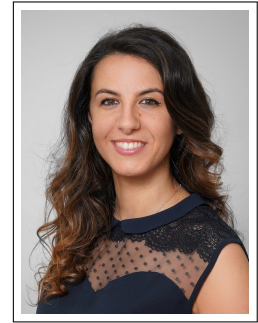


**CONTACT INFORMATION**

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Oskar-Morgenstern-Platz 1, 1090 Vienna, Austria  
*E-mail:* annalisa.iuorio@univie.ac.at  
*Webpage:* <https://annalisaiuorio.com>  
*Orcid:* <https://orcid.org/0000-0002-2297-4522>



Born on April 28, 1989. Italian citizenship.

**EMPLOYMENT**

*Jan 2021–present:* **University of Vienna (Austria)**  
**Principal Investigator** of the project “*Mathematical models to study toxicity effects on vegetation*” (FWF Firnberg-Programm T 1199)  
*Apr 2021–Sep 2021:* **National Research Council (CNR) (Italy)**  
**Occasional Collaborator** of the project “*Validation of hippocampal CA1 neurons models using GLIF formalism*” (HBP voucher 63)  
*Nov 2019–Dec 2020:* **Radon Institute for Computational and Applied Mathematics (Austria)**  
**Postdoctoral Researcher** in the group of Dr. Marie-Therese Wolfram  
*Mar 2017–Oct 2019:* **Vienna University of Technology (Austria)**  
**Scientific Manager** of the Doctoral School (DK) “*Dissipation and Dispersion in Nonlinear PDEs*” and **Postdoctoral Researcher** (from Jan 2018)

**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**

*2020:* **Hertha Firnberg Postdoctoral Fellowship** (243.K€)  
*2019:* **Christiana Hörbiger Award**, travel grant (5.K€)  
*2018:* **Christiana Hörbiger Award**, travel grant (1.1K€)

**ADDITIONAL FUNDING**

*2020:* **ICMS Early-Career Workshop** (with E. Daus, C. Soresina, A. Manhart), Edinburgh, UK (2021)  
*2019:* **Hausdorff School** (with E. Daus, C. Soresina), Bonn, Germany (2021)

**PUBLICATIONS**

- [1] A. Iuorio, F. Veerman. *The influence of autotoxicity on the dynamics of vegetation spots*. Physica D, 427:133015, 2021, <https://doi.org/10.1016/j.physd.2021.133015>.
- [2] A. Marasco, F. Giannino, A. Iuorio. *Modelling competitive interactions and plant-soil feedback in vegetation dynamics*. Ricerche mat., 2020, <https://doi.org/10.1007/s11587-020-00497-6>.

- [3] 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>.
- [4] 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>.
- [5] 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, 13.4:1269, 2020, <https://doi.org/10.3934/dcdss.2020073>.
- [6] A. Marasco, A. Iuorio, F. Carteni, 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>.
- [7] 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>.

## ACCEPTED

- [8] C. Kuehn, N. Berglund, C. Bick, M. Engel, T. Hurth, A. Iuorio, C. Soresina. *A General View on Double Limits in Differential Equations*. 2021, <https://arxiv.org/abs/2106.01160> (to appear in Physica D).

## PREPRINTS

- [9] A. Iuorio, G. Jankowiak, P. Szmolyan, M.T. Wolfram. *A PDE model for unidirectional flows: stationary profiles and asymptotic behaviour*. 2020, <https://arxiv.org/abs/2010.14424>.

## RESEARCH VISITS

- Nov 2021: **University of Naples Federico II (Italy)**, collaboration with Laboratory of Applied Ecology and System Dynamics
- Jul 2019 & Jan 2019: **Heidelberg University (Germany)**, collaboration with Frits Veerman
- Jul 2019: **University of Rostock (Germany)**, collaboration with Jens Starke
- Jun 2018 & Nov 2021: **TU Munich (Germany)**, collaboration with Christian Kuehn
- May 2018 & Sep-Dec 2016: **The University of Edinburgh (UK)**, collaboration with Nikola Popović

## SEMINAR TALKS

- Jun 2021: *PDE Afternoon*, TU Wien/University of Vienna/IST Austria, Austria
- Jun 2021: *Analysis Group Seminar*, University of Leiden, The Netherlands
- Apr 2021: *ICTP-SAIFR Complex Systems and Statistical Mechanics*, ICTP-SAIFR, Brazil
- Jan 2020: *Applied Math Seminar*, University of Warwick, UK
- Nov 2019: *Seminar on Qualitative Theory of Differential Equations*, Comenius University Bratislava, Slovakia
- Sep 2019: *Analysis Seminar*, University of Graz, Austria
- 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

