Adrian Montgomery Ruf

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Education/Employment

since 2016 **PhD Mathematics**, *University of Oslo*, Norway.
Marie Skłodowska–Curie research position in the ModCompShock network
Supervisor: Prof. Nils Henrik Risebro

2016 **MSc Mathematics**, *TU Berlin*, Germany.
Thesis: *A class of nonlinear evolution equations of second order*
Supervisor: Prof. Etienne Emmrich

2013 **BSc Mathematik**, *TU Berlin*, Germany.
Thesis: *Operations for nonnegative forms with an application to contents*
Supervisor: Prof. Karl-Heinz Förster

List of Publications

Journal articles

[1] A. M. Ruf. Convergence of a full discretization for a second-order nonlinear elasto-dynamic equation in isotropic and anisotropic Orlicz spaces. *Zeitschrift für angewandte Mathematik und Physik*, 68(5):118, Sept. 2017. ISSN: 1420-9039. DOI: 10.1007/s00033-017-0863-z.

[2] J. Ridder and A. M. Ruf. A convergent finite difference scheme for the Ostrovsky–Hunter equation with Dirichlet boundary conditions. *BIT Numerical Mathematics*, Mar. 2019. ISSN: 1572-9125. DOI: 10.1007/s10543-019-00746-7.

Preprints

[3] A. M. Ruf, E. Sande, and S. Solem. The optimal convergence rate of monotone schemes for conservation laws in the Wasserstein distance. Submitted for publication, 2018. URL: https://arxiv.org/abs/1808.04661.

[4] N. H. Risebro and A. M. Ruf. Numerical investigations into a model of partially incompressible two-phase flow in pipes. In preparation, 2019. URL: https://arxiv.org/abs/1906.00710.

Research visits

2019 **(scheduled) Polytechnic University of Bari**, with Prof. Giuseppe Coclite, (1 week).

2018 **ETH Zürich**, with Prof. Siddhartha Mishra, (3 months).

Scholarships

2019 **Scholarship for NUMHYP2019**, *University of Málaga*, Spain.
Numerical Methods for Hyperbolic Problems

2018 **Scholarship for an academic secondment**, *ETH Zürich*, Switzerland.

2018 **Scholarship for HYP2018**, *Penn State University*, USA.
XVII International Conference on Hyperbolic Problems: Theory, Numerics, Applications

Invited talks

○ **Seminar for Applied Mathematics** ETH Zürich, Switzerland, 21st of May 2019

Contributed talks

○ **NumHYP2019**, University of Malaga, Spain, 21st of June 2019
○ **BIT Circus**, Aalto University, Finland, 22th of September 2018
○ **Hyp2018 XVII International Conference on Hyperbolic Problems: Theory, Numerics, Applications**, Penn State University, USA, 28th of June 2018

Academic experience

2019 **Teaching assistant**, *Simula Research Laboratory*, Norway.
Taught the course 'Communicating Scientific Research' for PhD students

2018 **Supervision of Bachelor students**, *University of Oslo*, Norway.

2010–2016 **Teaching assistant**, *TU Berlin*, Germany.
Taught courses in
○ Functional analysis
○ Calculus
○ Calculus for engineers

2015–2016 **Student assistant**, *Matheon Research Center*, Berlin, Germany.
○ Organization of the Matheon advent calendar for students
○ Coordination and revision of the calendar puzzles and solutions
○ Donor acquisition

2015 **Coordinating assistant**, *TUBS*, Berlin, Germany.
Coordinated the 79th annual meeting of the DPG.

2011–2012 **Student assistant**, *Unitus project*, TU Berlin, Germany.
Created and improved activity oriented learning materials used in mathematical courses for engineers, e.g.
○ supporting teaching material
○ online platform Mumie
○ guidelines for teaching assistants
○ exam difficulty analyses

2009–2011 **Freelancer**, *Uniseminar Education AG*, Zürich, Switzerland.
Created various mathematical teaching materials for the courses
○ Mathematics I & II
○ Mathematical economics

Languages

German	Mother tongue
English	Proficient
Finnish	Basic knowledge
Norwegian	Basic knowledge