

MARCH 18, 2025

ALBERTO DINELLI

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EDUCATION

2024-09 – Present	<p>Postdoc Département de biochimie · Université de Genève · <i>Geneva</i></p> <p>Advisor: Karsten Kruse.</p>
2021-10 – 2024-08	<p>Ph.D. - Physique en Île de France Laboratoire Matière et Systèmes Complexes, Université Paris Cité · <i>Paris</i></p> <p>Thesis: Scalar Active Matter across scales · Supervisor: Julien Tailleur.</p>
2023-10 – 2023-11 2023-07 2022-10	<ul style="list-style-type: none"> · Visiting period at MIT, group of Prof. J. Tailleur · <i>Cambridge, US</i> · Visiting period at YITP, group of Prof. H. Hayakawa · <i>Kyoto, JP</i> · Visiting period at MIT, group of Prof. J. Tailleur · <i>Cambridge, US</i>
2019-09 – 2021-07	<p>Master in Physics of Complex Systems - International track Politecnico di Torino · <i>Torino</i> — Université Paris-Saclay · <i>Paris</i></p> <p>Final mark: 110/110 cum laude French M2 mark: 18/20 Thesis: Self-organization of active mixtures · Supervisor: Julien Tailleur.</p>
2019-09 – 2020-02	<ul style="list-style-type: none"> · Visiting period at SISSA, ICTP · <i>Trieste</i>
2016-09 – 2019-07	<p>Bachelor degree in Physics Università di Pisa · <i>Pisa</i></p> <p>Final mark: 110/110 cum laude Thesis: Rayleigh Taylor instability on a thin layer of fluid accelerated by the radiation pressure. · Supervisor: Francesco Pegoraro.</p>

TEACHING

2024 - 2025	<ul style="list-style-type: none"> · Teaching assistant, <i>Computer science</i> (Bachelor, 1st year) · Université de Genève (<i>Geneva</i>)
2021 - 2024	<ul style="list-style-type: none"> · Teaching assistant, <i>Physics of Materials</i> (Bachelor, 1st year) · IUT Pajol (<i>Paris</i>) · Teaching assistant, <i>Photonics</i> (Bachelor, 2nd year) · IUT Pajol (<i>Paris</i>)

PUBLICATIONS

1. [A. Dinelli](#), A. Altieri, J. Tailleur, “Random motility regulation drives the fragmentation of microbial ecosystems”. arXiv:2503.12692 (2025).
 2. T. Lefranc, [A. Dinelli](#), C. Fernández-Rico, R. Dullens, J. Tailleur, D. Bartolo, “Quorum sensing and absorbing phase transitions in colloidal active matter”. arXiv:2502.13919 (2025).
 3. [A. Dinelli](#), “Scalar active matter across scales”. PhD Thesis (2024).
 4. [A. Dinelli](#), J. O’Byrne, J. Tailleur, “Fluctuating hydrodynamics of active particles interacting via chemotaxis and quorum sensing: static and dynamics”. J. Phys. A 57, 395002 (2024).
 5. [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, Geneva) |
| 2024-02 | · Seminar at <i>Spring College of Physics of Complex Systems 2024</i> (ICTP, Trieste) |
| 2024-01 | · Flash talk at <i>Journées de Physique Statistique 2024</i> (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. Korolov’s groups, (Boston University, Boston) |
| 2023-10 | · Seminar in M. Hagan’s group, (Brandeis University, Waltham) |
| 2023-08 | · Contributed talk at <i>STATPHYS28</i> , (University of Tokyo, Tokyo) |
| 2023-08 | · Contributed talk at <i>Frontiers in nonequilibrium physics: Active matter, topology and beyond</i> , (YITP, Kyoto) |
| 2023-07 | · Seminar at YITP, Advanced Statistical Dynamics Group, (YITP, Kyoto) |
| 2023-06 | · Contributed talk at <i>EDPIF Scientific Day</i> , (Sorbonne University, Paris) |
| 2023-03 | · Seminar at Institut Curie, Theory Group (Institut Curie, Paris) |
| 2023-01 | · Flash talk at <i>Journées de Physique Statistique 2023</i> (ENS, Paris) |
| 2022-11 | · Contributed talk at <i>Physics of Microbial Motility Workshop</i> (ESPCI, Paris) |
| 2022-10 | · Talk at <i>Greater Boston Area Statistical Mechanics Meeting</i> (UMass-Amherst, Amherst) |
| 2022-10 | · Seminar at MIT Physics of Living Systems (MIT, Cambridge) |
| 2022-06 | · Contributed talk at the CECAM Workshop: <i>New Frontiers in Liquid Matter</i> (Sorbonne Jussieu, Paris) |
| 2022-01 | · Flash talk at <i>Journées de Physique Statistique 2022</i> (ENS, Paris) |
| 2021-11 | · Flash talk at <i>Multiscale integration in Biological Systems</i> (Institut Curie, Paris) |
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POSTER PRESENTATIONS

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| 2023-08 | · <i>From Soft Matter to Biophysics 2025</i> (Les Houches) · Best Poster Prize |
| 2023-08 | · <i>Perspectives on Non-Equilibrium Statistical Mechanics</i> (YITP, Tokyo) |
| 2023-06 | · <i>Active matter at surfaces and in complex environments</i> (MPIPKS, Dresden) |
| 2023-05 | · <i>Workshop on Signatures of Nonequilibrium fluctuations in life</i> (ICTP, Trieste) |
| 2022-12 | · <i>Population dynamics: from rare events to evolution</i> (Université Grenoble Alpes, Grenoble) |
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OTHER INFORMATION

Awards

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| 2025 | · Best Poster Prize @ Les Houches Winter School |
| 2023 | · International Mobility Fellowship |
| 2021 - 2024 | · IdEX International PhD Fellowship |
| 2020 - 2021 | · Paris-Saclay International Master's Scholarship |