

Davide Paolino

PhD Candidate
Active Matter Physics

BIRTH: Italy, 15 October 2001
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EDUCATION

OCT 2025 - PRESENT	PhD Candidate in Physics (Active Matter) / Gulliver Lab, ESPCI-Paris PSL <i>Supervisor: Prof. Ludovic Berthier</i> Investigating the statistical physics of active and disordered systems using numerical simulations and analytical methods. Focus on glassy dynamics, non-equilibrium phase transitions, and novel collective phenomena.
SEP 2023 - OCT 2025	Master of Science in Physics of Complex Systems / Politecnico di Torino, SISSA/ICTP (Trieste), Université Paris Cité (Paris) <i>Final Grade: 110 cum laude /110, Thesis "Boltzmann Inversion and force inference"</i> International double-degree program across Italy and France, with coursework between theoretical physics, computational science and stochastic processes.
JUL 2020 - SEP 2023	Bachelor of Science in Physical Engineering / Politecnico di Torino <i>Final Grade: 107/110, Thesis "Monte Carlo Simulations of 2D Ising Model"</i>

RESEARCH EXPERIENCE

MAR 2025 - JUL 2025	Research Intern under Prof. L. Berthier / Gulliver Lab, ESPCI-Paris PSL <i>Direct Boltzmann inversion method from particle configurations at arbitrary state points: arXiv:2603.12081.</i> Developing methods to infer particle interactions directly from experimental data. