# ALBERTO DINELLI

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#### **EDUCATION**

2024-09 – Present Postdoc

Département de biochimie · Université de Genève · Geneva

Advisor: Karsten Kruse.

2021-10 – 2024-08 Ph.D. - Physique en Île de France

Laboratoire Matière et Systèmes Complexes, Université Paris Cité · Paris

**Thesis:** Scalar Active Matter across scales · **Supervisor:** Julien Tailleur.

2023-10 - 2023-11

2023-07

2022-10

· 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

2019-09 – 2021-07 Master in Physics of Complex Systems - International track

Politecnico di Torino - Université Paris-Saclay · Paris

Final mark: 110/110 cum laude

French M2 mark: 18/20

 $\textbf{Thesis:} \ \ \textbf{Self-organization} \ \ \textbf{of} \ \ \textbf{active} \ \ \textbf{mixtures} \cdot \textbf{Supervisor:} \ \textbf{Julien} \ \ \textbf{Tailleur}.$ 

2016-09 – 2019-07 Bachelor degree in Physics

Università di Pisa · Pisa

Final 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. A. Dinelli, "Scalar active matter across scales". PhD Thesis (2024).
- 2. <u>A. Dinelli</u>, J. O'Byrne and J. Tailleur, "Fluctuating hydrodynamics of active particles interacting via chemotaxis and quorum sensing: static and dynamics". J. Phys. A 57, 395002 (2024).
- 3. <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

2024-04	· Seminar in K. Kruse's group, (Université de Genève, Geneva)
2024-02	· Seminar at Spring College of Physics of Complex Systems 2024 (ICTP, Trieste)
2024-01	· Flash talk at Journées de Physique Statistique 2024 (ENS, Paris)
2024-01	· Seminar in M. Shelley's group, (CCB, Flatiron Institute, New York)
2023-10	· Seminar in D. Nelson's group, (Harvard University, Cambridge)
2023-10	· Seminar in P. Mehta and K. Koroloev's groups, (Boston University, Boston)
2023-10	· Seminar in M. Hagan's group, (Brandeis University, Waltham)
2023-08	· Contributed talk at STATPHYS28, (University of Tokyo, Tokyo)
2023-08	· Contributed talk at Frontiers in nonequilibrium physics: Active matter, topology and beyond, (YITP, Kyoto)
2023-07	· Seminar at YITP, Advanced Statistical Dynamics Group, (YITP, Kyoto)
2023-06	· Contributed talk at EDPIF Scientific Day, (Sorbonne University, Paris)
2023-03	· Seminar at Institut Curie, Theory Group (Institut Curie, Paris)
2023-01	· Flash talk at Journées de Physique Statistique 2023 (ENS, Paris)
2022-11	· Contributed talk at Physics of Microbial Motility Workshop (ESPCI, Paris)
2022-10	· Talk at Greater Boston Area Statistical Mechanics Meeting (UMass-Amherst, Amherst)
2022-10	· Seminar at MIT Physics of Living Systems (MIT, Cambridge)
2022-06	· Contributed talk at the CECAM Workshop: <i>New Fronteers in Liquid Matter</i> (Sorbonne Jussieu, <i>Paris</i> )
2022-01	· Flash talk at Journées de Physique Statistique 2022 (ENS, Paris)
2021-11	· Flash talk at Multiscale integration in Biological Systems (Insitut Curie, Paris)

#### POSTER PRESENTATIONS

2023-08 · Perspectives on Non-Equilibrium Statistical Mechanics	-
2023-06 • Active matter at surfaces and in complex environments	(MPIPKS, Dresden)
2023-05 · Workshop on Signatures of Nonequilibrium fluctuations	s in life (ICTP, Trieste)
2022-12 · Population dynamics: from rare events to evolution (Uni	iversité Grenoble Alpes, Grenoble)

# OTHER INFORMATION

## **Awards**

2023	· International Mobility Fellowship	
2021 - 2024	· IdEX International PhD Fellowship	
2020 - 2021	$\cdot$ Paris-Saclay International Master's Scolars	hip