

Contact Information

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Born on April 28, 1989. Italian citizenship.

Scientific Positions

Feb 2018–present: **Vienna University of Technology (Austria)**
Postdoctoral Researcher

Employment

Mar 2017–present: **Vienna University of Technology (Austria)**
Scientific Manager of the Doctoral School (DK) “*Dissipation and Dispersion in Nonlinear PDEs*” (funded by FWF)

Education

2014–2018: **Vienna University of Technology (Austria)**
Ph.D in Mathematics (with Distinction), Viva date: 24 January 2018
“*Geometric analysis of multi-scale solutions in regularized models of microstructures and touchdown phenomena in MEMS*”
Advisor: Peter Szmolyan

2011–2013: **University of Naples Federico II (Italy)**
Master Degree in Mathematics (110/110 cum Laude)
“*Mathematical Models for Vegetation Pattern Formation*”
Advisors: Addolorata Marasco and Francesco Giannino

2007–2011: **University of Naples Federico II (Italy)**
Bachelor Degree in Mathematics (110/110 cum Laude)
“*On nonparametric inference statistical methods: The Wilcoxon Test*”
Advisor: Maria Longobardi

Academic Honours and Awards

2019: **Christiana Hörbiger Award**, travel grant (5.K€)

2018: **Christiana Hörbiger Award**, travel grant (1.1K€)

Publications

- [1] A. Iuorio, N. Popović, and P. Szmolyan. *Singular perturbation analysis of a regularized MEMS model*. SIAM J. Appl. Dyn. Syst. (SIADS), 18(2):661–708, 2019, <https://doi.org/10.1137/18M1197552>.
- [2] A. Iuorio and S. Melchionna. *Long-time behavior of a nonlocal Cahn-Hilliard equation with reaction*. Discrete Contin. Dyn. Syst., 38(8):3765–3788, 2018, <https://doi.org/10.3934/dcds.2018163>.
- [3] A. Iuorio, C. Kuehn, and P. Szmolyan. *Geometry and numerical continuation of multiscale orbits in a nonconvex variational problem*. Discrete Contin. Dyn. Syst. Ser. S, <https://doi.org/10.3934/dcdss.2020073>.
- [4] A. Marasco, A. Iuorio, F. Cartenì, G. Bonanomi, D.M. Tartakovsky, S. Mazzoleni, and F. Giannino. *Vegetation pattern formation due to interactions between water availability and toxicity in plant-soil feedback*. Bull. Math. Biol., 76(11):2866–2883, 2014, <https://doi.org/10.1007/s11538-014-0036-6>.

- [5] A. Marasco, A. Iuorio, F. Carteni, G. Bonanomi, F. Giannino, and S. Mazzoleni. *Water limitation and negative plant-soil feedback explain vegetation patterns along rainfall gradient*. *Procedia Environ. Sci.*, 19: 139–147, 2013, <https://doi.org/10.1016/j.proenv.2013.06.016>.

Research Visits

- Jul 2019 & Jan 2019:* **Heidelberg University (Germany)**
Collaboration with Frits Veerman
- Jul 2019:* **University of Rostock (Germany)**
Collaboration with Jens Starke
- Jun 2018:* **Technical University of Munich (Germany)**
Collaboration with Christian Kuehn
- May 2018 & Sep-Dec 2016:* **The University of Edinburgh (UK)**
Collaboration with Nikola Popović

Seminar Talks

- Aug 2019:* *Applied and Interdisciplinary Mathematics Seminar*, University of Bath, UK
- Jul 2019:* *GSPT Seminar*, Heidelberg University, Germany
- Jul 2019:* *Mathematisches Forschungskolloquium*, University of Rostock, Germany
- Mar 2019:* *Mathematisches Forschungskolloquium*, University of Rostock, Germany
- Jan 2019:* *Applied Analysis Seminar*, Heidelberg University, Germany
- Jun 2018:* *Oberseminar*, Technical University of Munich, Germany
- Sep 2016:* *PG (Post-Graduate) Colloquium*, The University of Edinburgh, UK
- Sep 2016:* *Applied and Computational Mathematics (ACM) Seminar*, The University of Edinburgh, UK

