Julian Streitberger — Curriculum Vitae (state: December 4, 2023)

Contact Information

University Assistant (PreDoc)
TU Wien
Institute of Analysis and Scientific Computing
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Personal information

Date of birth: 03.11.1995
Place of birth: Salzburg, Austria

Education

TU Wien, Austria
doctoral studies, Institute of Analysis and Scientific Computing, degree Dr. techn. expected in 2025
Advisor: Professor Dirk Praetorius
Tentative thesis title: Iterative solvers for cost-optimal adaptive FEM

Member of the Vienna School of Mathematics (VSM), Mentor: Professor Ansgar Jüngel

Humboldt-Universität zu Berlin, Germany
MSc., Department of Mathematics, October 2019–December 2021
Advisor: Professor Carsten Carstensen
Thesis title: Discrete stability of dGFEM for biharmonic plates

Paris-Lodron-Universität Salzburg, Austria
BSc., Department of Mathematics, October 2016–September 2019
Advisor: Professor Andreas Schröder
Thesis title: Lowest-order mixed FEM for the Poisson problem

Paris-Lodron-Universität Salzburg, Austria
BEd. Univ., Mathematics and History / Political Education, October 2015–November 2018
Advisor: Professor Clemens Fuchs
Thesis title: A diophantine equation for sums of consecutive like powers

Advisor: Univ.-Doz. Matthias Marschik
Thesis title: Schuschnigg und die Dollfuß-Straße, Eine Analyse des Personenkults im Austrofaschismus in den Jahren 1934–1938

Research Interests

adaptive finite element methods, contractive iterative solvers, optimal computational complexity, nonsymmetric elliptic PDEs

Publications

[5] P. Bringmann, M. Brunner, D. Praetorius, **J. Streitberger**: *Optimal complexity of goal-oriented adaptive FEM for nonsymmetric linear elliptic PDEs*, submitted (2023)
Preprint: arXiv:2312.00489

[4] P. Bringmann, M. Feischl, A. Miraçi, D. Praetorius, **J. Streitberger**: *On full linear convergence and optimal complexity of adaptive FEM with inexact solver*, submitted (2023)
Preprint: arXiv:2311.15738

[3] M. Brunner, P. Heid, M. Innerberger, A. Miraçi, D. Praetorius, **J. Streitberger**: *Adaptive FEM with quasi-optimal overall cost for nonsymmetric linear elliptic PDEs*, IMA Journal of Numerical Analysis (2023)
DOI: 10.1093/imanum/drad039 Preprint: arXiv:2212.00353

[2] M. Innerberger, A. Miraçi, D. Praetorius, **J. Streitberger**: *hp-robust multigrid solver on locally refined meshes for FEM discretizations of symmetric elliptic PDEs*, submitted (2022)
arXiv:2210.10415

[1] P. Bringmann, C. Carstensen, **J. Streitberger**, *Local parameter selection in the C^0 interior penalty method for the biharmonic equation*, Journal of Numerical Mathematics (2023)
DOI: 10.1515/jnma-2023-0028 arXiv:2209.05221

Conferences, Workshops and Talks

Talks

Cost-optimal goal-oriented adaptive FEM for linear elliptic PDEs, ENUMATH, Lisbon, September 4, 2023
Adaptive FEM for linear elliptic PDEs: optimal complexity, 17th Austrian Numerical Analysis Day, Wien, April 27, 2023
Adaptive FEM for linear elliptic PDEs: optimal complexity, PDE afternoon of the SFB F65, Wien, March 22, 2023

Contributed posters

Optimal cost of AFEM for linear elliptic PDEs. 2nd SFB International Workshop 2023 "Taming Complexity in Partial Differential Systems", Wien, April 19, Austria

Organized Workshops and Conferences

13th International Symposium on Hysteresis Modeling and Micromagnetics, TU Wien, June 4–7 2023, Austria
GAMM Seminar on Microstructures, TU Wien, January 26–28 2022, Austria
Computational Methods in Applied Mathematics, TU Wien, August 30–September 02 2022, Austria

Workshops and Conferences Attended

Workshop on Adaptive Methods and Novel Discretization Techniques in Continuum Mechanics, PLUS Salzburg, July 13–15 2022, Austria
Reliable Methods of Mathematical Modeling, EPFL Lausanne, June 21–23 2022, Switzerland
GATIPOR workshop, Inria Paris, June 8–10 2022, France
Austrian Numerical Analysis Day, JKU Linz, May 4–6 2022, Austria

Honors and Awards

Travel grant for early stage researchers for the *European Conference on Numerical Mathematics and Advanced Applications* in Lisbon, TU Wien, June 2023

Early student award of the Austrian Mathematical Society, Strobl, September 2018

Extra-curricular activities

Jury member for the Dr. Ing. Hans Riegel Fachpreise Selection, Paris-Lodron-Universität Salzburg, 2018-2019

Teaching Experience

TU Wien

Scientific programming in interdisciplinary mathematics (summer term 2022 and 2023, 4VU)
Numerical mathematics (winter term 2022/23, 2UE)
Fixed-point theorems (summer 2022, 2SE)

Paris-Lodron-Universität Salzburg

Mathematics I and II for physics (winter 2018/19 + summer 2019)

Analysis I (winter term 2018)

Language Skills	Native in German
	Fluent in English
	Basic level in Spanish