ALBERTO DINELLI

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EDUCATION

Oct 2021 - Present

Ph.D. - Physique en Île de France

Laboratoire Matière et Systèmes Complexes, Université Paris Cité · Paris

Subject: Self-organization and morphogenesis of active mixtures

Supervisor: Julien Tailleur

Oct 2023 - Nov 2023

Jul 2023 Oct 2022 · Visiting period at MIT, group of Prof. J. Tailleur · Cambridge, US

· Visiting period at YITP, group of Prof. H. Hayakawa · Kyoto, JP

· Visiting period at MIT, group of Prof. J. Tailleur · Cambridge, US

Sep 2019 - Jul 2021

Master in Physics of Complex Systems (International Track)

Politecnico di Torino · Torino

Université Paris-Saclay, Sorbonne Université, Université de Paris $\,\cdot\, Paris$ SISSA, ICTP $\cdot\, Trieste$

Italian degree mark: 110/110 cum laude

French M2 mark: 18/20

Thesis: Self-organization of active mixtures. · Supervisor: Julien Tailleur.

Sep 2016 - Jul 2019

Bachelor degree in Physics

Università di Pisa · Pisa

Degree mark: 110/110 cum laude

Thesis: Rayleigh Taylor instability on a thin layer of fluid accelerated by the

radiation pressure. · Supervisor: Francesco Pegoraro.

TEACHING

2021 - 2024 · Teaching assistant, Physics of Materials (Bachelor, 1st year) · IUT Pajol (Paris)

· Teaching assistant, *Photonics* (Bachelor, 2nd year) · IUT Pajol (*Paris*)

PUBLICATIONS

- 1. <u>A. Dinelli</u>, J. O'Byrne and J. Tailleur, "Fluctuating hydrodynamics of active particles interacting via chemotaxis and quorum sensing: static and dynamics". arXiv:2402.05072 (2024).
- 2. <u>A. Dinelli</u>, J. O'Byrne, A. Curatolo, Y. Zhao, P. Sollich, J. Tailleur, "Non-reciprocity across scales in active mixtures". Nature Communications 14, 7035 (2023).

TALKS

· Seminar at Spring College of Physics of Complex Systems 2024 (ICTP, Trieste)
· Flash talk at Journées de Physique Statistique 2024 (ENS, Paris)
· Seminar in M. Shelley's group, (CCB, Flatiron Institute, New York)
· Seminar in D. Nelson's group, (Harvard University, Cambridge)
· Seminar in P. Mehta and K. Koroloev's groups, (Boston University, Boston)
· Seminar in M. Hagan's group, (Brandeis University, Waltham)
· Contributed talk at STATPHYS28, (University of Tokyo, Tokyo)
· Contributed talk at Frontiers in nonequilibrium physics: Active matter, topology and beyond, (YITP, Kyoto)
· Seminar at YITP, Advanced Statistical Dynamics Group, (YITP, Kyoto)
· Contributed talk at EDPIF Scientific Day, (Sorbonne University, Paris)
· Seminar at Institut Curie, Theory Group (Institut Curie, Paris)
· Flash talk at <i>Journées de Physique Statistique</i> 2023 (ENS, <i>Paris</i>)
· Contributed talk at <i>Physics of Microbial Motility Workshop</i> (ESPCI, <i>Paris</i>)
· Talk at Greater Boston Area Statistical Mechanics Meeting (UMass-Amherst, Amherst)
· Seminar at MIT Physics of Living Systems (MIT, Cambridge)
 Contributed talk at the CECAM Workshop: New Fronteers in Liquid Matter (Sorbonne Jussieu, Paris)
· Flash talk at <i>Journées de Physique Statistique</i> 2022 (ENS, Paris)
· Flash talk at <i>Multiscale integration in Biological Systems</i> (Insitut Curie, <i>Paris</i>)

POSTER PRESENTATIONS

Aug 2023	· Perspectives on Non-Equilibrium Statistical Mechanics (YITP, Tokyo)
Jun 2023	· Active matter at surfaces and in complex environments (MPIPKS, Dresden)
May 2023	· Workshop on Signatures of Nonequilibrium fluctuations in life (ICTP, Trieste)
Dec 2022	· Population dynamics: from rare events to evolution (Université Grenoble Alpes, Grenoble)

COMPUTER SKILLS

IntermediateJulia, Matlab, MathematicaAdvancedPython, C, awk, bash, LATEX

OTHER INFORMATION

Awards

2023 · International Mobility Fellowship BDMI
 2021 - 2024 · IdEX International PhD Fellowship (Link)

2020 - 2021 · Paris-Saclay International Master's Scolarship (Link)

Languages

Italian · Mothertongue

English · Advanced C2 (Cambridge Proficiency Certificate in 2015)

French · Advanced