

Antonín Češík

Curriculum Vitae

Email: cesik@karlin.mff.cuni.cz
Web: <http://karlin.mff.cuni.cz/~cesik>
ORCID: 0000-0003-0207-6044
arXiv: http://arxiv.org/a/cesik_a_1

EDUCATION

- Charles University, Faculty of Mathematics and Physics, Prague** 2020 – present
PhD studies in Mathematical Analysis
Topic: *Variational strategies in material sciences: Analysis & Numerics*
Supervisor: Sebastian Schwarzacher
- Charles University, Faculty of Mathematics and Physics, Prague** 2017 – 2019
Master's degree in Mathematical Analysis
Thesis: *Convex hull properties for parabolic systems of partial differential equations*
Supervisor: Sebastian Schwarzacher
- University of Oulu, Finland** 2016
Erasmus exchange student
- Charles University, Faculty of Mathematics and Physics, Prague** 2014 – 2017
Bachelor's degree in General Mathematics, passed with honors
Thesis: *Topological entropy*
Supervisor: Benjamin Vejnar

ACADEMIC EXPERIENCE

- ERC-CZ Grant LL2105 CONTACT**, <http://fsi.karlin.mff.cuni.cz/> 2022 – present
Member of the research team (principal investigator Sebastian Schwarzacher)
- GAUK (Charles University Grant Agency) project no. 393421** 2021 – 2023
Approximability and uniqueness questions for fluid–solid interactions in full dimension
Principal investigator
- Project GAČR 23-04766S** 2023 – present
Variational approaches to dynamical problems in continuum mechanics
Member of the research team (principal investigator Martin Kružík)
- UNCE SCI/023** 2023
University center for mathematical modelling, applied analysis and computational mathematics
Scholarship recipient
- Projects PRIMUS/19/SCI/01 (PRIMUS) and GJ19-11707Y (GAČR)** 2020 – 2021
Member of the research team (principal investigator Sebastian Schwarzacher)

PUBLICATIONS AND PREPRINTS

Preprints available on arXiv: http://arxiv.org/a/cesik_a_1

- [1] Antonín Češík, Giovanni Gravina, and Malte Kampschulte. Inertial evolution of non-linear viscoelastic solids in the face of (self-)collision. *Calculus of Variations and Partial Differential Equations*, 63(2):55, February 2024.
- [2] Antonín Češík and Sebastian Schwarzacher. Stability and convergence of in time approximations of hyperbolic elastodynamics via stepwise minimization, June 2023.
- [3] Antonín Češík. Convex hull property for elliptic and parabolic systems of PDE, November 2023.
- [4] Antonín Češík, Giovanni Gravina, and Malte Kampschulte. Inertial (self-)collisions of viscoelastic solids with Lipschitz boundaries, December 2023.

SELECTED RESEARCH PRESENTATIONS

GeoCa 23 workshop on Geometric Analysis and Calculus of Variations, Lysečiny	2023
Invited talk: <i>Inertial (Self-)Collisions of Viscoelastic Solids with Lipschitz Boundaries</i>	
Marvellous Event on Geometric Analysis, Bedlewo	2023
Contributed poster: <i>Dynamics and (self-)collisions of inertial solids with Lipschitz boundaries</i>	
The PDEs and Applications seminar, Uppsala University	2023
Seminar talk: <i>Inertial evolution of non-linear viscoelastic solids in the face of (self-)collision</i>	
Nečas PDE seminar, Mathematical Institute of the Czech Academy of Sciences	2023
Seminar talk: <i>Inertial evolution of non-linear viscoelastic solids in the face of (self-)collision</i>	
ApplMath22, Brijuni, Croatia	2022
Contributed poster: <i>Hard collisions of elastic bodies</i>	
Workshop “Analysis of Fluid and Elastic Bodies Interactions”, Regensburg	2022
Contributed talk: <i>Energy estimates in a variational approach to hyperbolic evolutions</i>	
Nonlinear Elliptic and Parabolic Partial Differential Equations at Levico Terme	2021
Invited talk: <i>Convex hull properties for parabolic systems of partial differential equations</i>	
PDE of Mathematical Physics and Applications, Lake Como School	2021
Contributed poster: <i>Energy estimates in a variational approach to hyperbolic evolutions</i>	
Brijuni Applied Mathematics Workshop 2021, Croatia	2021
Contributed talk: <i>Energy estimates in a variational approach to hyperbolic evolutions</i>	

TEACHING EXPERIENCE

Charles University, Faculty of Mathematics and Physics, Prague	
Opponent of a Bachelor thesis (<i>Steady fluids in exterior domains</i>)	2021
Teaching Assistant:	
– <i>Partial differential equations 1</i> (grading homeworks, exercises)	2021 – 2022
– <i>Mathematical analysis 1, 2, 3, 4</i> exercise classes (6 semesters total)	2017 – 2021
Official student tutor at Department of Mathematical Analysis	2018 – 2023