Nr.I.4.2, 1990.
- [9] Krämer, E.: Theoretische Untersuchungen der stationären Rotorblattumströmung mit Hilfe eines Euler-Verfahrens. *Fortschritt-Berichte VDI, Reihe 7 „Strömungstechnik“, Nr.197*, VDI-Verlag, Düsseldorf, 1991.
- [10] Wagner, S., Krämer, E.: An Innovative Algorithm to Accurately Solve the Euler Equations for Rotary Wing Flow. In: Hirsch, C., Periaux, J., Kordulla, W. (eds.): *Proc. 1<sup>st</sup> European Fluid Dynamics Conference*. Elsevier 1992, pp. 851-858.

---

## 2005

- [11] Landmann B., Keßler M., Wagner S., Krämer E.: A parallel Discontinuous Galerkin code for the Navier-Stokes equations. *High Order Non-Oscillatory Methods for Wave Propagation, Trento, 2005*.
- [12] Landmann, B., Keßler, M., Wagner, S., Krämer, E.: A Parallel High Order Discontinuous Galerkin Code for Laminar and Turbulent Flows. *Euromech Colloquium 467: Turbulent Flow and Noise Generation, Marseille, France, 18.-20.7.2005*.  
Veröffentlicht in: *Computers & Fluids 37 (2008), S. 427-438. (s.u.)*
- [13] Herrig, A., Würz, W., Lutz, T., Braun, K., Krämer, E., Oerlemans, S.: Trailing-Edge Noise Measurements of Wind Turbine Airfoils in Open and Closed Test Section Wind Tunnels. *1<sup>st</sup> Int. Meeting on Wind Turbine Noise: Perspectives for Control, Berlin, 17.-18.10.2005*.
- [14] Lutz, T., Herrig, A., Würz, W., Braun, K., Krämer, E.: Constrained Aerodynamic and Aeroacoustic Design of Wind-Rotor Airfoils. *1<sup>st</sup> Int. Meeting on Wind Turbine Noise: Perspectives for Control, Berlin, 17.-18.10.2005*.
- [15] Dietz, M., Krämer, E., Wagner, S., Altmikus, A.R.M.: Weak Coupling for Active Advanced Rotors. *Proc. 31<sup>st</sup> European Rotorcraft Forum*, Florenz, Italien, 2005, Paper 43.
- [16] Lutz, T., Hirner, A., Würz, W., Kaiser, U., Krämer, E.: Aerodynamische Untersuchungen für die mehrsegmentige LTA Stratosphärenplattform „Luftwurm“. *Deutscher Luft- und Raumfahrtkongress 2005*, Friedrichshafen, 26.-29. September 2005. DGLR-2005-170.
- [17] Hirner, A., Lutz, T., Krämer, E.: Entwurf eines Verstellpropellers für die Stratosphärenplattform „Luftwurm“ 2.0. *Deutscher Luft- und Raumfahrtkongress 2005*, Friedrichshafen, 26.-29. September 2005. DGLR-2005-173.
- [18] Kutzbach, M., Lutz, T., Krämer, E.: Entwurf von spannweitig begrenzten Shock Control Bumps für den unendlich schiebenden Flügel. *Deutscher Luft- und Raumfahrtkongress 2005*, Friedrichshafen. DGLR-2005-208.
- [19] Munz, C.-D., Krämer, E.: Verfahren hoher Ordnung in der Numerischen Aeroakustik und Strömungsmechanik. *ERCOFTAC-Technologietag des Pilotcenters Süd, Stuttgart, 30.9.2005*.
- [20] Herrig, A., Würz, W., Krämer, E.: Akustisches Messverfahren für den Einsatz in Windkanälen mit hohem Hintergrundstörpegel. *12. STAB-Workshop Göttingen, 8.-9.11.2005*.

---

## 2006

- [21] Dietz, M., Keßler, M., Krämer, E.: Advanced Rotary Wing Aeromechanics. In: Nagel, W.E., Jäger, W., Resch, M. (eds.): *High Performance Computing in Science and Engineering '05*. Springer Verlag,

Berlin Heidelberg, 2006, S. 197-208.

- [22] Pätzold, M., Lutz, T., Krämer, E., Wagner, S.: Numerical Optimization of Finite Shock Control Bumps. *AIAA 44<sup>th</sup> Aerospace Science Meeting and Exhibit, Reno, Nevada, 9.-12.1.2006*, AIAA-Paper 2006-1054.
- [23] Landmann, B., Keßler, M., Wagner, S., Krämer, E.: A Parallel Discontinuous Galerkin Code for the Navier-Stokes Equations. *AIAA 44<sup>th</sup> Aerospace Science Meeting and Exhibit, Reno, Nevada, 9.-12.1.2006*, AIAA-Paper 2006-111, DOI:10.2514/6.2006-111.
- [24] Dietz, M., Wagner, S., Krämer, E.: Conservation of Circulation along a Tip Vortex Trajectory of a Helicopter Rotor by the Chimera Technique. *GAMM-Jahrestagung, Berlin, 27.-31.3.2006*.
- [25] Rödiger, T., Knauss, H., Gaisbauer, U., Krämer, E., Jenkins, S., v. Wolfersdorf, J.: Time-Resolved Heat Transfer Measurements on the Tip Wall of a Ribbed Channel Using a Novel Heat Flux Sensor – Part I: Sensor and Benchmarks. *Int. Gas Turbine and Aeroengine Congress and Exposition, Barcelona, Spanien, 8.-11.5.2006. ASME Paper GT2006-91129, 2006*.  
Erschienen außerdem im *ASME Journal of Turbomachinery*, 130, 011018, 2008.
- [26] Jenkins, S., v. Wolfersdorf, J., Weigand, B., Rödiger, T., Knauss, H., Krämer, E.: Time-Resolved Heat Transfer Measurements on the Tip Wall of a Ribbed Channel Using a Novel Heat Flux Sensor – Part II: Heat Transfer Results. *Int. Gas Turbine and Aeroengine Congress and Exposition, Barcelona, Spanien, 8.-11.5.2006. ASME Paper GT2006-91131, 2006*.  
Erschienen außerdem im *ASME Journal of Turbomachinery*, 130, 011019, 2008.
- [27] Lübon, C., Keßler, M., Wagner, S., Krämer, E.: High-Order Boundary Discretization for Discontinuous Galerkin Codes. *AIAA, 24<sup>th</sup> Applied Aerodynamic Conference, San Francisco, CA, AIAA-Paper 2006-2822*, DOI: 10.2514/6.2006-2822.
- [28] Herrig, A., Würz, W., Lutz, T., Krämer, E.: Trailing-Edge Noise Measurements Using a Hot-Wire Based Coherent Particle Velocity Method. *AIAA, 24<sup>th</sup> Applied Aerodynamic Conference, San Francisco, CA, AIAA-Paper 2006-3876*, DOI: 10.2514/6.2006-3876.
- [29] Dietz, M., Krämer, E., Wagner, S.: Tip Vortex Conservation on a Main Rotor in Slow Descent Flight Using Vortex-Adapted Chimera Grids. *AIAA, 24<sup>th</sup> Applied Aerodynamic Conference, San Francisco, CA, AIAA-Paper 2006-3478*, DOI: 10.2514/6.2006-3478.
- [30] Lutz, T., Herrig, A., Würz, W., Kamruzzaman, M., Krämer, E.: Design and Wind-Tunnel Verification of Low-Noise Airfoils for Wind Turbines. *AIAA, 24<sup>th</sup> Applied Aerodynamic Conference, San Francisco, CA, AIAA-Paper 2006-3322*. DOI: 10.2514/6.2006-3322  
Auch erschienen in: *AIAA Journal*, 45(4), pp. 779-792, 2007, DOI:10.2514/1.27658.
- [31] Knauss, H., Rödiger, T., Gaisbauer, U., Krämer, E., Bountin, D., Smorodsky, B., Maslov, A., Srulijes, J., Seiler, F.: A Novel Sensor for Fast Heat Flux Measurements. *25<sup>th</sup> AIAA Aerodynamic Measurement Technology and Ground Testing Conference, San Francisco, CA, AIAA-Paper 2006-3637*, DOI: 10.2514/6.2006-3637.

- [32] Fedorova N.N., Fedorchenko I.A., Kharlamova Yu.V., Gaisbauer U., Krämer E.: Numerical Simulation Of Supersonic Flow Around Double Ramp Configuration And Correlation With Experiment. *4<sup>th</sup> Int. Conf. on Computational Fluid Dynamics, Gent, Belgien, 10.-14. Juli 2006.*
- [33] Lutz, T., Würz, W., Herrig, A., Braun, K., Krämer, E., Schepers, J.G., Curvers, A.P.W.M., Oerlemans, S., Matesanz, A., Ahrelt, R., Maeder, T., Herr, S.: New Results from the European SIROCCO Project: Silent Rotors by Acoustic Optimization. *DEWEK 2006, 8<sup>th</sup> German Wind Energy Conference, Bremen, 22.-23. November 2006.*

---

## 2007

- [34] Schmid, S., Lutz, T., Krämer, E.: Numerical Simulation of the Flow Field Around the Stratospheric Observatory For Infrared Astronomy. *15. DGLR-STAB Symposium, Darmstadt, 29.11.-01.12.2006.* Veröffentlicht in: *Notes on Numerical Fluid Mechanics and Multidisciplinary Design (NNFM): New Results in Numerical and Experimental Fluid Mechanics, Vol. 96, Springer, 2008.*
- [35] Dietz, M., Keßler, M., Krämer, E.: Aeroelastic Simulations of Isolated Rotors Using Weak Fluid-Structure Coupling. In Nagel, W.E., Jäger, W., Resch, M. (eds.): *High Performance Computing in Science and Engineering '06. Springer Verlag, Berlin Heidelberg, 2007.*
- [36] Rödiger, T., Knauss, H., Wagner, S., Krämer, E., Bountin, D.A., Smorodsky, B.V., Chirkashenko, V.F., Zvegintsev, V.I., Maslov, A.A.: The Atomic Layer Thermopile – A Fast Heat Flux Sensor for Measuring High Heat Loads in Short Duration Hypersonic Ground Testing Facilities. *Proceedings of the 13<sup>th</sup> ICMAR, Novosibirsk, Feb. 2007.*
- [37] Herrig, A., Würz, W., Lutz, T., Krämer, E., Wagner S.: Trailing-Edge Noise Measurements of a NACA 0012 Airfoil Using the Coherent Particle Velocity Method. *Proceedings of the 13<sup>th</sup> Int. Conf. on the Methods of Aerophysical Research (ICMAR), Novosibirsk, Russia, 5.-10. Feb. 2007.*
- [38] Lenz, B., Gaisbauer, U., Krämer, E.: Fluctuation Measurements in a Supersonic Boundary-Layer Implying In-situ Calibration of the Hot-Wire Anemometer. *Proceedings of the 13<sup>th</sup> Int. Conf. on the Methods of Aerophysical Research (ICMAR), Novosibirsk, Russia, 5.-10. Feb. 2007.* Veröffentlicht in: *Journal of Thermophysics and Aeromechanics, Dezember 2007* (in russ. Übersetzung)
- [39] Lenz, B., Gaisbauer, U. Krämer, E.: Fluctuation Measurements in the Boundary Layer of a Supersonic Flow. *Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik (GAMM), 16.-20. Juli 2007, Zürich, Schweiz.* Proceedings in: *Applied Mathematics and Mechanics (PAMM), WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim, Band 7, S. 4100035-4100036, 2007.* DOI: 10.102/pamm.200700729  
Link:<http://www3.interscience.wiley.com/cgi-bin/jtoc/91016652/>
- [40] Zharkova, G.M., Kovrizhina, V.N., Petrov, A.P., Smorodsky, B.V., Knauss, H., Roediger, T., Wagner, S., Krämer, E.: Comparative Heat Transfer Studies at Hypersonic Conditions by means of three measurement techniques  
Part I: Measurement Techniques, Experimental Set-up and Preceding Investigations,  
Part II: Comparison of the Measurement Results and Identification with Theoretical Estimations.

- [41] Herrig A., Würz W., Lutz T., Krämer E., Wagner S.: Measurement of Airfoil Trailing Edge Noise with the Coherent Particle Velocity Method. *33<sup>rd</sup> German Annual Conference on Acoustics (DAGA)*, Stuttgart, 19.-22 März 2007.
- [42] Lutz, T., Herrig, A., Würz, W., Kamruzzaman, M., Krämer, E.: Design and Wind-Tunnel Verification of Low-Noise Airfoils for Wind Turbines. *AIAA Journal*, Vol. 45, No. 4, pp. 779-785, 2007, DOI:10.2514/1.27658.
- [43] Fedorchenko, I.A., Fedorova, N.N, Gaisbauer, U., Krämer, E.: Supersonic Double Ramp Flow Simulation and Comparison with Experimental Data. *International Conference on the Methods of Aerophysical Research: Proc. Pt 4, Novosibirsk: Publishing House "Nonparel", 2007. pp. 16-21.*
- [44] Schmid, S., Lutz, T., Krämer, E.: Simulation of the Unsteady Cavity Flow of the Stratospheric Observatory for Infrared Astronomy. *IUTAM Symposium "Unsteady Separated Flows and Their Control"*, Korfu, Greece, 18.-22.06.2007.  
Erschienen in: Braza, M., Hourigan, K. (Eds.): *Unsteady Separated Flows and Their Control*. IUTAM Bookseries, Springer Verlag 2009, ISBN: 978-1-4020-9897-0.
- [45] Rödiger, T., Knauss, H., Srulijes, J., Seiler, F., Krämer, E.: A Novel Fast-Response Heat Flux Sensor for Measuring Transition to Turbulence in the Boundary Layer Behind a Moving Shock Wave. *26<sup>th</sup> Int. Symposium on Shock Waves*, Göttingen, Juli 2007.
- [46] Dietz, M., Kessler, M., Krämer, E., Wagner, S.: Tip Vortex Conservation on a Helicopter Main Rotor Using Vortex-Adapted Chimera Grids. *AIAA Journal*, Vol. 45, No. 8, 2007, pp. 2062-2074, DOI: 10.2514/1.28643.
- [47] Dietz, M., Krämer, E., Wagner, S., Altmikus, A.: Active Rotor Performance Investigations using CFD/CSD Weak Coupling. *Proc. of the 33<sup>rd</sup> European Rotorcraft Forum*, Kazan, Russia, September 2007.
- [48] Hirner, A., Dorn, F., Lutz, T., Krämer, E.: Improvement of Propulsive Efficiency by Dedicated Stern Thruster Design. *7th AIAA Aviation Technology, Integration and Operations Conference (ATIO)*. Belfast, Northern Ireland, 18-20 September 2007. DOI: 10.2514/6.2007-7702.
- [49] Kamruzzaman, M., Lutz, T., Krämer, E.: An Approach to RANS Based Prediction of Airfoil Trailing Edge Far-Field Noise. *Conf. Proc. 2<sup>nd</sup> Int. Meeting on Wind Turbine Noise*, Lyon, France, 20-21 September 2007.
- [50] Kamruzzaman, M., Sonar, T., Lutz, T., Krämer, E.: A New Meshless Collocation Method for Partial Differential Equations. *Communication in Numerical Methods in Engineering 2008*, Vol. 24, pp.1617-1639. Online-Veröffentlichung in: *Communications in Numerical Methods in Engineering*, Wiley InterScience, 26. Oktober 2007, DOI: 10.1002/cnm.1055.
- [51] Schmid, S., Lutz, T., Krämer, E.: Simulation of the Flow Around the Stratospheric Observatory For Infrared Astronomy SOFIA Using URANS and DES. In: *3<sup>rd</sup> Joint HLRB and KONWIHR Result and Reviewing Workshop*, Germany, 2007.

