

CURRICULUM VITÆ

Sandro Azaele

Contact Details: Department of Physics and Astronomy “G. Galileo”, University of Padua, IT

Working Experience

- 27/09/19 – present: **Associate Professor in Physics** in the Department of Physics and Astronomy “G. Galileo”, University of Padua, IT.
- 01/06/2014 – 26/09/19: **Lecturer B in Applied Mathematics** (permanent position) at the University of Leeds (School of Mathematics), Leeds (UK).
- 01/01/2016 – 24/06/2016: **Visiting Fellow** of the *Isaac Newton Institute for Mathematical Sciences* (University of Cambridge) for the program “Stochastic Dynamical Systems in Biology: Numerical Methods and Applications”.
Four months (March-June) fully funded by INI for research work and seminars.
- 01/11/2012 – 31/05/2014: **Lecturer A in Applied Mathematics** (permanent position) at the University of Leeds (School of Mathematics), Leeds (UK).
- 01/11/2009 – 30/10/2012: **Post-doctoral Research Fellow** at the *University of Leeds* (Institute of Integrative and Comparative Biology, School of Biology), Leeds (UK).
Supervisors: Prof. W. K. Kunin and Dr S. J. Cornell.
- 15/01/2007 – 30/09/2009: **Post-doctoral Research Associate** at *Princeton University* (School of Engineering and Applied Science), Princeton, NJ (USA).
Supervisor: Prof. I. Rodriguez-Iturbe.

Educational Background & Professional Qualifications

- 08/08/2018: Italian “**Abilitazione Scientifica Nazionale**” (02/B2: Fisica Teorica della Materia):
Professore di II fascia (equivalent to *Associate Professor*).
- 13/07/2018: Italian “**Abilitazione Scientifica Nazionale**” (02/A2: Fisica Teorica delle Interazioni Fondamentali):
Professore di II fascia (equivalent to *Associate Professor*).
- 04/04/2017: Italian “**Abilitazione Scientifica Nazionale**” (02/D1: Fisica Applicata, Didattica e Storia della Fisica):
Professore di II fascia (equivalent to *Associate Professor*).
- 02/02/2015: **Teaching Award** (Professional Standard 2, University of Leeds). I am a **Fellow** of “The Higher Education Academy”. This is an official teaching degree awarded “in recognition of attainment against the UK Professional Standards Framework for teaching and learning support in higher education”.
- 13/03/2007: **Ph.D. in Physics** at the *University of Padova* (Italy).
Supervisor: Prof. Amos Maritan.
Dissertation title: “*Stochastic Equations for the Evolution of Ecosystems.*”
- 18/12/2002: **Graduation in Physics** (Laurea in Fisica, 110/110 magna cum laude) at the *University of Trieste* (Italy). Supervisor: Prof. GianCarlo Ghirardi.
Thesis: “*Conceptual Aspects of Quantum Computation.*”

Leadership, Memberships and Grants

- 2023: member of the Board of the PhD in Physics.
- 2022/09: member of Spoke 3 of the National Biodiversity Future Center (NBFC) funded by PNRR.
- 2021: Topics Board member of *Life*.
- 2021: Co-Organization of the **international conference** "*Stochastic Models and Experiments in Ecology and Biology*", Venice, June 21-24, 2021, at the European Center of Living Technology (ECLT).
- 2020: Co-organization of the Satellite conference "Robustness, Adaptability and Critical Transitions in Living Systems #4" for *CCS 2020*, Palma de Mallorca, October 19-23, 2020.
- 2019 (2-5 July): Co-organization of the **international conference** "Fluctuations, tipping points and emergence in eco-evolutionary dynamics" (Leeds, Manchester & EPSRC Network Plus).

Recent Invited Seminars

- Physics of Life 2023: Harrogate (UK).
- January 2022: GSSI-TNT-Sapienza Webinars on Statistical Mechanics.
- January 2021: Interviewed by Società Italiana di Fisica Statistica (Italian Society of Statistical Physics).
- December 2020: ICTP Winter School on Quantitative Systems Biology: Quantitative Approaches in Ecosystem Ecology (30-18/12/20): *Lecturer*.
- December 2020: *Chair* in the conference "Musing on the concept of Good Environmental Status: the complexity of the status & the status of complexity" (2-4 December 2020) by Bluemed & JPI Oceans.

Five Recent Selected Publications

E. Pigani, D. Sgarbossa, S. Suweis, A. Maritan, and **S. Azaele**,
Delay effects on the stability of large ecosystems,
Proceedings of the National Academy of Sciences of the USA, **119** (45), (2022).


D. Gupta, S. Garlaschi, S. Suweis, **S. Azaele*** & A. Maritan*,
Effective Resource Competition Model for Species Coexistence,
Physical Review Letters, **127**, 208101 (2021).

*Equal Senior Contribution.

F. Peruzzo, M. Mobilia and **S. Azaele**,
Spatial Patterns Emerging from a Stochastic Process Near Criticality,
Physical Review X, **10**, 011032 (2020).

Y. Sun, W. Li, H. Shi, D. Zhao & **S. Azaele**,
Finite-time and Fixed-time consensus of multi-agent networks with pinning control and noise perturbation;
SIAM J. Appl. Math., **79**, 111–130. (2019).

S. Azaele, S. Suweis, J. Grilli, I. Volkov, J. R. Banavar, & A. Maritan,
Statistical Mechanics of Ecological Systems: Neutral Theory and Beyond;

Reviews of Modern Physics, **88**(3), 035003 (2016). 

Cover of the Journal of the July issue.