

DECEMBER 20, 2025

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. <ul style="list-style-type: none"> · 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
2023-10 – 2023-11	
2023-07	
2022-10	
2019-09 – 2021-07	Master in Physics of Complex Systems - International track Politecnico di Torino · Torino — Université Paris-Saclay · Paris Final mark: 110/110 cum laude French M2 mark: 18/20 Thesis: Self-organization of active mixtures · Supervisor: Julien Tailleur. <ul style="list-style-type: none"> · Visiting period at SISSA, ICTP · Trieste
2019-09 – 2020-02	
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

2024 - 2026	<ul style="list-style-type: none"> · Teaching assistant, <i>Introduction to computer science</i> (Bachelor, 1st year) · Université de Genève (Geneva)
2021 - 2024	<ul style="list-style-type: none"> · Teaching assistant, <i>Physics of Materials</i> (Bachelor, 1st year) · IUT Pajol (Paris) · Teaching assistant, <i>Photonics</i> (Bachelor, 2nd year) · IUT Pajol (Paris)

PUBLICATIONS

1. Q. M. Nguyen, [A. Dinelli](#), G. Spera, J. Tailleur, “Contact forces in motility-regulated active matter”. arXiv:2507.08964 (2025).
 2. [A. Dinelli](#), A. Altieri, J. Tailleur, “Random motility regulation drives the fragmentation of microbial ecosystems”. arXiv:2503.12692 (2025).
 3. T. Lefranc, [A. Dinelli](#), C. Fernández-Rico, R. Dullens, J. Tailleur, D. Bartolo, “Synthetic quorum sensing and absorbing phase transitions in colloidal active matter”. Phys. Rev. X 15, 031050 (2025).
 4. [A. Dinelli](#), “Scalar active matter across scales”. PhD Thesis (2024).
 5. [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).
 6. [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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PRESENTATIONS

Invited talks

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| 2025-06 | · <i>Interdisciplinary challenges in the physics of complexity and life 2025 (IntCha25)</i> · EMBL Heidelberg, Heidelberg |
| 2025-05 | · <i>Conservation laws and non-reciprocity</i> · Universität Münster, Münster |

Contributed talks

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| 2025-07 | · STATPHYS29 · Firenze |
| 2023-08 | · STATPHYS28 · University of Tokyo, Tokyo |
| 2023-08 | · <i>Frontiers in nonequilibrium physics: Active matter, topology and beyond</i> · YITP, Kyoto |
| 2023-06 | · EDPIF Scientific Day · Sorbonne University, Paris |
| 2022-11 | · <i>Physics of Microbial Motility Workshop</i> · ESPCI, Paris |
| 2022-10 | · <i>Greater Boston Area Statistical Mechanics Meeting</i> · UMass-Amherst, Amherst |
| 2022-06 | · CECAM workshop <i>New Frontiers in Liquid Matter</i> · Sorbonne Jussieu, Paris |

Seminars

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| 2025-10 | · Final audition for <i>thesis prize by Systèmes Complexes 2025</i> · Maison des sciences de l’homme et de l’environnement, Besançon |
| 2025-09 | · Biochemistry department seminar · Université de Genève, Geneva |
| 2024-04 | · K. Kruse’s group · Université de Genève, Geneva |
| 2024-02 | · <i>Spring College of Physics of Complex Systems 2024</i> · ICTP, Trieste |
| 2024-01 | · M. Shelley’s group · CCB, Flatiron Institute, New York |
| 2023-10 | · D. Nelson’s group · Harvard University, Cambridge |
| 2023-10 | · P. Mehta and K. Koroloev’s groups · Boston University, Boston |
| 2023-10 | · M. Hagan’s group · Brandeis University, Waltham |
| 2023-07 | · Advanced Statistical Dynamics Group · YITP, Kyoto |
| 2023-03 | · Institut Curie Theory Group · Institut Curie, Paris |
| 2022-10 | · MIT Physics of Living Systems · MIT, Cambridge |

Flash talks

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| 2024-01 | · <i>Journées de Physique Statistique 2024</i> · ENS, Paris |
| 2023-01 | · <i>Journées de Physique Statistique 2023</i> · ENS, Paris |
| 2022-01 | · <i>Journées de Physique Statistique 2022</i> · ENS, Paris |

2021-11 · *Multiscale integration in Biological Systems* · Institut Curie, Paris

Poster presentations

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

Awards

- 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 Scolarship