Erschienen in: Wagner, S.; Steinmetz, M.; Bode, A.; Brehm, M. (Eds.): *High Performance Computing in Science and Engineering*, Garching/Munich, 2009, ISBN: 978-3-540-69181-5.

- [52] Streiner, S., Krämer, E., Eulitz, A., Armbruster, P.: Aeroelastic Analysis of Wind Turbines Applying 3D CFD Computational Results. *Journal of Physics, Conference Series 75*, 2007.
- [53] Schmid, S., Lutz, T., Krämer, E.: Simulations of the Unsteady Cavity Flow of the Stratospheric Observatory for Infrared Astronomy. *IUTAM Symposium*, Corfu, Greece, 2007.
- [54] Herrig, A., Würz, W., Krämer, E., Wagner S.: Hitzdraht-basierte Messungen von Hinterkantenlärm an NACA-0012 Profilen. 13. *STAB-Workshop Göttingen*, 14-15.11.2007.

---

## 2008

- [55] Landmann, B., Kessler, M., Wagner, S., Krämer, E.: A parallel, high-order discontinuous Galerkin code for laminar and turbulent flows. *Computers & Fluids 37 (2008)*, S. 427–438.
- [56] Dietz, M., Khier, W., Knutzen, B., Wagner, S., Krämer, E.: Numerical Simulation of a Full Helicopter Configuration Using Weak Fluid-Structure Coupling. *AIAA, 46<sup>th</sup> AIAA Aerospace Sciences Meeting and Exhibit*, Reno, NV, 7 -10 Jan. 2008, DOI:10.2514/6.2008-401.
- [57] Heitmann, D., Kähler, C., Radespiel, R., Rödiger, T., Knauss, H., Krämer, E.: Disturbance-Level and Roughness-Induced Transition Measurements in a Conical Boundary Layer at Mach 6. *26<sup>th</sup> AIAA Aerodynamic Measurement Technology and Ground Testing Conference, 2008*, DOI: 10.2514/6.2008-3951
- [58] Rödiger, T., Knauss, H., Gaisbauer, U., Krämer, E.: Pressure and Heat Flux Measurements on the Surface of a Low-aspect-ratio Circular Cylinder Mounted on a Ground Plate. *15. DGLR-STAB Symposium*, Darmstadt, 29.11.-01.12.2006.  
Veröffentlicht in: Tropea, C., Jakirlic, S., Heinemann, H.-J., Henke, R., Hönliger, H. (eds.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design (NNFM): New Results in Numerical and Experimental Fluid Mechanics*, Vol. 96, Springer, 2008.
- [59] König, B., Pätzold, M., Lutz, T., Krämer, E.: Shock Control Bumps on Flexible and Trimmed Transport Aircraft in Transonic Flow. *15. DGLR-STAB Symposium*, Darmstadt, 29.11.-01.12.2006.  
Veröffentlicht in: Tropea, C., Jakirlic, S., Heinemann, H.-J., Henke, R., Hönliger, H. (eds.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design (NNFM): New Results in Numerical and Experimental Fluid Mechanics*, Vol. 96, Springer, 2008.
- [60] Schmid, S., Lutz, T., Krämer, E.: Numerical Simulation of the Flow Field Around the Stratospheric Observatory for Infrared Astronomy. *15. DGLR-STAB Symposium*, Darmstadt, 29.11.-01.12.2006.  
Veröffentlicht in: Tropea, C., Jakirlic, S., Heinemann, H.-J., Henke, R., Hönliger, H. (eds.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design (NNFM): New Results in Numerical and Experimental Fluid Mechanics*, Vol. 96, Springer, 2008.
- [61] Lübon, C., Kessler, M., Wagner, S., Krämer, E.: Detached Eddy Simulation of Separated Flow on a High-Lift Device and Noise Propagation. *2<sup>nd</sup> Symposium on Hybrid RANS-LES Methods*, Korfu, Griechenland, 17.-18.06.2007.

Veröffentlicht in: Peng, S.-H., Haase, W. (eds.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design (NNFM): [Advances in Hybrid RANS-LES Modelling](#), Vol. 97, Springer, 2008.*

- [62] Dietz, M., Keßler, M., Krämer, E., Wagner, S.: Trimmed Simulation of a Complete Helicopter Configuration using Weak Fluid-Structure Coupling. In: Nagel, W.E., Jäger, W., Resch, M. (eds.): *High Performance Computing in Science and Engineering '07*. Springer Verlag, Berlin Heidelberg, 2008.
- [63] Roediger, T., Knauss, H., Kraemer, E., Estdorf, M., Schneider, S.P., Smorodsky, B.V.: Hypersonic Instability Waves Measured Using Fast-Response Heat-flux Gauges. *AIAA 46<sup>th</sup> Aerospace Science Meeting and Exhibit, Reno, Nevada, 7.-10.1.2008*, AIAA-Paper 2008-0638.
- [64] Kamruzzaman, M., Lutz, T., Herrig, A., Krämer, E.: RANS Based Prediction of Airfoil Trailing Edge Far- Field Noise: Impact of Isotropic & Anisotropic Turbulence. *14<sup>th</sup> AIAA/CEAS Aeroacoustics Conference (29<sup>th</sup> AIAA Aeroacoustic Conference)*, Vancouver, Canada, 5-7 May 2008, AIAA-2008-2867, DOI: 10.2514/6.2008-2867.
- [65] Lutz, T., König, B., Pätzold, M., Krämer, E.: Optimisation of Supports for High Reynolds Number Testing. *ECCOMAS Conference 2008*.
- [66] Herrig A., Würz W., Krämer E., Wagner S.: New CPV-Results of NACA 0012 Trailing-Edge Noise. *Int. Conf. on the Methods of Aerophysical Research ICMAR*, 30.06.-06.07.2008, Novosibirsk, Russia.
- [67] Braga de Paula, I., Sartorius, D., Würz, W., Kraemer, E., Kachanov, Y.S.: Experimental study of broadband resonant interactions in a non-self similar boundary layer on an airfoil. *Int. Conf. on the Methods of Aerophysical Research ICMAR*, 30.06.-06.07.2008, Novosibirsk, Russia.
- [68] Lenz, B., Gaisbauer, U., Kraemer, E., Kosinov, A.D., Fedorchenko, I.A., Fedorova, N.N.: Experimental and numerical investigations of laminar and turbulent boundary layer separation at  $M = 2$ . *Proceedings of the 14<sup>th</sup> Int. Conf. on the Methods of Aerophysical Research (ICMAR)*, 30.06.-06.07.2008, Novosibirsk, Russia.
- [69] Herrig, A., Würz, W., Krämer, E., Wagner, S.: Trailing-Edge Noise Measurements on NACA 0012 Airfoils Using the Coherent Particle Velocity Method. *15<sup>th</sup> Int. Congress of Sound and Vibration*, Daejeon, Korea, 06.-10.July 2008.
- [70] Kamruzzaman, M., Nübler, K., Lutz, T., Krämer E.: IAGNoise: An Airfoil Noise Prediction Tool with Graphical Frontend. *Poster Presentation, Abstract in Proc. of the European Postgraduate Fluid Dynamics Conf. (EPFDC)*, 21-23 July, 2008, Keele University, UK.
- [71] König, B., Pätzold, M., Lutz, T., Krämer, E., Rosemann, H., Richter, K., Uhlemann, H.: Numerical and Experimental Validation of Three-Dimensional Shock Control Bumps. *4<sup>th</sup> AIAA Flow Control Conference*, Seattle, WA, USA, 23 - 26 June 2008, AIAA 2008-4001. DOI:10.2514/6.2008-4001.  
Auch erschienen im J. of Aircraft 2009 (s.u.)
- [72] Schmid, S., Lutz, T., Krämer, E., Kühn, T.: Passive Control of the Flow Around the Stratospheric Observatory For Infrared Astronomy. *AIAA 26<sup>th</sup> Applied Aerodynamic Conf.*, Hawaii, US, 18.-21. August 2008, AIAA-Paper 2008-6717, 2008, DOI: 10.2514/6.2008-6717.



- [73] Schmid S., Lutz, T., Krämer, E.: DES Simulations of the Unsteady Flow Field Around the Stratospheric Observatory For Infrared Astronomy SOFIA. *XXII Int. Congress of Theoretical and Applied Mechanics*, Adelaide, Australia, 25 - 28 August 2008.
- [74] Lenz, B., Gaisbauer, U., Krämer, E., Kosinov, A.D., Semionov, N.V., Yermolaev, Y.G.: Experimentelle Untersuchung der Wellenausbreitung künstlich angefachter Störungen in einer laminaren Überschall-Grenzschicht. *Tagungsband des Deutschen Luft- und Raumfahrtkongresses (DLRK)*, 8.-10. September 2008, Darmstadt.
- [75] Streiner, S., Hauptmann, S., Kühn, M., Krämer, E.: Coupled Fluid-Structure Simulations of a Wind Turbine Rotor. *Proc. DEWEK 2008, 9<sup>th</sup> German Wind Energy Conference*, Bremen, 26.-27. November 2008.
- [76] Wagner, S., Dietz, M., Embacher, M., Schneider, C., Krämer, E.: Influence of Grid Arrangements and Fuselage on the Numerical Simulation of the Helicopter Aeromechanics in Slow Descent Flight. *International Conference on Computational and Experimental Engineering and Sciences*, Hawaii, 2008.
- [77] Hirner, A., Lutz, T., Krämer, E.: Reduction of Noise Emission of Suboptimal Operating Propellers. *Paper Nr.: 71183, 7<sup>th</sup> Intl. Airship Convention 2008*, Friedrichshafen, 9.-11. Oktober 2008.

---

## 2009

- [78] König, B., Lutz, T., Krämer, E.: Numerical Simulation of a Transonic Wind Tunnel Experiment. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '08*. Springer Verlag, Berlin Heidelberg, 2009.
- [79] Embacher, M., Keßler, M., Bensing, F., Krämer, E.: Numerical Simulation of Helicopter Aeromechanics in Slow Descent Flight. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '08*. Springer Verlag, Berlin Heidelberg, 2009.
- [80] Kamruzzaman, M., Lutz, T., Ivanov, A., Herrig, A., Würz, W., Krämer, E.: Evaluation of Measured Anisotropic Turbulent Two-point Correlation Data for the Accurate Prediction of the Turbulence Noise Sources. *15<sup>th</sup> AIAA/CEAS Aeroacoustics Conference (30<sup>th</sup> AIAA Aeroacoustic Conference)*, Miami, Florida, 11.-13. May 2009, AIAA Paper 2009-3313-818, DOI: 10.2514/6.2009-3313.
- [81] König, B., Pätzold, M., Lutz, T., Krämer, E., Rosemann, H., Richter, K., Uhlemann, H.: Numerical and Experimental Validation of Three-Dimensional Shock Control Bumps. *J. of Aircraft*, 2009, Vol.46, No.2, pp. 675-682, 2009, DOI:10.2514/1.41441.
- [82] Kamruzzaman, M., Herrig, A., Lutz, T., Würz, W., Krämer, E., Wagner, S.: Comprehensive Evaluation and Assessment of Trailing Edge Noise Prediction Based on Dedicated Measurements. *3<sup>rd</sup> Conf. on Wind Turbine Noise*, Aalborg, Dänemark, 17.-19. Juni 2009.



Auch erschienen in (s.u.): *Intl. J. of Noise Control Engineering, Spezialausgabe Wind Turbine Noise*, Vol. 59(1), pp. 54-67, Jan.-Febr. 2011, DOI: 10.3397/1.3531794.