- Nov 2022: *Workshop on “Topics in Multiple Time Scale Dynamics”*, Banff International Research Station, Canada **(Invited Speaker)**
- Nov 2021: *SIAM Conference on Analysis of Partial Differential Equations (PD22)*, Berlin, Germany **(Invited Speaker)** [\(online\)](#)
- Nov 2021: *Neuroscience 2021*, Chicago, USA **(Poster Presenter)** [\(online\)](#)
- Aug 2021: *Dynamics Days Europe*, Nice, France **(Invited Speaker)**
- Aug 2021: *Workshop on “Dynamics of Waves and Patterns”*, Oberwolfach, Germany
- Jun 2021: *Workshop on “A PhD in Mathematics - career possibilities & gender aspects”*, online **(Invited Speaker)**
- May 2021: *SIAM Conference on Applications of Dynamical Systems (DS21)*, online **(Talk + Minisymposium Organiser)**
- Feb 2021: *12th Workshop on Dynamical Systems Applied to Biology and Natural Sciences (DSABNS2021)*, online
- Aug 2020: *SMB 2020 Annual Meeting, e-Conference* **(Contributed talk)**
- Aug 2020: *European Conference on Mathematical Biology (ECMTB) 2020*, Heidelberg, Germany **(Poster Presenter)** **(postponed)**
- Feb 2020: *11th Workshop on Dynamical Systems Applied to Biology and Natural Sciences (DSABNS2020)*, Trento, Italy **(Contributed Talk)**
- Jan 2020: *PDE-MANS 2020*, Granada, Spain **(Poster Presenter)**
- Sep 2019: *Workshop “On growth and pattern formation”*, Oxford, UK **(Poster Presenter)**
- 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)**
- 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)**

## TEACHING EXPERIENCE

- Winter Term 2021/22: *Linear Algebra for Computational Science* (6 ECTS), University of Vienna, Austria
- Summer Term 2021: *Tutorials on Ordinary Differential Equations* (2 ECTS), University of Vienna, Austria

## MENTORING AND SUPERVISION OF STUDENTS

- 2021: Advisor for the Bachelor thesis of Mr. Yehor Pospolit at the Faculty of Mathematics, University of Vienna.

## RESEARCH SCHOOLS

- Mar 2020: DK Winter School “Dissipation and Dispersion in Nonlinear PDEs”, Baden, Austria  
**(Invited Speaker) (postponed)**
- Apr 2019: LMS-CMI Research School “PDEs in Mathematical Biology: Modelling and Analysis”,  
Edinburgh, UK **(Poster Presenter)**
- 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

- Nov 2021: Role model profile for the workshop “MINT erforschen” @ *KinderUni*, University of Vienna, Austria
- Jul 2021: “The Turing Pattern Project” @ *KinderUni*, University of Vienna, Austria
- 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**
- Apr 2022: Hausdorff School *Diffusive Systems: Part II*, Bonn, Germany
- Sep 2021: ICMS Early-Career Workshop *MoDiS - Modelling Diffusive Systems: Theory & Biological Applications*, online
- May 2021: Mini-symposium *Recent Developments in Ecosystems’ Resilience* at SIAM DS21, online
- Apr 2021: Hausdorff School *Diffusive Systems: pattern formation, bifurcations, and biological applications*, online
- 2020: Mini-symposium “*Multi-scale phenomena in biology: modelling and analysis*”  
at ECMTB 2020, Heidelberg, Germany **(postponed)**
- 2017-2019: 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**
- SIAM Journal on Applied Mathematics
  - Physica D: Nonlinear Phenomena
  - Journal of Mathematical Biology
  - Mathematical Biosciences
  - International Journal of Bifurcations and Chaos
  - IEEE Control Systems
  - Mathematical Modelling of Natural Phenomena
  - Mathematical Problems in Engineering
  - Ricerche di Matematica
  - Mathematics

## PROGRAMMING & SOFTWARE SKILLS

- Languages:* Mathematica, MATLAB, Fortran
- Software:* AUTO, pde2path
- Graphics:* Gimp, Xfig

## SCIENTIFIC TRAINING

- Oct 2021:* ERC Starting and Consolidator Grant Application Workshop  
*Feb 2021:* Basic Qualification for Junior Staff - Teaching in STEM disciplines  
*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

- Oct 2021–present:* *Society for Neuroscience (SFN)*  
*Oct 2021–present:* *Sydic (System Dynamics Italian Chapter)*  
*Sep 2021–present:* *Gruppo UMI “Modellistica Socio-Epidemiologica (MSE)”*  
*Jul 2021–present:* *Società Italiana di Matematica Applicata ed Industriale (SIMAI)*  
*Jul 2021–present:* *Unione Matematica Italiana (UMI)*  
*Jul 2019–present:* *European Women in Mathematics (EWM)*  
*Feb 2019–present:* *European Society for Mathematical and Theoretical Biology (ESMTB)*  
*May 2019–Apr 2020:* *Society for Applied and Industrial Mathematics (SIAM)*

## LANGUAGES

- Italian**, mother tongue  
**English**, fluent (TOEFL certificate)  
**German**, fluent (C1.2 certificate)