### Onofrio Mazzarisi

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### **Appointments**

Dec 2020 /

Postdoctoral researcher

Dec 2022

Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany

Topics: Theoretical Ecology, Evolutionary Dynamics, Statistical Mechanics, Stochastic Processes

### **Education**

Jan 2021 | **Ph.D, Physics**, University of Salerno, Italy

Advisor: Federico Corberi

Dissertation title: Out of equilibrium problems in classical spin models of statistical me-

chanics

Jul 2017 M.S., Theoretical Physics, University of Bologna, Italy

110/110 cum laude

Oct 2014 **B.S., Physics**, University of Bologna, Italy

110/110

### **Publication list**

| 2022 | Onofrio Mazzarisi and Matteo Smerlak. The role of density-dependent predation and self- |
|------|---|
|      | regulation behind the predator-prey scaling law. <i>In preparation</i> , 2022           |

- Lorenzo Fant, **Onofrio Mazzarisi**, Emanuele Panizon, and Jacopo Grilli. Stable cooperation emerges in stochastic multiplicative growth. *arXiv preprint arXiv:2202.02787*, 2022
- Onofrio Mazzarisi, Amanda de Azevedo-Lopes, Jeferson J. Arenzon, and Federico Corberi. Maximal diversity and zipf's law. *Phys. Rev. Lett.*, 127:128301, Sep 2021
- Federico Corberi, Leticia F Cugliandolo, Marco Esposito, **Onofrio Mazzarisi**, and Marco Picco. How many phases nucleate in the bidimensional potts model? *arXiv preprint arXiv:2102.01003*, 2021
- Onofrio Mazzarisi, Federico Corberi, Leticia F Cugliandolo, and Marco Picco. Metastability in the potts model: exact results in the large q limit. *Journal of Statistical Mechanics: Theory and Experiment*, 2020(6):063214, 2020
- Federico Corberi, **Onofrio Mazzarisi**, and Andrea Gambassi. Dynamics of fluctuations in the gaussian model with dissipative langevin dynamics. In *Journal of Physics: Conference Series*, volume 1548, page 012027. IOP Publishing, 2020
- 2019 Federico Corberi, **Onofrio Mazzarisi**, and Andrea Gambassi. Dynamics of fluctuations in the gaussian model with conserved dynamics. *Journal of Statistical Mechanics: Theory and Experiment*, 2019(10):104001, 2019
- Armando Bazzani, **Onofrio Mazzarisi**, Massimo Giovannozzi, and Ewen Maclean. Diffusion in stochastically perturbed hamiltonian systems with applications to the recent lhc dynamic aperture experiments. In *Nonlinear Dynamics and Collective Effects in Particle Beam Physics: Proceedings of the International Committee on Future Accelerators Arcidosso Italy 2017*, pages 70–85. World Scientific, 2019

## **Conference presentations**

| 2021 | Paris Biological Physics Community Day, Paris, France  |
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| 2021 | Young Seminars SIFS, Online                            |
| 2019 | 10 <sup>th</sup> Young Researcher Meeting, Rome, Italy |

# **Teaching experiences**

| 2018 / | Teaching assistant, University of Salerno |
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| 2019   | Physics 1                                 |

## Schools and visiting experiences

| Sept/Dec 2019 | Visit: Sorbonne Université, Laboratoire de Physique Théorique et Hautes Energies, Paris, France<br>Host: Leticia Cugliandolo |
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| 2019          | School: Glasses, Jamming, and Slow Dynamics, Beg Rohu, France  |
| 2018          | School: Entropy, Information and Order in Soft Matter, ICTS, Bangalore, India  |
| 2018          | School: Spring College on the Physics of Complex Systems, ICTP, Trieste, Italy   |
| Jan/Dec 2018  | Visit: SISSA - International School for Advanced Studies, Trieste, Italy<br>Host: Andrea Gambassi                            |

## Computer skills and languages

| Computer  | Julia, C, C++, fortran, Python, sh, IATEX   |
|-----------|---|
| Languages | Italian (native), English (fluent), French (good), German (good), Spanish (basic) |

## Journal referee

Journal of Statistical Mechanics: Theory and Experiments

### References

### Dr Matteo Smerlak

Max Planck Institute for Mathematics in the Sciences, Germany matteo.smerlak@mis.mpg.de

### Pr Leticia Cugliandolo

Sorbonne Université, Paris, France leticia@lpthe.jussieu.fr

### Pr Federico Corberi

University of Salerno, Salerno, Italy fcorberi@unisa.it