- [83] Schreyer, A.-M., Gaisbauer, U., Krämer, E.: Fluctuation Measurements in the Turbulent Boundary Layer of a Supersonic Flow. *7<sup>th</sup> IUTAM Symposium on Laminar-Turbulent Transition*, 23.-26. Juni 2009, Stockholm, Schweden.
- [84] de Paula, I.B., Würz, W., Krämer, E., Borodulin, V.I., Kachanov, Y.S.: Experimental Study of Resonant Interaction of Modulated Waves in a non Self-Similar Boundary Layer. *7<sup>th</sup> IUTAM Symposium on Laminar-Turbulent Transition*, 23.-26. Juni 2009, Stockholm, Schweden.
- [85] Roediger, T., Knauss, H., Smorodsky, B.V., Bountin, D.A., Maslov, A.A., Krämer, E., Wagner, S.: Hypersonic Instability Waves Measured on a Circular Cone at M=12 Using Fast-response Surface Heat-flux and Pressure Gauges. *7<sup>th</sup> IUTAM Symposium on Laminar-Turbulent Transition*, 23.-26. Juni 2009, Stockholm, Schweden.
- [86] Klein, A., Altmikus, A., Richter, K., Lutz, T., Krämer, E.: UNSTEADY CRITERIA FOR HELICOPTER AIRFOIL DESIGN. *35<sup>th</sup> European Rotorcraft Forum*, September 22-25, 2009, Hamburg, Germany.
- [87] Wolf, A., Lutz, T., Krämer, E.: Active Flow Control for Noise Reduction and Performance Improvement of Future Generation Wind Turbines. *Proceedings of EAWE 2009 Conference*, Durham University, 27 September – 1 October , 2009, Durham, England.
- [88] Schmid, S., Lutz, T., Krämer, E.: Control of the unsteady flow inside the SOFIA telescope cavity by means of a porous fence. *Third Symposium on Hybrid RANS-LES Methods*, 10-12 June 2009, Gdansk, Poland.
- [89] Schmid, S., Lutz, T., Krämer, E.: Impact of Modelling Approaches to the Prediction of Ground Effect Aerodynamics. *J. of Engineering Applications of Computational Fluid Mechanics*, Vol. 3, No. 3, September 2009.
- [90] Meister, K., Lutz, T., Krämer, E.: "Development of a process chain for detailed wake simulation of horizontal axis wind turbines", *EUROMECH Colloquium 508 - Wind turbine wakes*, Madrid, Spain, October 20-22, 2009.
- [91] Kamruzzaman, M., Meister, K., Lutz, T., Kühn, M., Krämer, E.: Wind Turbine Aerodynamics and Aeroacoustics at University of Stuttgart - An Overview of Research and Development *1<sup>st</sup> Int. Conf. on the Developments in Renewable Energy Technology (ICDRET'09)*, Dhaka, Bangladesh, December 17-19, 2009.
- [92] Schmid, S.; Kütemeyer, M.; Lutz, Th.; Krämer, E.: Characterisation of the Aeroacoustic Properties of the SOFIA Cavity and its Passive Control. In: Wagner, S. et al (eds.): *High Performance Computing in Science and Engineering*, Garching/Munich 2009, Springer Verlag.
- [93] Wolf, A., Kamruzzaman, M., Würz, W., Lutz, T., Krämer, E.: Wall Pressure Fluctuation (WPF) and Trailing-Edge Noise Measurements on a NACA 64-418 Airfoil. *Technical Report, EU-project UpWind*, Institute of Aerodynamics and Gasdynamics (IAG), University of Stuttgart, Nov. 2009.

- [94] de Paula, I.B., Würz, W., Krämer, E., Borodulin, V.I., Kachanov, Y.S.: Experimental Study of Weakly Non-linear Interactions of Tollmien-Schlichting Waves in a non Self-Similar Boundary Layer. 14. STAB-Workshop Göttingen, 11-12.11.2009.

---

## 2010

- [95] Embacher, M., Keßler, M., Krämer, E.: Convergence of Helicopter Trim Calculations with 6 Degrees of Freedom and CFD-CSD Coupling. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '09*. Springer Verlag, Berlin Heidelberg, 2010.
- [96] Kamruzzaman, M., Lutz, T., Herrig, A., Krämer, E.: Semi-empirical Modeling of Turbulent Anisotropy for Airfoil Self Noise Prediction. *16<sup>th</sup> AIAA/CEAS Aeroacoustics Conference*, Stockholm, Sweden, 7 -9 June 2010, AIAA Paper 2010-3878, DOI: 10.2514/6.2010-3878.  
Auch erschienen (s.u.) im *AIAA Journal*, Vol. 50 (1), pp. 46-60, Jan. 2012, DOI: 10.2514/1.J050805
- [97] Embacher, M., Keßler, M., Dietz, M., Krämer, E.: Coupled CFD-Simulation of a Helicopter in Free-Flight Trim. *Proceedings of the American Helicopter Society, 66<sup>th</sup> Annual Forum*, Phoenix, AZ, USA, 2010.
- [98] Schreyer, A.-M., Gaisbauer, U., Krämer, E.: Fluctuation Measurements in the Turbulent Boundary Layer of a Supersonic Flow. In: Schlatter, P., Henningson, D.S. (eds.): *Seventh IUTAM Symposium on Laminar-Turbulent Transition*, IUTAM Bookseries Volume 18, 2010, pp 569-572.
- [99] Illi, S., Lutz, T., Krämer, E.: Simulation of pressure and shock induced separation using DES implementations in the DLR-TAU Code. *Second Symposium "Simulation of Wing and Nacelle Stall"*, Braunschweig, Germany, 22 – 23 June 2010
- [100] de Paula, I.B., Würz, W., Krämer, E., Borodulin, V.I., Kachanov, Y.S.: Production of Seeds for Subharmonic Resonance in the Evolution of Modulated T-S Waves on an Airfoil Boundary Layer. *8<sup>th</sup> Euromech Fluid Mechanics Conference*, 13.-16. September 2010, Bad Reichenhall.
- [101] Kamruzzaman, M., Wolf, A., Bekiropoulos, D., Lutz, T., Würz, W., Herring, A., Krämer, E.: Study of Turbulent Boundary Layer Wall Pressure Fluctuations Spectrum Models for Trailing-edge Noise Prediction. *15<sup>th</sup> Int. Conf. on the Methods of Aerophysical Research (ICMAR 2010)*, Akademgorodok, Novosibirsk, Russia, 1-6, Nov., 2010
- [102] Knauss, H., Rödiger, T., Wagner, S., Krämer, E.: The Atomic Layer Thermopile – Some Applications of a New Heat Transfer Measurement Technique in Fluid Mechanics and Thermodynamics. *15<sup>th</sup> Int. Conf. on the Methods of Aerophysical Research (ICMAR 2010)*, Akademgorodok, Novosibirsk, Russia, 1-6, Nov., 2010
- [103] de Paula, I.B., Würz, W., Krämer, E., Borodulin, V.I., Kachanov, Y.S.: Generation of seeds for subharmonic resonances in an airfoil boundary layer transition initiated by modulated TS waves. *15<sup>th</sup> Int. Conf. on the Methods of Aerophysical Research (ICMAR 2010)*, Akademgorodok, Novosibirsk Russia, 1-6, Nov., 2010
- [104] Schreyer, A.-M., Gaisbauer, U., Krämer, E.: Measurements of total pressure fluctuations in the turbulent boundary layer of a supersonic flow. In: *Proc. of the 15<sup>th</sup> Int. Conf. on the Methods of*

- [105] Kamruzzaman, M.; Lutz, T.; Krämer, E.: Improved Wind Turbine Noise Prediction Tools for Low Noise Airfoil Design. *Proc. DEWEK 2010, 10<sup>th</sup> German Wind Energy Conference*, Bremen, 17.-18. November 2010.
- [106] Meister, K.; Lutz, T.; Krämer, E.: Consideration of Unsteady Inflow Conditions in Wind Turbine CFD Simulations. *Proc. DEWEK 2010, 10<sup>th</sup> German Wind Energy Conference*, Bremen, 17.-18. November 2010.
- [107] Wolf, A., Lutz, T., Würz, W., Stalnov, O., Krämer, E.: Impact of Suction on Boundary-Layer and Noise Emission of Wind Turbine airfoils. *Proc. DEWEK 2010, 10<sup>th</sup> German Wind Energy Conference*, Bremen, 17.-18. November 2010.
- [108] Lutz, T., Meister, K., Krämer, E.: Aerodynamic and Acoustic Design of Wind Turbine Airfoils with Trailing-Edge Flap. *Proc. DEWEK 2010, 10<sup>th</sup> German Wind Energy Conference, Bremen*, 17.-18. November 2010.
- [109] Schreyer, A.-M., Würz, W., Krämer, E., Talamell, A., Alfredsson, H.: *Experimental Flow Studies on Separation and Reattachment in the Vicinity of Sharp, Wedge-Shaped Leading Edges at Low Reynolds Numbers*. In: Dillmann, A. et al. (eds.): *Numerical and Experimental Fluid Mechanics VII, NNFM 112*, pp. 273-280, Springer-Verlag Berlin, Heidelberg, 2010.

---

## 2011

- [110] Lutz, T.; Meister, K.; Krämer, E.: Near Wake Studies of the MEXICO Rotor. *EWEA Annual Event 2011*, Brussels, 14-17 March 2011.
- [111] Bensing, F., Keßler, M., Krämer, E.: CFD-CSM-Coupled Simulation of Helicopter Rotors Using an Unstructured Flow Solver. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '10*, DOI: 10.1007/978-3-642-15748-6-30, Springer Verlag Berlin Heidelberg 2011.
- [112] Illi, S., Engfer, C., Lutz, T., Krämer, E.: Hybrid RANS-LES methods for complex applications. *CFD and Experiment – Integration of Simulation, Workshop of the DGLR-Querschnittsbereich Thermo- and Fluidynamics*, Göttingen, Germany, April 5<sup>th</sup> - 6<sup>th</sup>, 2011
- [113] Kamruzzaman, M., Lutz, T., Nübler, K., Krämer, E.: Implementation and Verification of an Aeroacoustic Wind Turbine Blade Analysis Tool. *4<sup>th</sup> International Meeting on Wind Turbine Noise*, Rome, Italy, 12.-14. April 2011.
- [114] Kamruzzaman, M., Herrig, A., Lutz, T., Würz, W., Krämer, E., Wagner, S.: Comprehensive Evaluation and Assessment of Trailing Edge Noise Prediction Based on Dedicated Measurements. *Intl. J. of Noise Control Engineering (NCEJ)* **59** 54, Jan.-Febr. 2011.

- [115] Kamruzzaman, M., Lutz, T., Würz, W., Krämer, E.: On the Length Scales of Turbulence for Aeroacoustic Applications. *17<sup>th</sup> AIAA/CEAS Aeroacoustic Conference (32<sup>nd</sup> AIAA Aeroacoustic Conference)*, Portland, Oregon, USA, 6 - 8 June 2011, AIAA-Paper No AIAA-2011-2734, DOI: 10.2514/6.2011-2734.
- [116] Embacher, M., Keßler, M., Dietz, M., Krämer, E.: Capability of Helicopter CFD-Simulations Trimmed to Free Flight Condition to Predict Flight Test Data. *37<sup>th</sup> European Rotorcraft Forum*, September 13-15, 2011, Gallarate (VA) – Italy.
- [117] Hollands, M., Keßler, M., Altmikus, A., Krämer, E.: Trade Study: Influence of Different Blade Shape Designs on Forward Flight and Hovering Performance of an Isolated Rotor. *37<sup>th</sup> European Rotorcraft Forum*, September 13-15, 2011, Gallarate (VA) – Italy.
- [118] Klein, A., Richter, K., Gardner, A.D., Altmikus, A.R.M., Lutz, T., Krämer, E.: Numerical Comparison of Dynamic Stall for 2D-Airfoils and an Airfoil Model in the DNW-TWG. *37<sup>th</sup> European Rotorcraft Forum*, September 13-15, 2011, Gallarate (VA) – Italy.
- [119] Koster, J., Serani, E., Velazco, A., Wiley, T., Munz, C.-D., Kurz, H., Krämer, E., Wong, K.C., Lehmkuehler, K., Verstraete, D.: HYPERION: An International Collaboration. *Proceedings of the 7<sup>th</sup> International CDIO Conference*, Technical University of Denmark, Copenhagen, June 20 - 23, 2011
- [120] Koster, J., Balaban, S., Brewer, A., Goodman, C., Hillery, D., Humbargar, C., Johnson, M., Kosyan, M., Nasso, D., Price, J., Serani, E., Velazco, A., Wiley, T., Zhao, R., Arenz, M., Kurz, H., Pfeifer, D., Seitz, M., Munz, C.-D., Krämer, E., Lehmkuehler, K., Wong, K.-C., Verstraete, D.: Hyperion Flying Wing Aircraft Technology. *Proceedings of the 7<sup>th</sup> International CDIO Conference*, Technical University of Denmark, Copenhagen, June 20 - 23, 2011
- [121] Koster, J., Velazco, A., Munz, C.-D., Krämer, E., Wong, K.-C., Verstraete, D.: WORKFORCE DEVELOPMENT FOR GLOBAL AIRCRAFT DESIGN. *Proceedings of the ASME 2011 International Mechanical Engineering Congress & Exposition IMECE2011*, November 11-17, 2011, Denver, Colorado, USA, IMECE2011-62273.
- [122] Koster, J., Munz, C.-D., Kraemer, E., Wong, K.-C., Verstraete, D., Goodman, C., Hillery, D., Serani, E., Arenz, M., Kurz, H., Pfeifer, D., Seitz, M., Balaban, S., Brewer, A., Johnson, M., Kosyan, M., Nasso, D., Price, J., Velazco, A., Wiley, T., Humbargar, C., Zhao, R., Lehmkuehler, K.: Rapid, International Design and Test of a Hybrid-Powered, Blended-Wing Body Unmanned Aerial Vehicle. *11<sup>th</sup> AIAA Aviation Technology, Integration, and Operations (ATIO) Conference*, 2011, DOI: 10.2514/6.2011-6964
- [123] Meister, K., Lutz, T., Krämer, E.: Grid dependency studies on tip vortex preservation in wind turbine CFD simulations. *Proceedings of Wake Conference*, 8-9 June, 2011, Visby, Sweden.
- [124] Plogmann, B., Würz, W., Krämer, E.: Interaction of a 3D Roughness Element with a Laminar Boundary Layer near an Airfoil Leading Edge. *15. STAB-Workshop Göttingen*, 09-10.11.2011.

