

Curriculum Vitae

Michael Woopen

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Date and Place of Birth 30.10.1986, Memmingen
Nationality German



Education

Since 11/2012 **Doctoral candidate at the Aachen Institute for Advanced Study in Computational Engineering Science**
RWTH Aachen University
Research area: Adaptive high-order numerical methods for conservation laws

09/2014–11/2014 **Visiting student at the Department of Aerospace Engineering**
University of Michigan

04/2011–10/2012 **Master of Science in Computational Engineering Science**
RWTH Aachen University
Major field of study: mathematics
Average grade: 1.3

10/2007–03/2011 **Bachelor of Science in Computational Engineering Science**
RWTH Aachen University
Major field of study: fluid dynamics
Average grade: 2.1

08/1997–06/2006 **Abitur**
Bodelschwingh Gymnasium Herchen
Advanced courses in mathematics and english
Average grade: 2.1

Professional Career

05/2011–10/2012 **Aachen Institute for Advanced Study in Computational Engineering Science**
RWTH Aachen University
Student research assistant
High-order numerical methods for conservation laws

01/2011–03/2011 **Institute of Propulsion Technology, Turbine Technology**
German Aerospace Center
Bachelor student
Reduction of film coolant in high pressure turbines

10/2010–12/2010 **Institute of Propulsion Technology, Turbine Technology**
German Aerospace Center
Intern
Film cooling in high pressure turbines

01/2010–09/2010 **Chair for Computational Analysis of Technical Systems**
RWTH Aachen University
Student research assistant
Shape optimization in computational fluid dynamics

03/2009–12/2009 **Institute of Road and Traffic Engineering Aachen**
RWTH Aachen University
Student research assistant
Software developer

09/2007–02/2009	Mise en Place Germany GmbH Project manager Organisation and coordination of events in the sophisticated gastronomy
04/2007–09/2007	Montaplast GmbH Assembling and packing of plastic components for the automotive industry
07/2006–03/2007	Diakonie Community service Coordination and execution of a food service for elderly people

Computer Literacy

Operating Systems	Mac OS X, various Linux distributions, Windows
Office	iWork, Latex, Microsoft Office, OpenOffice
Programming Languages	C, C++, C#, Delphi, Fortran 77/90 and PHP
Preprocessing	Centaur, G3D Mesh, GMC, Pointwise
Simulation	TRACE
Postprocessing	Paraview, Tecplot

Foreign Languages

English	Business fluent
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Other Activities

11/2005–10/2009	Member of the parish council St. Joseph Rosbach
08/2005–10/2007	Member of the managing board of the catholic youth club OffRoad of the parish St. Joseph Rosbach
Sports	Swimming, bicycling, running

Publications

Journal Papers

M. Wopen, A. Balan, G. May, and J. Schütz:

A Comparison of Hybridized and Standard DG Methods for Target-Based hp-Adaptive Simulation of Compressible Flow
Computers & Fluids 98:3–16, 2014

M. Wopen, G. May, and J. Schütz:

Adjoint-Based Error Estimation and Mesh Adaptation for Hybridized Discontinuous Galerkin Methods
International Journal for Numerical Methods in Fluids, 2014

Conference Proceedings

A. Jaust, J. Schütz, and M. Wopen:

A Hybridized Discontinuous Galerkin Method for Unsteady Flows with Shock-Capturing
AIAA Paper 2014-2781, American Institute of Aeronautics and Astronautics, 2014

M. Wopen, T. Ludescher, and G. May:

A Hybridized Discontinuous Galerkin Method for Turbulent Compressible Flow
AIAA Paper 2014-2783, American Institute of Aeronautics and Astronautics, 2014

M. Wopen, A. Balan, and G. May:

A Hybridized Discontinuous Galerkin Method for Three-Dimensional Compressible Flow Problems
AIAA Paper 2014-0938, American Institute of Aeronautics and Astronautics, 2014

A. Balan, M. Woopen, and G. May:

Adjoint-Based Hp-Adaptation for a Class of High-Order Hybridized Finite Element Schemes for Compressible Flows

AIAA Paper 2013-2938, American Institute of Aeronautics and Astronautics, 2013

J. Schütz, M. Woopen, and G. May:

A Combined Hybridized Discontinuous Galerkin / Hybrid Mixed Method for Viscous Conservation Laws

in F. Ancona, A. Bressan, P. Marcati, and A. Marson (Editors), Hyperbolic Problems: Theory, Numerics, Applications, pp. 915-922, American Institute of Mathematical Sciences, 2012

M. Woopen, A. Dannhauer and P.-A. Gieß:

Reducing the Demand of Coolant at the Sidewall of a High Pressure Turbine Cascade by Means of Slot Width Modulation

ASME Paper GT2012-68325, American Society of Mechanical Engineers, 2012

J. Schütz, M. Woopen and G. May:

A Hybridized DG/Mixed Scheme for Nonlinear Advection-Diffusion Systems, Including the Compressible Navier-Stokes Equations

AIAA Paper 2012-0729, American Institute of Aeronautics and Astronautics, 2012