

MAY 1, 2024

# ALBERTO DINELLI

*Born in* Lucca (Italia), 07/10/1997  
*email* [alberto.dinelli@u-paris.fr](mailto:alberto.dinelli@u-paris.fr)  
*address* Laboratoire Matière et Systèmes Complexes  
 UMR 7057 · Université de Paris  
 10 rue Alice Domon et Léonie Duquet  
 75205 Paris CEDEX 13 (France)  
*website* [adinelli.github.io](https://adinelli.github.io)

## 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

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

Jul 2023

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

Oct 2022

· 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 · *Paris*SISSA, ICTP · *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. [A. Dinelli](#), 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. [A. Dinelli](#), J. O’Byrne, A. Curatolo, Y. Zhao, P. Sollich, J. Tailleur, “Non-reciprocity across scales in active mixtures”. *Nature Communications* 14, 7035 (2023).
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## TALKS

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

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| 2023-08 | · <i>Perspectives on Non-Equilibrium Statistical Mechanics</i> (YITP, <i>Tokyo</i> )                      |
| 2023-06 | · <i>Active matter at surfaces and in complex environments</i> (MPIPKS, <i>Dresden</i> )                  |
| 2023-05 | · <i>Workshop on Signatures of Nonequilibrium fluctuations in life</i> (ICTP, <i>Trieste</i> )            |
| 2022-12 | · <i>Population dynamics: from rare events to evolution</i> (Université Grenoble Alpes, <i>Grenoble</i> ) |
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## COMPUTER SKILLS

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|---------------------|---|
| <i>Intermediate</i> | · Julia, MATLAB, MATHEMATICA                            |
| <i>Advanced</i>     | · Python, C, awk, bash, L <sup>A</sup> T <sub>E</sub> X |
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## OTHER INFORMATION

### Awards

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|--------------------|--|
| <i>2023</i>        | · International Mobility Fellowship <a href="#">BDMI</a>                   |
| <i>2021 - 2024</i> | · IdEX International PhD Fellowship ( <a href="#">Link</a> )               |
| <i>2020 - 2021</i> | · Paris-Saclay International Master's Scholarship ( <a href="#">Link</a> ) |

### Languages

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|----------------|---|
| <i>Italian</i> | · Mothertongue  |
| <i>English</i> | · Advanced C2 (Cambridge Proficiency Certificate in 2015) |
| <i>French</i>  | · Advanced  |