- [125] Koster, J., Velazco, A., Munz, C.-D., Krämer, E., Wong, K.C., Verstraete, D.: HYPERION UAV: An International Collaboration. *50<sup>th</sup> AIAA Aerospace Sciences Meeting*, Nashville, TN, 9 - 12 Jan. 2012, AIAA-2012-1223, DOI: 10.2514/6.2012-1223.
- [126] Kranzinger, P., Hollands, M., Keßler, M., Wagner, S., Krämer, E.: Generation and Verification of Meshes Used in Automatic Process Chains to Optimize Rotor Blades. *50<sup>th</sup> AIAA Aerospace Sciences Meeting*, Nashville, TN, 9 - 12 Jan. 2012, AIAA-2012-1260, DOI:10.2514/6.2012-1260.
- [127] Nübler, K., Lutz, T., Krämer, E., Colliss, S., Babinsky, H.: Shock Control Bump for Robustness Enhancement. *50<sup>th</sup> AIAA Aerospace Sciences Meeting*, Nashville, TN, 9 - 12 Jan. 2012, AIAA-2012-0043, DOI: 10.2514/6.2012-43.
- [128] Colliss, S., Nübler, K., Bruce, P.J.K., Babinsky, H., Lutz, T., Krämer, E.: An Experimental Investigation of Three-Dimensional Shock Control Bumps Applied to Transonic Airfoils. *50<sup>th</sup> AIAA Aerospace Sciences Meeting*, Nashville, TN, 9 - 12 Jan. 2012, AIAA-2012-0046, DOI: 10.2514/6.2012-46.
- [129] Nübler, K., Colliss, S., Lutz, T., Babinsky, H., Krämer, E.: Joint Wind Tunnel and CFD Examination of Flow over Shock Control Bumps. *47<sup>th</sup> Int. Symp. of Applied Aerodynamics*, Paris, 3b\_05, 2012.
- [130] Koster, J., Hillery, D., Munz, C.-D., Krämer, E., Verstraete, D.: The Hyperion 2 Green Aircraft Project. *50<sup>th</sup> AIAA Aerospace Sciences Meeting*, Nashville, TN, 9 - 12 Jan. 2012, AIAA-2012-0878.
- [131] Bensing, F., Embacher, M., Hollands, M., Kutz, B., Keßler, M., Krämer, E.: Numerical Simulation of Helicopter Wake Evolution, Performance and Trim. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '11*, DOI: 10.1007/978-3-642-23869-7\_30, Springer Verlag Berlin Heidelberg 2012.
- [132] Klein, A., Illi, S., Nübler, K., Lutz, T., Krämer, E.: Wall Effects and Corner Separations for Subsonic and Transonic Flow Regimes. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '11*, DOI: 10.1007/978-3-642-23869-7\_30, Springer Verlag Berlin Heidelberg 2012.
- [133] Shin, Y., Rist, U., Krämer, E.: Experimental Study of the Instability and Laminar-Turbulent Transition Behind a Roughness Element in the Boundary Layer. *5<sup>th</sup> EU-Korea Conference on Science and Technology 2012*, Berlin, 26.-28. July 2012.
- [134] Engfer, C., Pfueller, E., Wiedeman, M., Wolf, J., Lutz, T., Krämer, E., Röser, H-P.: Evaluation of the aero-optical properties of the SOFIA cavity by means of Computational Fluid Dynamics and a Super Fast Diagnostic Camera. *SPIE Astronomical Telescopes + Instrumentation*, 1-6 July 2012, Amsterdam, Netherlands.
- [135] Kalimullina, A., Illi, S., Gansel, P., Lutz, T., Krämer, E.: The Spectral Analysis of Unsteady Pressure Coefficient at the Wing Trailing Edge. In: *Proc. of the 16<sup>th</sup> Int. Conf. on the Methods of Aerophysical Research ICMAR*, August 20 - 26, 2012 Kazan, Russia.

- [136] Plogmann, B., Würz, W., Krämer, E.: Interaction of a Three-Dimensional Roughness Element with a TS-wave near an Airfoil Leading Edge. In: *Proc. of the 16<sup>th</sup> Int. Conf. on the Methods of Aerophysical Research ICMAR*, August 20 - 26, 2012 Kazan, Russia.
- [137] Kamruzzaman, M., Lutz, T., Herrig, A., Krämer, E.: Semi-Empirical Modeling of Turbulent Anisotropy for Airfoil Self-Noise Predictions. *AIAA Journal*, Vol.50, No.1, pp. 46-60, January 2012, DOI:10.2514/1.J050805.
- [138] Kamruzzaman, M., Bekiropoulos, D., Wolf, A., Lutz, T., Krämer, E.: A Semi-Empirical Wall Pressure Fluctuation Spectrum and Far-Field Trailing-Edge Noise Prediction Model. *Int. J of Aeroacoustics*, 2012.
- [139] Hollands, M., Keßler, M., Krämer, E.: Influence of An-/Dihedral and of Different Blade Shapes on Performance and Aeroacoustics of an Isolated Rotor. *38<sup>th</sup> European Rotorcraft Forum*, Amsterdam, Netherlands, 2012.
- [140] Kutz, B.M., Großmann, T., Keßler, M., Krämer, E.: Experimental and Numerical Examination of a Helicopter Hovering in Ground Effect. *38<sup>th</sup> European Rotorcraft Forum*, Amsterdam, Netherlands, 2012.  
Auch erschienen im *CEAS Aeronautical Journal* 2013 (s.u.).
- [141] Kutz, B.M., Kowarsch, U., Keßler, M., Krämer, E.: Numerical Investigation of Helicopter Rotors in Ground Effect. *30<sup>th</sup> AIAA Applied Aerodynamics Conference*, New Orleans, USA, 2012, Paper AIAA-2012-2913, DOI: 10.2514/6.2012-2913.
- [142] Plogmann, B., Würz, W., Krämer, E.: Interaction of a Laminar Boundary Layer with a Cylindrical Roughness Element near an Airfoil Leading Edge. *42<sup>nd</sup> AIAA Fluid Dynamics Conference and Exhibit*, 2012, DOI: 10.2514/6.2012-3077.
- [143] Busch, E.R., Keßler, M., Krämer, E.: Numerical Investigation of Counter-Rotating Open Rotor Noise Emission in Different Flight Conditions. *ASME Turbo Expo*, Copenhagen, Denmark, 2012.
- [144] Illi, S., Lutz, T., Krämer, E.: On the capability of unsteady RANS to predict transonic buffet. *Third Symposium "Simulation of Wing and Nacelle Stall"*, Braunschweig, Germany, 22 – 23 June, 2010.
- [145] Meister, K., Lutz, T., Krämer, E.: Time - Resolved CFD Simulation of a turbulent atmospheric boundary layer interacting with a wind turbine. *Euromech Colloquium [528]*, 22 - 24 February, Oldenburg, Germany, 2012.
- [146] Klein, A., Lutz, T., Krämer, E., Richter, K., Gardner, A.D., Altmikus, A.R.M.: Numerical Comparison of Dynamic Stall for Two-Dimensional Airfoils and an Airfoil Model in the DNW-TWG. *Journal of the American Helicopter Society*, Vol. 57, Number 4, October 2012.
- [147] Kowarsch, U. ; Bensing, F. ; Keßler, M. ; Krämer, E.: Untersuchungen zur Rotornachlauf-Rumpff-Interaktion mit einem hybriden Strömungslöser / Universität Stuttgart. 2012 (KR2959/1). – *Abschlussbericht des DFG-Projektes KR 2959/1*.

- [148] Gansel, P., Illi, A., Lutz, T., Krämer, E.: Numerical Simulation of Low Speed Stall and Analysis of Turbulent Wake Spectra. *Proc. 15<sup>th</sup> Int. Conf. on Fluid Flow Technologies*, Budapest, Hungary, 4-7 September, Vol. I, pp. 199-206, 2012.
- [149] Meister, K., Lutz, T., Krämer, E.: Simulation of a 5MW Wind Turbine in an Atmospheric Boundary Layer. *The Science of Making Torque from Wind 2012 (TORQUE 2012)*. 9.-11. Oktober, Oldenburg, 2012.
- [150] Busch, E.R., Keßler, M., Krämer, E.: Numerical Investigation of different blade tip shapes operating at transonic blade tip speeds. *16th workshop of the Aeroacoustics Specialist Committee of CEAS / 2nd scientific workshop of the European X-Noise EV network "AEROACOUSTIC INSTALLATION EFFECTS & NOVEL AIRCRAFT ARCHITECTURES"*, 11 – 12 October 2012, Braunschweig, Germany
- [151] Busch, E.R., Keßler, M., Krämer, E.: Computational aeroacoustics of a counter-rotating open rotor at different angles of attack. *18. DGLR-Fach-Symposium der STAB*, 6. - 7. November 2012.  
Erschienen in: Dillmann, A., Heller, G., Krämer, E., Kreplin, H. P., Nitsche, W., Rist, U. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 124, New Results in Numerical and Experimental Fluid Mechanics IX*. Springer, 2014. ISBN: 978-3-319-03157-6.
- [152] Wurst, M., Keßler, M., Krämer, E.: Detached Eddy Simulation using the Discontinuous Galerkin method. *18. DGLR-Fach-Symposium der STAB*, 6. - 7. November 2012.  
Erschienen in: Dillmann, A., Heller, G., Krämer, E., Kreplin, H. P., Nitsche, W., Rist, U. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 124, New Results in Numerical and Experimental Fluid Mechanics IX*. Springer, 2014. ISBN: 978-3-319-03157-6.
- [153] Bogdanski, S., Nübler, K., Lutz, T., Krämer, E.: Numerical Investigation of the Influence of Shock Control Bumps on the Buffet Characteristics of Transonic Airfoils. *18. DGLR-Fach-Symposium der STAB*, 6. - 7. November 2012.  
Erschienen in: Dillmann, A., Heller, G., Krämer, E., Kreplin, H. P., Nitsche, W., Rist, U. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 124, New Results in Numerical and Experimental Fluid Mechanics IX*. Springer, 2014. ISBN: 978-3-319-03157-6.
- [154] Gansel, P., Dürr, P., Baumann, M., Lutz, T., Krämer, E.: Influence of Meshing on Flow Simulation in the Wing-Body Junction of Transport Aircraft. *18. DGLR-Fach-Symposium der STAB*, 6. - 7. November 2012.  
Erschienen in: Dillmann, A., Heller, G., Krämer, E., Kreplin, H. P., Nitsche, W., Rist, U. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 124, New Results in Numerical and Experimental Fluid Mechanics IX*. Springer, 2014. ISBN: 978-3-319-03157-6.
- [155] Plogmann, B., Würz, W., Krämer, E.: Interaction of a Cylindrical Roughness Element and a Two-Dimensional TS-Wave. *18. DGLR-Fach-Symposium der STAB*, 6. - 7. November 2012.  
Erschienen in: Dillmann, A., Heller, G., Krämer, E., Kreplin, H. P., Nitsche, W., Rist, U. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 124, New Results in Numerical and Experimental Fluid Mechanics IX*. Springer, 2014. ISBN: 978-3-319-03157-6.
- [156] Hollands, M., Keßler, M., Krämer, E.: Blade Shape Design: Trim Acceleration for Fluid-Structure Coupled Simulations of an Isolated Rotor In Forward Flight. *18. DGLR-Fach-Symposium der STAB*, 6. - 7. November 2012.



Erschienen in: Dillmann, A., Heller, G., Krämer, E., Kreplin, H. P., Nitsche, W., Rist, U. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 124, New Results in Numerical and Experimental Fluid Mechanics IX*. Springer, 2014. ISBN: 978-3-319-03157-6.

- [157] Stanger, C., Hollands, M., Keßler, M., Krämer, E.: Adaptation of the Dynamic Rotor Blade Modelling in CAMRAD for Fluid-Structure Coupling Within a Blade Design Process. *18. DGLR-Fach-Symposium der STAB*, 6. - 7. November 2012.

Erschienen in: Dillmann, A., Heller, G., Krämer, E., Kreplin, H. P., Nitsche, W., Rist, U. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 124, New Results in Numerical and Experimental Fluid Mechanics IX*. Springer, 2014. ISBN: 978-3-319-03157-6.

- [158] Wolf, A., Lutz, T., Krämer, E.: Modelling of Active Flow Control for Noise Reduction of Future Wind Turbines. *DEWEK 2012, 11<sup>th</sup> German Wind Energy Conference*, Bremen, 07.-08. November 2012.
- [159] Bekiropoulos, D., Rieß, R.M. Lutz, T., Krämer, E., Matha, D., Werner, M., Cheng, P. W.: Simulation of Unsteady Aerodynamic Effects on Floating Offshore Wind Turbines. *DEWEK 2012, 11<sup>th</sup> German Wind Energy Conference*, Bremen, 07.-08. November 2012.

---

## 2013

- [160] Wolf, A., Henes, D., Bogdanski, S., Lutz, T., Krämer, E.: Statistical Analysis of Parameter Variations using the Taguchi Method. In: Eisfeld, B., Barnewitz, H., Fritz, W., Thiele, F.: *Management and Minimisation of Uncertainties and Errors in Numerical Aerodynamics. Notes on Numerical Fluid Mechanics and Multidisciplinary Design*. Volume 122, Springer Verlag 2013, pp 247-264.
- [161] Illi, S.A., Lutz, T., Krämer, E.: Transonic Tail Buffet Simulations on the ATRA Research Aircraft. In: Kroll, N., Radespiel, R., Burg, J.W., Sørensen, K.: *Computational Flight Testing, Notes on Numerical Fluid Mechanics and Multidisciplinary Design*. Volume 123, Springer Verlag 2013, pp 273-287. doi: 10.1007/978-3-642-38877-4\_19.
- [162] Heister, C.C., Klein, A., Krämer, E.: RANS-Based Laminar-Turbulent Transition Prediction for Airfoil and Rotary Wing Applications Using Semi-empirical Criteria. *17. DGLR-Fach-Symposium der STAB*, 9. - 10. November 2010. Erschienen in: Dillmann, A., Heller, H.-P., Kreplin, Nitsche, W., Pelzer, I. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 121, New Results in Numerical and Experimental Fluid Mechanics VIII*. Springer, 2013. ISBN: 978-3-642-35679-7. DOI: 10.1007/978-3-642-35680-3
- [163] Busch, E.R., Wurst, M.S., Keßler, M., Krämer, E.: Computational Aeroacoustics with Higher Order Methods. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '12*, DOI: 10.1007/978-3-642-333374-3, Springer Verlag Berlin Heidelberg 2013, S. 239-253.
- [164] Nübler, K., Colliss, S.P., Lutz, T., Babinsky, H., Krämer, E.: Numerical and Experimental Examination of Shock Control Bump Flow Physics. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '12*, DOI: 10.1007/978-3-642-333374-3, Springer Verlag Berlin Heidelberg 2013, S. 333-350.

