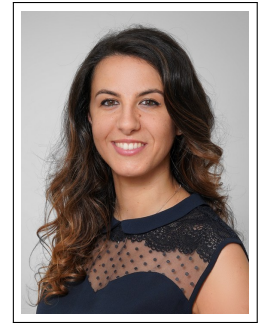


**CONTACT INFORMATION**

*Office:* Faculty of Mathematics, University of Vienna  
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)  
*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. 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>.
- [2] 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>.
- [3] 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>.

- [4] 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>.
- [5] 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>.
- [6] A. Marasco, A. Iuorio, F. Cartenì, 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>.

## PREPRINTS

- [1] A. Iuorio, F. Veerman. *The influence of autotoxicity on the dynamics of vegetation spots*. 2020, <https://doi.org/10.1101/2020.07.29.226522>.
- [2] 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

- Jul 2019 & Jan 2019: **Heidelberg University (Germany)**, collaboration with Frits Veerman  
 Jul 2019: **University of Rostock (Germany)**, collaboration with Jens Starke  
 Jun 2018: **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

- Aug 2021: *Workshop on “Dynamics of Waves and Patterns”*, Oberwolfach, Germany.  
 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 Presentation) (postponed)**

- Aug 2020: *Dynamics Days Europe*, Nice, France (**Invited Speaker**) (**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 Presentation**)
- 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**)
- 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

Summer Term 2021: Tutorials on Ordinary Differential Equations, University of Vienna, Austria

## MENTORING AND SUPERVISION OF STUDENTS

2021: Advisor for the Bachelor thesis of Mr. Yehor Pospolit at the Fakultät für Mathematik, University of Vienna.  
 Thesis: *Linear differential equation of the second order with constant coefficients. Forced oscillations of a point particle.*  
 Defence: June 2021.

## 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 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

- Jul 2021: *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**

Sep 2021: ICMS Early-Career Workshop *Diffusive Systems: pattern formation, bifurcations, and 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**

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

## PROGRAMMING & SOFTWARE SKILLS

Languages: Mathematica, MATLAB, Fortran

Software: AUTO, pde2path

Graphics: Gimp, Xfig

## SCIENTIFIC TRAINING

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

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)

April 13, 2021