

Anna Logioti

Curriculum Vitae

Institut für Analysis, Dynamik und
Modellierung - IADM
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Personal Information

Nationality **Greek**
Born **17/11/1993**

Research Interests

- **Applied Mathematics**
- **Analysis of Partial Differential Equations**
Reaction-Diffusion Systems
Bifurcations
- **Well-Posedness, Qualitative Behaviour of Solutions**
- **Free Boundary problems**
Obstacle-type Problems
- **Mathematical Biology**
Cell polarization
Pattern formation

Employment

- 11/2022- present **Universität Stuttgart**, Stuttgart, Germany
- **Postdoctoral researcher**, with Prof. Dr. Guido Schneider
- 10/2018- 09/2022 **Rheinische Friedrich-Wilhelms-Universität**, Bonn, Germany
- **Research assistant**, with Prof. Dr. Barbara Niethammer

Education

- 10/2018- 09/2022 **Ph.D. in Mathematics**, Grade: "magna cum laude", Rheinische Friedrich-Wilhelms-Universität, Bonn, Germany
- **Ph.D. Thesis:** "*A non-local free boundary problem arising in a model of cell polarization,*" under supervision of **Prof. Dr. Barbara Niethammer**
- 10/2015- 08/2018 **M.Sc. in Mathematics**, Grade: "excellent", National and Kapodistrian University of Athens, Athens, Greece
- **M.Sc. Thesis:** "*One and Two Dimensional Connecting Orbits for Phase Transition Systems,*" under supervision of **Prof. Dr. Nicholas D. Alikakos**
- 10/2011- 06/2015 **B.Sc. in Mathematics**, Grade: "very good", National and Kapodistrian University of Athens, Athens, Greece
- **Specialization:** "*Pure Mathematics*"

Certificates

- 02/2022-05/2022 **Data Science with Python**, National and Kapodistrian University of Athens, e-learning
- NumPy, Pandas, Matplotlib
 - Machine Learning & Deep learning (Scikit Learn, TensorFlow, Keras)

Honors & Awards

- Hausdorff Doctoral Scholarship, Bonn International Graduate School, 2018-2022.
- Scholarship for extraordinary nationwide university entrance examination score and admission in the Mathematics Department of university of Athens, National Post Agency of Greece, 2011.
- Nationwide University Entrance Examination Score, Grade: 18.500/20.000, (*top 2% nationwide*).

Peer-reviewed Publications

- With Barbara Niethammer, Matthias Röger and Juan J.L. Velázquez. "A parabolic free boundary problem arising in a model of cell polarization." *SIAM J. Math. Anal.* (2021) Vol. 53.
- With Barbara Niethammer, Matthias Röger and Juan J.L. Velázquez. "Qualitative properties of solutions to a mass-conserving free boundary problem modeling cell polarization." *Commun. Partial. Differ. Equ.* (2023) Vol. 48.

Preprints

- With Barbara Niethammer, Matthias Röger and Juan J.L. Velázquez. "Interface behavior for the solutions of a mass conserving free boundary problem modeling cell polarization" <https://arxiv.org/abs/2402.03034>
- With Nicole Gauss, Guido Schneider, and Dominik Zimmermann. "Global existence for long wave Hopf unstable spatially extended systems with a conservation law." <http://arxiv.org/abs/2401.12660>

Thesis

- "On a non-local free boundary problem modeling cell polarization." *PhD Thesis, Rheinische Friedrich-Wilhelms-Universität Bonn (2022)*.

Contributed Talks

- 04/2023 **Mathematical Life Sciences**, Conference, Bonn, Germany
- **Mathematical Biology**
- 07/2022 **CEDYA / CMA 2022**, *Minisymposium, Zaragoza (online)*
- **PDE Models in Biology**
- 07/2022 **Second Congress of Greek Mathematicians SCGM-2022**, Conference, Athens, Greece

- **Differential Equations**
- 09/2021 **FBP2021**, Minisymposium, Berlin (online)
- **Free boundary problems in cell biology**
- 09/2021 **ICMS**, Workshop, Edinburgh (online)
- **Modelling Diffusive Systems: Theory & Biological Applications**
- 06/2021 **CEDYA / CMA 2020**, Minisymposium, Gijón (online)
- **Nonlinear PDEs and its applications in Natural Sciences**
- 02/2021 **Women in Applied Mathematics**, Workshop, Crete (online)

Schools, Conferences and Workshops attended

- 04/2021 **Hausdorff School**, on "*Diffusive Systems: Pattern Formation, Bifurcations, and Biological Applications*", Bonn, Germany (online)
- 09/2019 **CIME School**, on "*Geometric Measure Theory and Applications: From Geometric Analysis to Free Boundary Problems*", Cetraro, Italy
- 02/2019 **Workshop**, "*Geometric Measure Theory and Free Boundary Problems*", Bonn, Germany
- 06/2018 **Conference**, "*First Congress of Greek Mathematicians FCGM-2018*", Athens, Greece

Teaching Experience

- Summer 2024 **Teaching Assistant**, Universität Stuttgart (Prof. Dr. Andreas Kollross)
 - **Lecture:** "*Lineare Algebra und Analytische Geometrie 2*"
- Winter 2023/2024 **Teaching Assistant**, Universität Stuttgart (Prof. Dr. Andreas Kollross)
 - **Lecture:** "*Lineare Algebra und Analytische Geometrie 1*"
- Summer 2023 **Teaching Assistant**, Universität Stuttgart (Prof. Dr. Ingo Steinwart)
 - **Lecture:** "*Höhere Mathematik 2 für el, mecha, phys, tkyb*"
- Winter 2022/2023 **Teaching Assistant**, Universität Stuttgart (Prof. Dr. Ingo Steinwart)
 - **Lecture:** "*Höhere Mathematik 1 für el, mecha, phys, tkyb*"
- Summer 2020 **Teaching Assistant**, University of Bonn (Prof. Dr. Juan J. L. Velázquez)
 - **Seminar:** "*Ordinary Differential Equations and Dynamical Systems*"
- 10/2013-06/2018 **Private Tutor**, Athens, Greece

Programming Skills

- **Python, Matlab**

Languages

- **Greek:** Native
- **English:** Fluent

- **German:** Intermediate

Scientific Referees

- **Prof. Dr. Barbara Niethammer,**
University of Bonn, Institute for Applied Mathematics,
niethammer@iam.uni-bonn.de.
- **Prof. Dr. Juan J. L. Velázquez,**
University of Bonn, Institute for Applied Mathematics,
velazquez@iam.uni-bonn.de.
- **Prof. Dr. Guido Schneider,**
University of Stuttgart, Institut für Analysis, Dynamik und Modellierung ,
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