- [165] Matter, M., Busch, E.R., Lutz, T., Keßler, M., Krämer, E.: Numerical investigation of a model propeller operating under off-design conditions. *51<sup>st</sup> Aerospace Sciences Meeting, New Horizons Forum and Aerospace Exhibition*, Grapevine, TX, USA, 7-10 January 2013, DOI: 10.2514/6.2013-758.
- [166] Illi, S., Gansel, P., Lutz, T., Krämer, E. (2013) Hybrid RANS–LES wake studies of an airfoil in stall. *CEAS Aeronautical Journal, Vol.4, Issue 2*, 2013, DOI: 10.1007/s13272-012-0050-z.
- [167] Busch, E.R., Keßler, M., Krämer, E.: Aeracoustics of a high-fidelity CFD calculation of a Counter-Rotating Open Rotor in take-off conditions. *19<sup>th</sup> AIAA/CEAS Aeroacoustics Conference (34<sup>th</sup> AIAA Aeroacoustics Conference)*, 27-29 May 2013, Berlin, Germany, DOI: 10.2514/6.2013-2202.
- [168] Engfer, C., Lutz, T., Krämer, E.: Characterization of the Cavity Shear Layer of the Stratospheric Observatory For Infrared Astronomy by Means of Pressure Sensor Data and a Hybrid RANS-LES Study. *21<sup>st</sup> AIAA Computational Fluid Dynamics Conference*, San Diego, USA, 24-27 June 2013, DOI: 10.2514/6.2013-2839.
- [169] Hollands, M., Keßler, M., Krämer, E.: Planform Design for a Five Bladed Isolated Helicopter Rotor Using Fluid-Structure Coupled CFD Simulations. *31<sup>st</sup> AIAA Applied Aerodynamics Conference*, San Diego, USA, 24-27 June 2013, DOI: 10.2514/6.2013-2525.
- [170] Wurst, M., Keßler, M., Krämer, E.: Aerodynamic and acoustic analysis of an extruded airfoil with a trailing edge device using Detached Eddy Simulation with a Discontinuous Galerkin method. *21<sup>st</sup> AIAA Computational Fluid Dynamics Conference*, San Diego, USA, 24-27 June 2013, DOI: 10.2514/6.2013-2429.
- [171] Illi, S., Fingskes, C., Lutz, T., Krämer, E.: Transonic Tail Buffet Simulations for the Common Research Model. *31<sup>st</sup> AIAA Applied Aerodynamics Conference*, San Diego, USA, 24-27 June 2013, DOI: 10.2514/6.2013-2510.
- [172] Kowarsch, U., Keßler, M., Krämer, E.: High Order CFD-Simulation of the Rotor-Fuselage Interaction. *39<sup>th</sup> European Rotorcraft Forum*, Moscow, 2013.
- [173] Kutz, B.M., Großmann, T., Keßler, M., Krämer, E.: Experimental and Numerical Examination of a Helicopter Hovering in Ground Effect. *CEAS Aeronautical Journal, Volume 4, Issue 4 (2013)*, pp. 397-408, DOI: 10.1007/s13272-013-0084-x, 2013.
- [174] de Paula, I.B., Würz, W., Krämer, E., Borodulin, V.I., Kachanov, Y.S.: Weakly-nonlinear Stages of Boundary-Layer Transition by Modulated Tollmien-Schlichting Waves. *Journal of Fluid Mechanics*, Vol. 732, October 2013, pp 571 - 615. doi: 10.1017/jfm.2013.420
- [175] Krämer, E.: Numerical Simulation of Helicopter Aerodynamics. *HELI World Conference 2013*, Frankfurt a.M., 6.-7. November 2013 (invited talk).
- [176] Plogmann, B., Würz, W., Krämer, E.: The Influence of a Cylindrical Roughness Element on the Disturbance Evolution in a Perturbed Boundary Layer. *16. STAB-Workshop Göttingen*, 12-13.11.2013.

- [177] Werner, M., Würz, W., Krämer, E.: Experimental Investigations of Tonal Noise on Vehicle Side Mirrors. 16. STAB-Workshop Göttingen, 12-13.11.2013.

---

## 2014

- [178] Krämer, E.: Konfigurationsaerodynamik Kampfflugzeuge. In: Rossow, C.-C., Wolf, K., Horst, P. (Hrsg.): *Handbuch der Luftfahrzeugtechnik*. Carl Hanser Verlag München, 2014, pp. 113-150.
- [179] Kowarsch, U., Öhrle, C., Hollands, M., Keßler, M., Krämer, E.: Computation of Helicopter Phenomena Using a Higher Order Method. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '13*, DOI: 10.1007/978-3-319-02165-2, Springer Verlag Berlin Heidelberg 2013, S. 423-438.
- [180] Gansel, P., Illi, S., Krimmer, S., Lutz, T., Krämer, E.: Unsteady CFD Simulation of the NASA Common Research Model in Low Speed Stall. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '13*, DOI: 10.1007/978-3-319-02165-2, Springer Verlag Berlin Heidelberg 2013, S. 439-454.
- [181] Dillmann, A., Heller, G., Krämer, E., Kreplin, H.-P., Nitsche, W., Rist, U. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 124. New Results in Numerical and Experimental Fluid Mechanics IX. Contributions to the 18<sup>th</sup> STAB/DGLR Symposium, Stuttgart, Germany, 2012*. Springer-Verlag 2014, ISBN: 978-3-319-03157-6.
- [182] Plogmann, B., Petri, L., Souza, L., Wuerz, W., Kraemer, E.: Disturbance Evolution downstream of a Cylindrical Roughness Element: Experiments and DNS. *44<sup>th</sup> AIAA Fluid Dynamics Conference, AIAA Aviation and Aeronautics Forum and Exposition 2014*.
- [183] Plogmann B., Würz W., Krämer E.: On the disturbance evolution downstream of a cylindrical roughness element. *Journal of Fluid Mechanics, vol. 758, pp. 238-286, 2014*.
- [184] Kamruzzaman, M., Bekiropoulos, D., Wolf, A., Lutz, T., Kraemer, E.: Rnoise: A RANS Based Airfoil Trailing-edge Noise Prediction Model. *20<sup>th</sup> AIAA/CEAS Aeroacoustic Conference, AIAA Aviation and Aeronautics Forum and Exposition 2014*, Atlanta, U.S., AIAA2014-3305. DOI: 10.2514/6.2017-0711
- [185] Plogmann, B., Würz, W., Krämer, E.: Stability of a Boundary Layer Flow in the Wake of a Medium Height Roughness Element. *44<sup>th</sup> AIAA Fluid Dynamics Conf.*, Atlanta, June 16-20, 2014, AIAA-Paper 2014-2886. DOI: 10.2514/6.2014-2886.
- [186] Arnold, B., Lutz, T., Krämer, E., Abzalilov, D.: On the Effect of Boundary Layer Suction on the Boundary Layer State at the Trailing-Edge and Noise Reduction. *54<sup>th</sup> Israel Annual Conference on Aerospace Sciences, 2014*.
- [187] Krause, M., Gaisbauer, U., Kosinov, A.D., Yermolaev, Y., Krämer, E.: Static Calibration of Wedge Hot-film Probe and determination of Sensitivities for Modal Analysis in T-325 Supersonic Wind Tunnel. *17<sup>th</sup> International Conference on the Methods of Aerophysical Research (ICMAR 2014)*. June 30 – July 6, 2014, Novosibirsk, Russia

- [188] Gaisbauer, U., Krämer, E., Weigand, B., Yaroslavtsev, M.I.: Aero-thermodynamic Design of a Scramjet Propulsion System – Ground Testing. *17<sup>th</sup> International Conference on the Methods of Aerophysical Research (ICMAR 2014)*. June 30 – July 6, 2014, Novosibirsk, Russia
- [189] Kowarsch, U., Keßler, M., Krämer, E.: CFD-Simulation of the Rotor Head Influence on the Rotor-Fuselage Interaction. *40<sup>th</sup> European Rotorcraft Forum*, Southampton, 2014.
- [190] Plogmann, B., Würz, W., Krämer, E.: Nonlinear Mode Interactions in the Wake of a Medium Height Roughness Element. *8<sup>th</sup> IUTAM Symposium on Laminar Turbulent Transition*, Rio de Janeiro, Sept. 8 – 12, 2014.
- [191] Lutz, T., Arnold, B., Wolf, A., Krämer, E.: Numerical Studies on a Rotor with Distributed Suction for Noise Reduction. *The Science of Making Torque from Wind 2014 (TORQUE 2014)*, *J. Phys.: Conference Series 524 (2014) 012122*. IOP Publishing. doi: 10.1088/1742-6596/524/1/012122.
- [192] Schulz, C., Klein, L., Weihing, P., Lutz, T., Krämer, E.: CFD Studies on Wind Turbines in Complex Terrain under Atmospheric Inflow Conditions. *The Science of Making Torque from Wind 2014 (TORQUE 2014)*, *J. Phys.: Conference Series 524 (2014) 012134*. IOP Publishing. doi: 10.1088/1742-6596/524/1/012134.
- [193] Weihing, P., Meister, K., Schulz, C., Lutz, T., Krämer, E.: CFD Simulations on Interference Effects between Offshore Wind Turbines. *The Science of Making Torque from Wind 2014 (TORQUE 2014)*, *J. Phys.: Conference Series 524 (2014) 012143*. IOP Publishing. doi: 10.1088/1742-6596/524/1/012143.
- [194] Meister, K., Lutz, T., Krämer, E.: Simulation of a 5MW wind turbine in an atmospheric boundary layer. *J. Phys.: Conference Series 555 (2014) 012071*, doi: 10.1088/1742-6596/555/1/012071.
- [195] Plogmann, B., Würz, W., Krämer, E.: Nonlinear Disturbance Evolution Downstream of a Medium Height Roughness Element. *19. DGLR-Fach-Symposium der STAB*, 4. - 5. November 2014. Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Breitsamter C. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 132, New Results in Numerical and Experimental Fluid Mechanics X*. Springer, 2016. ISBN: 978-3-319-27278-8.
- [196] Werner, M., Würz, W., Krämer, E.: Experimental Investigations of Tonal Noise on a Vehicle Side Mirror. *19. DGLR-Fach-Symposium der STAB*, 4. - 5. November 2014. Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Breitsamter C. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 132, New Results in Numerical and Experimental Fluid Mechanics X*. Springer, 2016. ISBN: 978-3-319-27278-8.
- [197] Schulz, C., Meister, K., Lutz, T., Krämer, E.: Investigations on the Wake Development of the MEXICO Rotor Considering Different Inflow Conditions. *19. DGLR-Fach-Symposium der STAB*, 4. - 5. November 2014. Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Breitsamter C. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 132, New Results in Numerical and Experimental Fluid Mechanics X*. Springer, 2016. ISBN: 978-3-319-27278-8.

- [198] Wurst, M., Keßler, M., Krämer, E.: A high-order Discontinuous Galerkin Chimera method for laminar and turbulent flows. *53<sup>rd</sup> AIAA Aerospace Sciences Meeting, AIAA Science and Technology Forum 2015*, 5-9 January 2015, Kissimee, Florida, US. DOI: 10.2514/6.2015-0059.  
auch erschienen in *Computers and Fluids* (s.u.).
- [199] Waldmann, A., Gansel, P., Lutz, T., Krämer, E.: Unsteady Wake Flow Analysis of an Aircraft under Low-speed Stall Conditions Using DES and PIV. *53<sup>rd</sup> AIAA Aerospace Sciences Meeting, AIAA Science and Technology Forum 2015*, 5-9 January 2015, Kissimee, Florida, US. AIAA 2015-1096, 2015. DOI: 10.2514/6.2015-1096.
- [200] Shin, Y., Rist, U., Krämer, E.: Stability of the laminar boundary-layer flow behind a roughness element. *Experiments in Fluids, Volume 56, Issue 1, January 2015*. Springer Berlin Heidelberg, doi: 10.1007/s00348-014-1878-2
- [201] Weihing, P., Schulz, C., Lutz, T., Krämer, E.: CFD Performance Analyses of Wind Turbines Operating in Complex Environments. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '14*, DOI: 10.1007/978-3-319-10810-0, Springer International Publishing Switzerland 2015, S. 403-416.
- [202] Stanger, C., Kutz, B., Kowarsch, U., Busch, E.R., Keßler, M., Krämer, E.: Enhancement and Applications of a Structural URANS Solver. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '14*, DOI: 10.1007/978-3-319-10810-0, Springer International Publishing Switzerland 2015, S. 433-446.
- [203] Bogdanski, S., Gansel, P., Lutz, T., Krämer, E.: Impact of 3D Shock Control Bumps on Transonic Buffet. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '14*, DOI: 10.1007/978-3-319-10810-0, Springer International Publishing Switzerland 2015, S. 447-461.
- [204] Lutz, T., Fischer, A., Jost, E., Klein, L., Krämer, E.: CFD Studies on Passive and Active Load Control for Wind Turbines. *Smart Blade Symposium 2015*, 11.-12.02.2015, Oldenburg.
- [205] Illg, J., Lutz, T., Neunaber, I., Krämer, E.: Numerische Untersuchung von Vorder- und Hinterkantenlärm eines Profils in turbulenter Anströmung. *41. Jahrestagung für Akustik DAGA*, Nürnberg, 16. - 19. März 2015.
- [206] Illg, J., Lutz, T., Krämer, E.: Aeroacoustic Simulation of an Airfoil in Turbulent Inflow. *Proc. 6<sup>th</sup> International Conference on Wind Turbine Noise*, Glasgow, 20.-23. April 2015.
- [207] Kowarsch, U., Lippert, D., Schneider, S., Keßler, M., Krämer, E.: Aeroacoustic Simulation of an EC145T2 Rotor in Descent Flight. AHS International. *71<sup>st</sup> Annual Forum and Technology Display*. Virginia Beach, USA, May 5-7, 2015.
- [208] Wolf, A., Lutz, T., Würz, W., Krämer, E., Stalnov, O., Seifert, A.: Trailing Edge Noise Reduction of Wind Turbine Blades by Active Flow Control. *Wind Energy*, Volume 18, Issue 5, pp. 909-923, May 2015, doi: 10.1002/we.1737.
- [209] Mayer, R., Lutz, T., Krämer, E.: NUMERICAL OPTIMIZATION OF BUFFET ALLEVIATING THREE-DIMENSIONAL SHOCK CONTROL BUMPS. *6th European Conference for Aeronautics and Space*