Conferences & Workshops

- Sep 2019:* *Workshop "On growth and pattern formation"*, Oxford, UK **(Poster Presentation)**
- Jul 2019:* *Edinburgh Slow-Fast-Ival*, Edinburgh, UK **(Invited Speaker)**
- May 2019:* *SIAM Conference on Applications of Dynamical Systems (DS19)*, Snowbird, Utah, USA **(Invited Speaker)**
- Mar 2019:* *GFS follow on: Mathematics of form in active and inactive media*, Cambridge, UK **(Invited Speaker)**
- Feb 2019:* *First International Nonlinear Dynamics Conference (NODYCON2019)*, Rome, Italy **(Contributed Talk)**
- Feb 2019:* *10th Workshop on Dynamical Systems Applied to Biology and Natural Sciences (DSABNS2019)*, Naples, Italy **(Contributed Talk)**
- Jul 2018:* *European Conference on Mathematical Biology (ECMTB) 2018*, Lisbon, Portugal **(Invited Speaker)**
- Jun 2017:* *9th European Nonlinear Dynamics Conference (ENOC)*, Budapest, Hungary **(Invited Speaker)**
- Jul 2016:* *European Conference on Mathematical Biology (ECMTB) 2016*, Nottingham, UK
- Jun 2016:* *Vienna young Scientist Symposium*, Vienna, Austria **(Contributed Talk)**
- Jul 2015:* *Equadiff 2015*, Lyon, France **(Contributed Talk)**
- Jul 2015:* *Models in Cancer Therapy*, Vienna, Austria
- Jun 2015:* *Vienna PDE day*, Vienna, Austria
- Jun 2014:* *Advances in nonlinear PDEs: analysis, numerics, stochastics, applications*, Vienna, Austria
- Jun 2013:* *Four decades of progress in monitoring and modeling of processes in the soil-plant-atmosphere system: applications and challenges*, Naples, Italy **(Contributed Talk)**

Research Schools

- Apr 2019:* LMS-CMI Research School "PDEs in Mathematical Biology: Modelling and Analysis",
Edinburgh, UK (**Poster Presentation**)
- Nov 2015:* 1st CENTRAL School on Analysis and Numerics for Partial Differential Equations,
Vienna, Austria
- Sep 2014:* Summer School "Analysis and Applications of Partial Differential Equations",
Graz, Austria

Outreach Events

- Dec 2016:* Edinburgh Maths Circle, The University of Edinburgh, UK
- Nov 2016:* Outreach event at Flora Stevenson Primary School, Edinburgh, UK

Academic Services

- 2017-present:* **Organiser of Scientific Events**
DK Winter & Summer Schools
Seminar *PDE Afternoon*
- Jun 2019:* Workshop *Women in PDEs @ Vienna*, Austria
- Nov 2016:* Workshop *Nonlinear PDEs & Gradient Flows: Analytical and Numerical Aspects*,
Vienna, Austria
- 2018-present:* **Journal Referee**
Journal of Mathematical Biology
Mathematical Biosciences
International Journal of Bifurcations and Chaos
IEEE Control Systems
Mathematical Modelling of Natural Phenomena
Mathematical Problems in Engineering

Scientific Training

- Jan 2017:* Proposal writing
- Jan 2016:* Career planning
- Jan 2015:* Scientific writing
- Jan 2014:* Presentation techniques

Work experience

- 2012-2014:* **Book Reviser** for *Editorial Group SIMONE*, Italy
- 2013-2014:* **Scientific Reviser** for *Progetto Matematika*, Italy

Memberships

- Jul 2019:* *European Women in Mathematics (EWM)*
- May 2019:* *Society for Applied and Industrial Mathematics (SIAM)*
- Feb 2019:* *European Society for Mathematical and Theoretical Biology (ESMTB)*

Languages

- Italian**, mother tongue
- English**, fluent
- German**, fluent

References

Christian Kuehn (TU Munich): ckuehn@ma.tum.de

Nikola Popović (The University of Edinburgh): nikola.popovic@ed.ac.uk

Peter Szmolyan (TU Vienna): peter.szmolyan@asc.tuwien.ac.at