- [210] Wurst, M., Keßler, M., Krämer, E.: A high-order Discontinuous Galerkin Chimera method for laminar and turbulent flows. *Computers and Fluids* 10/2015; 121. DOI: 10.1016/j.compfluid.2015.08.013
- [211] Fischer, A., Lutz, T., Krämer, E., Cordes, U., Hufnagel, K., Tropea, C.: Experimental and Numerical Generation of Turbulent Inflow Conditions for Wind Turbine Airfoils. *12<sup>th</sup> German Wind Energy Conference, DEWEK 2015*, Bremen, 19./20. Mai 2015.
- [212] Nayeri, C. N.; Vey, S.; Marten, D.; Pechlivanoglou, G.; Paschereit, C. O.; Huang, X.; Meinke, M.; Schöder, W.; Kampers, G.; Hölling, M.; Peinke, J.; Fischer, A.; Lutz, T.; Krämer, E.; Cordes, U.; Hufnagel, K.; Schiffmann, K.; Spiegelberg, H.; Tropea, C.: Collaborative research on wind turbine load control under realistic turbulent inflow conditions. *12<sup>th</sup> German Wind Energy Conference, DEWEK 2015*, Bremen, 19./20. Mai 2015.
- [213] Lutz, T., Bekiropoulos, D., Illg, J., Würz, W., Dembowski, J., Krämer, E.: RANS Based Prediction of the Airfoil Turbulent Boundary Layer-Trailing Edge Interaction Noise for Mildly Separated Flow Conditions. *12<sup>th</sup> German Wind Energy Conference, DEWEK 2015*, Bremen, 19./20. Mai 2015.
- [214] Bangga, G., Lutz, T., Krämer, E.: Numerical Investigation of Unsteady Aerodynamic effects on thick Flatback Airfoils. *12<sup>th</sup> German Wind Energy Conference, DEWEK 2015*, Bremen, 19./20. Mai 2015.
- [215] Zimmermann, D.-M., Waldmann, A., Lutz, T., Krämer, E.: Development of Flow Structures in the Near-field Wake Region of the Common Research Model. *5<sup>th</sup> CEAS Air & Space Conference*, Delft, September 2015.  
Auch erschienen im *CEAS Aeronautical Journal* und online (2016, s.u.)
- [216] Kowarsch, U., Öhrle, C., Schneider, S., Keßler, M., Krämer, E.: Aeroacoustic Simulation of a Complete EC145T2 Helicopter in Descent Flight. *41<sup>st</sup> European Rotorcraft Forum*, München, 1.-4. September 2015.
- [217] Letzgus, J., Keßler, M., Krämer, E.: CFD-Simulation of Three-Dimensional Dynamic Stall on a Rotor with Cyclic Pitch Control. *41<sup>st</sup> European Rotorcraft Forum* München, 1.-4. September 2015.
- [218] Hoffrogge, C., Kraus, B., Yao, L., Passeck, S., Zimmermann, D.-M., Jost, E., Krämer, E.: Ein mobiler Flachwasserkanal zu Visualisierungszwecken. *Deutscher Luft- und Raumfahrtkongress*, 22.-24. September 2015, Rostock, Germany.
- [219] Bangga, G., Lutz, T., Krämer, E.: An examination of rotational effects on large wind turbine blades. *11<sup>th</sup> EAWE PhD Seminar on Wind Energy in Europe*. Stuttgart, 23.-25. September 2015.
- [220] A. Fischer, T. Lutz, E. Krämer: Numerical investigations of an airfoil in the wake of a slotted cylinder. *11<sup>th</sup> EAWE PhD Seminar on Wind Energy in Europe*. Stuttgart, 23.-25. September 2015.
- [221] E. Jost, T. Lutz, E. Krämer: Steady and unsteady CFD power curve simulation of generic 10 MW turbines. *11<sup>th</sup> EAWE PhD Seminar on Wind Energy in Europe*. Stuttgart, 23.-25. September 2015.

- [222] Klein, L., Lutz, T., Krämer, E.: CFD simulations of a floating horizontal axis model wind turbine. *11<sup>th</sup> EAWE PhD Seminar on Wind Energy in Europe*. Stuttgart, 23.-25. September 2015.
- [223] Lutz, T., Arnold, B., Bekiropoulos, D., Illg, J., Krämer, E., Wolf, A., Hann, R., Kamruzzaman, M.: Prediction of Flow-Induced Noise Sources of Wind Turbines and Application Examples. *Intl. J. of aeroacoustics, Vol. 14, number 5&6*, p. 675-714, 2015.
- [224] Kamruzzaman, M., Bekiropoulos, D., Lutz, T., Würz, W., Krämer, E.: A semi-empirical surface pressure spectrum model for airfoil trailing-edge noise prediction. *Intl. J. of aeroacoustics, Vol. 14, number 5&6*, p. 833-882, 2015.
- [225] Mayer, R., Lutz, T., Krämer, E.: Toward Numerical Optimization of Buffet Alleviating Three-Dimensional Shock Control Bumps. In: *6<sup>th</sup> European Conference for Aeronautics and Space Sciences*, pp. 1–12, Krakow, Poland, 2015.
- [226] Krämer, E.: Status and Future of High-Fidelity Prediction Methods for Rotorcraft Aeromechanics. *10<sup>th</sup> AIRTEC 2015*, Munich, 3-5 November 2015 (invited keynote lecture).
- [227] Jost, E., Lutz, T., Krämer, E.: Numerische Untersuchung einer 10 MW Windenergieanlage mit elastischen Hinterkantenklappen. *Präsentation am STAB Workshop*, Göttingen, 10.-11. November 2015.
- [228] Plogmann, B., Würz, W., Krämer, E.: Transitional Flow in the Wake of a Moderate to Large Height Cylindrical Roughness Element. *Experiments in Fluids, Vol. 56, Issue 12*, 2015.

---

## 2016

- [229] Jost, E., Lutz, T., Krämer, E.: A parametric CFD study of morphing trailing edge flaps on a 10 MW offshore wind turbine, *13<sup>th</sup> EERA DeepWind Conference*, Januar 2016, Trondheim, Norwegen, <http://dx.doi.org/10.1016/j.egypro.2016.09.192>.
- [230] Waldmann, A., Gansel, P., Lutz, T., Krämer, E.: Unsteady Wake of the NASA Common Research Modell in Low-Speed Stall. *J of Aircraft, Vol. 53, No. 4 (2016)*, pp. 1073-1086. DOI: 10.2514/1.C033413.
- [231] Werner, M., Würz, W., Krämer, E.: Experimental Investigations of an Aeroacoustic Feedback Mechanism on a Two-dimensional Side Mirror Model. *Journal of Sound and Vibration, Vol. 387*, pp. pp. 79-95, 2017. DOI:10.1016/j.jsv.2016.10.012.
- [232] Dillmann, A., Heller, G., Krämer, E., Wagner, C., Breitsamter, C. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 124. New Results in Numerical and Experimental Fluid Mechanics X - Contributions to the 19<sup>th</sup> STAB/DGLR Symposium, Munich, Germany, 2014*. Springer-Verlag 2016, ISBN: 978-3-319-27278-8.
- [233] Wawrzinek, K., Lutz, T., Krämer, E.: Numerical studies of turbulent flow influence on a two-element airfoil. In: *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 07/2016; 131: 111-135*.



- [234] C. Schulz, A. Fischer, P. Weihing, T. Lutz, and E. Krämer: Evaluation and Control of Wind Turbines under Different Operation Conditions by means of CFD. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '15*, DOI: 10.1007/978-3-319-24633-8, Springer International Publishing Switzerland 2016, S. 463-478.
- [235] Kranzinger, P., Kowarsch, U., Schuff, M., Keßler, M., and E. Krämer: Advances in Parallelization and High-Fidelity Simulation of Helicopter Phenomena. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '15*, DOI: 10.1007/978-3-319-24633-8, Springer International Publishing Switzerland 2016, S. 479-494.
- [236] Mayer, R., Zimmermann, D.-M., Wawrzinek, K., Lutz, T., and Krämer, E.: Numerical Study of Three-Dimensional Shock Control Bump Flank Effects on Buffet Behavior. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '15*, DOI: 10.1007/978-3-319-24633-8, Springer International Publishing Switzerland 2016, S. 495-510.
- [237] Wurst, M., Keßler, M., and E. Krämer: A High-Order Discontinuous Galerkin CFD Solver for Turbulent Flows. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '15*, DOI: 10.1007/978-3-319-24633-8, Springer International Publishing Switzerland 2016, S. 547 – 564.
- [238] Fischer, A., Lutz, T., Krämer, E., Cordes, U., Hufnagel, K., Tropea, C., Kampers, G., Hölling, M., Peinke, J.: Numerical and experimental investigation of an airfoil with load control in the wake of an active grid. In: *J. Phys.: Conf. Ser., Vol. 753, p. 022036*. IOP Publishing (2016), <http://iopscience.iop.org/article/10.1088/1742-6596/753/2/022036>.
- [239] Jost, E., Fischer, A., Lutz, T., Krämer, E.: An investigation of unsteady 3D effects on trailing edge flaps. In: *J. Phys.: Conf. Ser. 753, Vol. 753, p. 022009*. IOP Publishing (2016), <http://dx.doi.org/10.1088/1742-6596/753/2/022009>.  
Erweitert erschienen in: *Special Issue: The Science of Making Torque from Wind*. Copernicus Publications, 2017.
- [240] Klein, L., Luhmann, B., Rösch, K.-N., Lutz, T., Cheng, P.W., Krämer: CFD simulation of a 2 bladed multi megawatt wind turbine with flexible rotor connection. In: *J. Phys.: Conf. Ser., Vol. 753, p. 022026*. IOP Publishing (2016), <http://iopscience.iop.org/article/10.1088/1742-6596/753/2/022026>.
- [241] Bangga, G., Kim, Y., Lutz, T., Weihing, P., Krämer, E.: Investigations of the inflow turbulence effect on rotational augmentation by means of CFD. In: *J. Phys.: Conf. Ser., Vol. 753, p. 022036*. IOP Publishing (2016), <http://iopscience.iop.org/article/10.1088/1742-6596/753/2/022036>.
- [242] Sayed, M., Lutz, T., Krämer, E., Shayegan, S., Ghantasala, A., Wüchner, R., Bletzinger, K.-U.: High fidelity CFD-CSD aeroelastic analysis of slender bladed horizontal-axis wind turbine. In: *J. Phys.: Conf. Ser., Vol. 753, p. 042009*. IOP Publishing (2016), <http://iopscience.iop.org/article/10.1088/1742-6596/753/2/042009>.
- [243] Schulz, C., Letzgus, P., Lutz, T., Krämer, E.: CFD study on the impact of yawed inflow on loads, power and near wake of a generic wind turbine. *Wind Energy*. Online ISSN: 1099-1824. <http://onlinelibrary.wiley.com/doi/10.1002/we.2004>, 2016.

- [244] Werner, M., Würz, W., Kraemer, E.: Experimental Investigation of the Tonal Self-Noise Emission of a Vehicle Side Mirror. *22<sup>nd</sup> AIAA/CEAS Aeroacoustics Conference, 2016*. AIAA-Paper 2016-2753, DOI: 10.2514/6.2016-2753.
- [245] Waldmann, A., Lutz, T., and Krämer, E.: Wind Tunnel Support System Influence on NASA Common Research Model at Low Speed Conditions, *32<sup>nd</sup> AIAA Aerodynamic Measurement Technology and Ground Testing Conference*, AIAA Aviation 2016, Washington, D.C., 13-17 June 2016, AIAA-Paper 2016-3655. DOI: 10.2514/6.2016-3655.
- [246] <http://arc.aiaa.org/doi/abs/10.2514/6.2016-3655>  
auch erschienen im *Journal of Aircraft* 2018 (s.u.)
- Zimmermann, D.-M., Waldmann, A., Lutz, T., Krämer, E.: Development of Flow Structures in the Near-field Wake Region of the Common Research Model. *CEAS Aeronautical Journal*, 2016, DOI: 10.1007/s13272-016-0222-3.  
Erschienen auch in der Printversion 2018 (s.u.).
- [247] Kowarsch, U., Öhrle, C., Keßler, M., Krämer, E.: Aeroacoustic Simulation of a Complete H145 Helicopter in Descent Flight. *J of the American Helicopter Society, Vol. 61, Number 4, Oct. 2016, AHS International, Fairfax, VA, U.S.*
- [248] Kowarsch, U., Hofmann, T., Keßler, M., and E. Krämer: Adding Hybrid Mesh Capability to a CFD-Solver for Helicopter Flows. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '16*, DOI: 10.1007/978-3-319-47066-5, Springer International Publishing AG Switzerland 2016, S. 461 - 472.
- [249] Fischer, A., Klein, L., Lutz, T., and E. Krämer: Simulations of Unsteady Aerodynamic Effects on Innovative Wind Turbine Concepts. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '16*, DOI: 10.1007/978-3-319-47066-5, Springer International Publishing AG Switzerland 2016, S. 529 - 543.

---

## 2017

- [250] Krämer, E.: High-fidelity Simulation of Rotorcraft Aeromechanics and Aeracoustics. *German-Russian Conference on Supercomputing in Scientific and Industrial Problems*. HLRS Stuttgart, May, 27<sup>th</sup> – 29<sup>th</sup>, 2017, Germany (invited talk).
- [251] Jost, E., Fischer, A., Bangga G., Lutz, T., Krämer, E.: An investigation of unsteady 3D effects on trailing edge flaps. In: *Wind Energy Science, Vol. 2, issue 1. Special Issue: The Science of Making Torque from Wind*. Copernicus Publications, 2017, pp. 241-256.  
doi:10.5194/wes-2-241-2017. <http://www.wind-energ-sci.net/2/241/2017>.
- [252] Krause, M., Gaisbauer, U., Kraemer, E., Kosinov, A.D.: Experimental and numerical investigation of the recovery ratio of a wedge-shaped hot-film probe. *Thermophysics and Aeromechanics, 2017, Vol. 24, No.2*, pp. 187-202, ISSN 0869-8643.
- [253] Werner, M., Würz, W., Krämer, E.: Experimental Investigations of the Tonal Self-Noise Emission of a Vehicle Side Mirror. *AIAA Journal, 2017, Vol. 55*, pp. 1673-1680. DOI:10.2514/1.J055513

- [254] Mayer, R., Lutz, T., Kraemer, E.: A Numerical Study on the Ability of Shock Control Bumps for Buffet Alleviation. *55<sup>th</sup> AIAA Aerospace Sciences Meeting, 2017*, AIAA-Paper 2017-0711. DOI: 10.2514/6.2017-0711.
- [255] Arnold, B., Rautmann, C., Lutz, T., Kraemer, E.: Design of a Boundary-Layer Suction System for Trailing-Edge Noise Reduction of an Industrial Wind Turbine. *35<sup>th</sup> Wind Energy Symposium, 2017*, AIAA-Paper 2017-1380, DOI: 10.2514/6.2017-1380.
- [256] Bangga, G., Lutz, T., Dessoky, A., Krämer, E.: Unsteady Navier-Stokes studies on loads, wake and dynamic stall characteristics of a two-bladed vertical axis wind turbine, *Journal of Renewable and Sustainable Energy* 9(5), 053303, 2017. DOI: 10.1063/1.5003772.
- [257] Bangga G., Lutz T. and Krämer, E.: Root flow characteristics and 3D effects of an isolated wind turbine rotor. *Journal of Mechanical Science and Technology* 31 (8), pp. 3839-3844, 2017. DOI: 10.1007/s12206-017-0728-6.
- [258] Weihing, P., Schulz, C., Lutz, T., Krämer, E.: Comparison of the Actuator Line Model with Fully Resolved Simulations in Complex Environmental Conditions, *Journal of Physics, Conference Series, Volume 854, conference 1*. <http://iopscience.iop.org/article/10.1088/1742-6596/854/1/012049>.
- [259] Bangga, G., Lutz, T., Jost, E., Krämer, E.: CFD studies on rotational augmentation at the inboard sections of a 10 MW wind turbine rotor, *Journal of Renewable and Sustainable Energy* 9 (2), 023304, 2017. DOI: 10.1063/1.4978681.
- [260] Bangga, G., Weihing, P., Lutz, T., Krämer, E.: Effect of computational grid on accurate prediction of a wind turbine rotor using delayed detached-eddy simulations, *Journal of Mechanical Science and Technology* 31 (5), pp. 2359–2364, 2017. DOI:10.1007/s12206-017-0432-6.
- [261] Dillmann, A., Heller, G., Krämer, E., Wagner, C., Bansmer, S., Radespiel, R., Semaan, R. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 136. New Results in Numerical and Experimental Fluid Mechanics XI - Contributions to the 20<sup>th</sup> STAB/DGLR Symposium, Braunschweig, Germany, 2016*. Springer-Verlag 2016, ISBN: 978-3-319-64518-6.
- [262] Waldmann, A., Lutz, T., Krämer, E.: Unsteady Simulation of the Separated Wake of a Transport Aircraft by Detached Eddy Simulation. *20. STAB/DGLR-Symposium*, 8. - 9., Braunschweig, November 2016.
- Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Bansmer, S., Radespiel, R., Semaan, R. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 136. New Results in Numerical and Experimental Fluid Mechanics XI - Contributions to the 20<sup>th</sup> STAB/DGLR Symposium, Braunschweig, Germany, 2016*. Springer-Verlag 2016, ISBN: 978-3-319-64518-6.
- [263] Bangga G., Weihing P., Lutz T., Krämer E.: Hybrid RANS/LES simulations of the three-dimensional flow at root region of a 10 MW wind turbine rotor. *20. STAB/DGLR-Symposium*, Braunschweig, 8. - 9. November 2016.
- Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Bansmer, S., Radespiel, R., Semaan, R. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 136. New Results in Numerical and Experimental Fluid Mechanics XI - Contributions to the 20<sup>th</sup> STAB/DGLR Symposium, Braunschweig, Germany, 2016*. Springer-Verlag 2016, ISBN: 978-3-319-64518-6.

- [264] Fischer, A., Flamm, A., Jost, E., Lutz, T., Krämer, E.: Numerical Investigation of a Model Wind Turbine. *20. STAB/DGLR-Symposium*, Braunschweig, 8. - 9. November 2016.
- Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Bansmer, S., Radespiel, R., Semaan, R. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 136. New Results in Numerical and Experimental Fluid Mechanics XI - Contributions to the 20<sup>th</sup> STAB/DGLR Symposium, Braunschweig, Germany, 2016*. Springer-Verlag 2016, ISBN: 978-3-319-64518-6.
- [265] Jost, E., Firnhaber Beckers, M., Lutz, T., Krämer, E.: CFD Study of Trailing Edge Flaps for Load Control on Wind Turbines. *20. STAB/DGLR-Symposium*, Braunschweig, 8. - 9. November 2016.
- Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Bansmer, S., Radespiel, R., Semaan, R. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 136. New Results in Numerical and Experimental Fluid Mechanics XI - Contributions to the 20<sup>th</sup> STAB/DGLR Symposium, Braunschweig, Germany, 2016*. Springer-Verlag 2016, ISBN: 978-3-319-64518-6.
- [266] Schulz, C., Lutz, T., Krämer, E.: Aerodynamic Response of Wind Turbines in Complex Terrain to Atmospheric Boundary Layer Flows. *20. STAB/DGLR-Symposium*, Braunschweig, 8. - 9. November 2016.
- Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Bansmer, S., Radespiel, R., Semaan, R. (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 136. New Results in Numerical and Experimental Fluid Mechanics XI - Contributions to the 20<sup>th</sup> STAB/DGLR Symposium, Braunschweig, Germany, 2016*. Springer-Verlag 2016, ISBN: 978-3-319-64518-6.
- [267] Schreyer, A., Dussauge, J., Krämer, E.: Characterization of an incipiently separated shock wave/turbulent boundary layer interaction. *Shock Waves, Vol. 27*, pp. 153–168, 2017.  
doi:10.1007/s00193-016-0656-x.
- [268] Schäferlein, U., Keßler, M., Krämer, E.: Aeroelastic Simulation of the Tail Shake Phenomenon. *43<sup>rd</sup> European Rotorcraft Forum* Milano, Italy, 12 - 15 September 2017.
- [269] Letzgus, J., Gardner, A.D., Schwermer, T., Keßler, M., Krämer, E.: Numerical Investigations of Dynamic Stall on a Rotor with Cyclic Pitch Control. *43<sup>rd</sup> European Rotorcraft Forum* Milano, Italy, 12 - 15 September 2017.  
Auch erschienen in (s.u.): *J of the American Helicopter Society*, Vol. 64, (1), 2019, pp. 1-14.  
doi: 10.4050/JAHS.64.012007.
- [270] Kranzinger, P., Keßler, M., Krämer, E.: Examination of the Influence of Empiric Parameters on the Aero-acoustic Results of the Free-Wake Code FIRST. *43<sup>rd</sup> European Rotorcraft Forum* Milano, Italy, 12 - 15 September 2017.
- [271] Dürrwächter, L., Keßler, M., Krämer, E.: A Tool Chain for the Computation of CROR Noise Shielding. *21<sup>st</sup> Workshop of the Aeroacoustics Specialists Committee of the CEAS*, Dublin, 13 - 15 September 2017
- [272] Bartholomay, S., Martínez, M.S., Marten, D., Klein, A., Alber, J., Nayeri, C., Lutz, T., Krämer, E., Paschereit, C.O.: Cross-Talk Compensation for Blade Root Flap- and Edgewise Moments on an Experimental Research Wind Turbine and to Comparison Numerical Results. *ASME 2018, Turbomachinery Technical Conference & Exposition*, Lillestrøm (Oslo), Norway, June 11-15, 2018.

- [273] Letzgus, J., Dürrwächter, L., Schäferlein, U., Keßler, M., and E. Krämer: Optimization and HPC-Applications of the Flow Solver FLOWer. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '17*, DOI: 10.1007/978-3-319-68394-2, Springer International Publishing AG Switzerland 2018, S. 305 - 322.
- [274] Wawrzinek, K., Lutz, T., and E. Krämer: Numerical Simulations of Artificial Disturbance Influence on a High Lift Airfoil. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '17*, DOI: 10.1007/978-3-319-68394-2, Springer International Publishing AG Switzerland 2018, S. 323 - 338.
- [275] Klein, A. (née Fischer), Zabel, S., Lutz, T., and E. Krämer: About the Influence of Wind Tunnel Walls, Tower and Nozzle on the Performance of a Model Wind Turbine. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '17*, DOI: 10.1007/978-3-319-68394-2, Springer International Publishing AG Switzerland 2018, S. 339 - 354.
- [276] Waldmann, A., Lutz, T., and Krämer, E.: Wind Tunnel Support System Influence on NASA Common Research Model at Low Speed Conditions, *J of Aircraft Vol. 55 Number 5*, pp. 1762–1772, September 2018. doi: 10.2514/1.C034440
- [277] Arnold, B., Rautmann, C., Lutz, T., Krämer, E.: Wind Turbine Trailing-Edge Noise Reduction by means of Boundary-Layer Suction. *AIAA Journal*, Feb. 2018.
- [278] Krause, M., Gaisbauer, U., Kraemer, E., Kosinov, A.D.: Implementation of a New Thermal Model and Static Calibration of a Wedge-Shaped Hot-Film Probe in a Constant-Temperature Mode. *International Journal of Heat and Mass Transfer*, Vol. 126, 2018. DOI:10.1016/j.ijheatmasstransfer.2018.05.002.
- [279] Bangsa, G., Guma, G., Lutz, T., Krämer, E.: Numerical Simulation of a Large Offshore Wind Turbine Exposed to Turbulent Inflow Conditions. *Wind Engineering*, Vol. 42, Issue 2, 2018.
- [280] Schäferlein, U., Kessler, M., Krämer, E.: *Aeroelastic Simulation of the Tail Shake Phenomenon*. 74<sup>th</sup> Annual Vertical Flight Society Forum and Technology Display 2018 (FORUM 74), Phoenix, Arizona, USA 14 - 17 May 2018.
- [281] Schäferlein, U., Öhrle, C., Kessler, M., Krämer, E.: *Higher-Order Simulation of a Compound Helicopter Using Adaptive Mesh Refinement*. 74<sup>th</sup> Annual Vertical Flight Society Forum and Technology Display 2018 (FORUM 74), Phoenix, Arizona, USA 14 - 17 May 2018.
- [282] Zimmermann, D.-M., Mayer, R., Lutz, T., Krämer, E.: Impact of Model Parameters of SALSALSA Turbulence Model on Transonic Buffet Prediction. *AIAA Journal*, 56(2):874–877, 2018. doi: 10.2514/1.J056193.
- [283] Zimmermann, D.-M., Waldmann, A., Lutz, T., Krämer, E.: Development of Flow Structures in the Near-field Wake Region of the Common Research Model. *CEAS Aeronautical Journal*, Volume 9 Number 2, 2018

- [284] Bangga, G., Lutz, T., Krämer, E.: Energy assessment of two vertical axis wind turbines in side-by-side arrangement. *Journal of Renewable and Sustainable Energy* 10, 033303, 2018. DOI: 10.1063/1.5028199
- [285] Weihing, P., Letzgus, J., Bangga, G., Lutz, T., Krämer, E.: Hybrid RANS/LES Capabilities of the Flow Solver FLOWer – Application to Flow around Wind Turbines. In: Hoarau, Y., Peng, S.-H., Schwaborn, D., Revell, A. (eds.): *Progress in Hybrid RANS-LES Modelling*. Springer International Publishing, Cham, Switzerland, pp. 369-380, 2018.
- [286] Romblad, J., Ohno, D., Guissart, A., Würz, W., Krämer, E.: Wind Tunnel Experiments on Laminar to Turbulent Transition at Increased Turbulence Levels. *IUTAM Transition Symposium*, London, 2-6 September 2018.
- [287] Romblad, J., Ohno, D., Nemitz, T., Würz, W., Krämer, E.: Laminar to Turbulent Transition due to Unsteady Inflow Conditions: Wind Tunnel Measurements at Increased Turbulent Levels. *Deutscher Luft- und Raumfahrtkongress*, Friedrichshafen, 4. - 6. September 2018.
- [288] Schäferlein U. (né Kowarsch), Keßler, M., Krämer, E.: Aeroelastic Simulation of the Tail Shake Phenomenon. *J of the American Helicopter Society*, Vol. 63, Number 3, July 2018, *AHS International*, Fairfax, VA, U.S.
- [289] Klein, A. C., Bartholomay, S., Marten, D., Lutz, T., Pechlivanoglou, G., Nayeri, C. N., Paschereit, C. O., Krämer, E.: About the suitability of different numerical methods to reproduce model wind turbine measurements in a wind tunnel with high blockage ratio. *Wind Energy Sci.*, Vol. 3, Issue 1, pp. 439-460, 2018. doi: 10.5194/wes-3-439-2018.
- [290] Weihing, P., Wegmann, T., Lutz, T., Krämer, E., Kühn, T., Altmikus, A.: Numerical analyses and optimizations on the flow in the nacelle region of a wind turbine. *Wind Energy Sci.*, Vol. 3, Issue 2, pp. 503-531, 2018. doi: 10.5194/wes-3-503-2018.
- [291] Guma, G., Bangga, G., Jost, E., Lutz, T., Krämer, E.: Consistent 3D CFD and BEM simulations of a research turbine considering rotational augmentation. *The Science of Making Torque from Wind (TORQUE 2018)*, *J. Phys.: Conference Series* 1037 (2018) 022024. IOP Publishing. doi: 10.1088/1742-6596/1037/7/022024.
- [292] Bangga, G., Lutz, T., Krämer, E.: Active separation control on a very thick windturbine airfoil - A URANS and DDES perspective. *The Science of Making Torque from Wind (TORQUE 2018)*, *J. Phys.: Conference Series* 1037 (2018) 022025. IOP Publishing. doi: 10.1088/1742-6596/1037/7/022025.
- [293] Bühler, M., Weihing, P., Klein, L., Lutz, T., Krämer, E.: Line Method Simulations for the Analysis of Wind Turbine Wakes Acting on Helicopters. *The Science of Making Torque from Wind (TORQUE 2018)*, *J. Phys.: Conference Series* 1037 (2018) 062004. IOP Publishing. doi: 10.1088/1742-6596/1037/7/062004.
- [294] Schulz, C., Letzgus, P., Weihing, P., Lutz, T., Krämer, E.: Numerical Simulation of the impact of atmospheric turbulence on a wind turbine in complex terrain. *The Science of Making Torque from Wind (TORQUE 2018)*, *J. Phys.: Conference Series* 1037 (2018) 072016. IOP Publishing. doi: 10.1088/1742-6596/1037/7/072016.

- [295] Letzgus, P., Lutz, T., Krämer, E.: Detached Eddy Simulations of the local Atmospheric Flow Field within a Forested Wind Energy Test Site located in Complex Terrain. *The Science of Making Torque from Wind (TORQUE 2018)*, *J. Phys.: Conference Series 1037 (2018) 072043*. IOP Publishing. doi: 10.1088/1742-6596/1037/7/072043.
- [296] Cormier, M., Caboni, M., Lutz, T., Boorsma, K., Krämer, E.: Numerical analysis of unsteady aerodynamics of floating offshore wind turbines. *The Science of Making Torque from Wind (TORQUE 2018)*, *J. Phys.: Conference Series 1037 (2018) 072048*. IOP Publishing. doi: 10.1088/1742-6596/1037/7/072048.
- [297] Letzgus, J., Weihing, P., Keßler, M., Krämer, E.: Assessment of Delayed Detached-Eddy Simulation of Dynamic Stall on a Rotor. *Proc. 7<sup>th</sup> Symp. On Hybrid RANS-LES Methods*, Berlin, 17. – 19. September 2018.
- [298] Weihing, P., Letzgus, J., Keßler, M., Krämer, E.: Development of Alternative Shielding Functions for Detached-Eddy Simulations. *Proc. 7<sup>th</sup> Symp. On Hybrid RANS-LES Methods*, Berlin, 17. – 19. September 2018.
- [299] Ehrle, A.M., Waldmann, A., Lutz, T., Krämer, E.: An Automated Zonal Detached Eddy Simulation Method for Transonic Buffet. *Proc. 7<sup>th</sup> Symp. On Hybrid RANS-LES Methods*, Berlin, 17. – 19. September 2018. doi: 10.1007/978-3-030-27607-2.
- [300] Thiemeier, J., Öhrle, C., Frey, F., Keßler, M., Krämer, E.: Aerodynamic and Flight Mechanics Analysis of Airbus Helicopter's Compound Helicopter RACER in Hover under Crosswind. *44<sup>th</sup> European Rotorcraft Forum* Delft, The Netherlands, 18-21 September 2018.
- [301] Arnold, B., Lutz, T., Krämer, E.: Design of a Boundary-Layer Suction System for Turbulent Trailing-Edge Noise Reduction of Wind Turbines. *Renewable Energy Journal*, 123:249–262, 2018.
- [302] Mayer, R., Lutz, T., Krämer, E.: Numerical Study on the Ability of Shock Control Bumps for Buffet Control. *AIAA Journal*, 56(5):1978–1987, 2018. doi: 10.2514/1.J056737.
- [303] Waldmann, A., Konrath, R., Lutz, T., Krämer, E.: Unsteady Wake and Tailplane Loads of the Common Research Model in Low Speed Stall. 21. *STAB/DGLR-Symposium*, Darmstadt, 6. - 7. November 2018.  
Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Tropea, C., Jakirlić, S.: (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 142. New Results in Numerical and Experimental Fluid Mechanics XII - Contributions to the 21<sup>st</sup> STAB/DGLR Symposium, Darmstadt, Germany, 2018*. Springer-Verlag 2019, ISBN: 978-3-030-25252-6, doi: 10.1007/978-3-030-25253-3\_2.
- [304] Romblad, J., Ohno, D., Würz, W., Krämer, E.: Laminar to Turbulent Transition at Unsteady Inflow Conditions: Wind Tunnel Measurements at Oscillating Inflow Angle. 21. *STAB/DGLR-Symposium*, Darmstadt, 6. - 7. November 2018.  
Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Tropea, C., Jakirlić, S.: (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 142. New Results in Numerical and Experimental Fluid Mechanics XII - Contributions to the 21<sup>st</sup> STAB/DGLR Symposium, Darmstadt, Germany, 2018*. Springer-Verlag 2019, ISBN: 978-3-030-25252-6, doi: 10.1007/978-3-030-25253-3.



- [305] Schollenberger, M., Lutz, T., Krämer, E.: Boundary Condition Based Actuator Line Model to Simulate the Aerodynamic Interactions at Wingtip Mounted Propellers. 21. *STAB/DGLR-Symposium*, Darmstadt, 6. - 7. November 2018.
- Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Tropea, C., Jakirlić, S.: (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 142. New Results in Numerical and Experimental Fluid Mechanics XII - Contributions to the 21<sup>st</sup> STAB/DGLR Symposium, Darmstadt, Germany, 2018*. Springer-Verlag 2019, ISBN: 978-3-030-25252-6, doi: 10.1007/978-3-030-25253-3\_58.
- [306] Ullah, J., Shay, N., Possti, M., Seifert, A., Lutz, T., Krämer, E.: Capability of RANS Simulations to Reproduce Flat Plate Boundary Layer Interaction with Suction and Oscillatory Blowing. 21. *STAB/DGLR-Symposium*, Darmstadt, 6. - 7. November 2018.
- Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Tropea, C., Jakirlić, S.: (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 142. New Results in Numerical and Experimental Fluid Mechanics XII - Contributions to the 21<sup>st</sup> STAB/DGLR Symposium, Darmstadt, Germany, 2018*. Springer-Verlag 2019, ISBN: 978-3-030-25252-6, doi: 10.1007/978-3-030-25253-3.
- [307] Stanger, C., Keßler, M., Krämer, E.: Design and Construction of a CROR-Model with Aeroacoustic Investigation at Different Flight Conditions. 21. *STAB/DGLR-Symposium*, Darmstadt, 6. - 7. November 2018.
- Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Tropea, C., Jakirlić, S.: (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 142. New Results in Numerical and Experimental Fluid Mechanics XII - Contributions to the 21<sup>st</sup> STAB/DGLR Symposium, Darmstadt, Germany, 2018*. Springer-Verlag 2019, ISBN: 978-3-030-25252-6, doi: 10.1007/978-3-030-25253-3.
- [308] Dessoky, A., Bangga, G., Lutz, T., Krämer, E.: Computational Study Using DDES with Higher Order Scheme Modeling to Predict Darrieus VAWT Noise Mechanisms. 21. *STAB/DGLR-Symposium*, Darmstadt, 6. - 7. November 2018.
- Erschienen in: Dillmann, A., Heller, G., Krämer, E., Wagner, C., Tropea, C., Jakirlić, S.: (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 142. New Results in Numerical and Experimental Fluid Mechanics XII - Contributions to the 21<sup>st</sup> STAB/DGLR Symposium, Darmstadt, Germany, 2018*. Springer-Verlag 2019, ISBN: 978-3-030-25252-6, doi: 10.1007/978-3-030-25253-3.
- [309] Jost, E., Klein, L., Leipprand, H., Lutz, T., Krämer, E.: Extracting the angle of attack on rotor blades from CFD simulations. *Wind Energy Journal*, Vol. 21, Issue 10, October 2018, pp. 807-822. doi: 10.1002/we.2196.
- [310] Dessoky, A., Lutz, T., Zamre, P., Krämer, E.: "Numerical Investigations Of Two Darrieus Turbine Rotors Placed One Behind The Other With Respect To Wind Direction." *Thirteenth International Conference of Fluid Dynamics*, Cairo, EGYPT, December 2018.

---

## 2019

- [311] Dillmann, A., Heller, G., Krämer, E., Wagner, C., Tropea, C., Jakirli, S.: (Hrsg.): *Notes on Numerical Fluid Mechanics and Multidisciplinary Design 142. New Results in Numerical and Experimental Fluid Mechanics XII - Contributions to the 21<sup>st</sup> STAB/DGLR Symposium, Darmstadt, Germany, 2018*. Springer-Verlag 2019, ISBN: 978-3-030-25252-6,

- [312] Frey, F., Herb, J., Letzgus, J., Weihing, P., Keßler, M., and E. Krämer: Enhancement and Application of the Flow Solver FLOWer. In: Nagel, W.E., Kröner, D.H., Resch, M.M. (eds.): *High Performance Computing in Science and Engineering '18*, DOI: 10.1007/978-3-030-13325-2, Springer International Publishing AG Switzerland 2019, S. 323 - 336.
- [313] Letzgus, J., Gardner, A.D., Schwermer, T., Keßler, M., Krämer, E.: Numerical Investigations of Dynamic Stall on a Rotor with Cyclic Pitch Control. *J of the American Helicopter Society, Vol. 64, Number 1, Jan. 2019, AHS International, Fairfax, VA, U.S.*  
doi: 10.4050/JAHS.64.012007
- [314] Öhrle, C., Frey, F., Thiemeier, J., Keßler, M., Krämer, E.: Coupled and Trimmed Aerodynamic and Aeroacoustic Simulations for Airbus Helicopters' Compound Helicopter RACER. *J of the American Helicopter Society, Vol. 64, Number 3, July 2019, AHS International, Fairfax, VA, U.S.* doi: 10.4050/JAHS.64.032003
- [315] Dürrwächter, L., Keßler, M., Krämer, E.: Numerical Assessment of Open-Rotor Noise Shielding with a Coupled Approach. *AIAA Journal* 57(5), 2019.
- [316] Thiemeier, J., Öhrle, C., Frey, F., Keßler, M., Krämer, E.: Aerodynamics and flight mechanics analysis of Airbus Helicopter's compound helicopter RACER in hover under crosswind conditions. *CEAS Aeronautical Journal*, online April 2019. doi: 10.1007/s13272-019-00392-3.  
Als Print Version erschienen in: *CEAS Aeronautical Journal* (2020) Vol. 11, pp. 49-66.
- [317] Hornung, C., Lutz, T., Krämer, E.: Development of Design Guidelines for Low Noise but High Yield Wind Turbines. *Proc. 8th Int. Conf. on Wind Turbine Noise*, Lisbon, 2019.
- [318] Hornung, C., Scheit, N., Noffke, A., Altmikus, A., Lutz, T., Krämer, E.: Inflow Noise: Prediction and Analysis of the Relevance for a Multi-Megawatt Turbine. *DAGA*, Rotterdam, 2019.
- [319] Mayer, R., Lutz, T., Krämer, E., Dandois, J.: Control of Transonic Buffet by Shock Control Bumps on a Wing-Body Configuration. *Journal of Aircraft*, Vol. 56, Number 2, March 2019. doi: 10.2514/1.C034969
- [320] Öhrle, C., Frey, F., Thiemeier, J., Keßler, M., Krämer, E., Embacher, M., Cranga, P., Eglin, P.: Compound Helicopter X3 in High-Speed Flight: Correlation of Simulation and Flight Test. *Vertical Flight Society 75<sup>th</sup> Annual Forum and Technology Display*. Philadelphia, USA, May 13-16, 2019.
- [321] Frey, F., Thiemeier, J., Öhrle, C., Keßler, M., Krämer, E.: Aerodynamic Interactions on Airbus Helicopters' Compound Helicopter RACER in Cruise Flight. *Vertical Flight Society 75<sup>th</sup> Annual Forum and Technology Display*. Philadelphia, USA, May 13-16, 2019.
- [322] Letzgus, J., Keßler, M., Krämer, E.: Simulation of Dynamic Stall on an Elastic Rotor in High-Speed Turn Flight. *Vertical Flight Society 75<sup>th</sup> Annual Forum and Technology Display*. Philadelphia, USA, May 13-16, 2019.
- [323] Sayed, M., Lutz, T., Krämer, E., Shayegan, S., Wüchner, R.: Aeroelastic analysis of 10 MW wind turbine using CFD–CSD explicit FSI-coupling approach. *Journal of Fluids and Structures, Volume 87*,

- [324] Dessoky, A., Bangga, G., Lutz, T., Krämer, E.: "Aerodynamic and aeroacoustic performance assessment of H-rotor darrieus VAWT equipped with wind-lens technology." *Energy* 175 (2019), pp. 76-97. doi: 10.1016/j.energy.2019.03.066.
- [325] Ullah, J., Prachar, A., Smid, M., Seifert, A., Soudakov, V., Lutz, T., Krämer, E.: Reynolds Number and Wind Tunnel Effects on the Flow Field Around a Generic UHBR Engine High-Lift Configuration. *Proc. 54<sup>th</sup> 3AF International Conf. on Applied Aerodynamics*, Paris, 2019.
- [326] Ehrle, A.M., Waldmann, A., Lutz, T., Krämer, E.: Simulation of Transonic Buffet at the Common Research Model with an Automated Zonal Detached Eddy Simulation Approach. *Proc. 54<sup>th</sup> 3AF International Conf. on Applied Aerodynamics*, Paris, 2019.
- [327] Ehrle, A.M., Waldmann, A., Lutz, T., Krämer, E.: Flow Separation and Wake of the Common Research Model at Low Mach Numbers. *Proc. AVT-307 Research Symposium*, Trondheim, 2019.
- [328] Waldmann, A., Lutz, T., Krämer, E.: Separated Wake Flow and Tail Loads of the Common Research Model in Low Speed Stall Conditions. *AIAA Scitech 2019 Forum*, 7-11 January 2019, San Diego, California. doi: 10.2514/6.2019-2315
- [329] Bangga, G., Dessoky, A., Lutz, T., Krämer, E.: Improved double-multiple-streamtube approach for H-Darrieus vertical axis wind turbine computations. *Energy*, Vol. 182, 1 September 2019, Pages 673-688. doi: 10.1016/j.energy.2019.06.083
- [330] Dessoky, A., Lutz, T., Bangga, G., Krämer, E.: "Computational studies on Darrieus VAWT noise mechanisms employing a high order DDES model." *Renewable Energy*, Elsevier, Vol. 143 (2019), pp. 404-425. doi.org/10.1016/j.renene.2019.04.133
- [331] Hornung, C., Lutz, T., Krämer, E.: A Model to Include Turbulence-Turbulence Interaction in the Prediction of Trailing Edge Far Field Noise for High Angles of Attack or Slightly Separated Flow. *Renewable Energy*, Elsevier, Vol. 136 (2019), pp. 945-954. doi: 10.1016/j.renene.2018.12.093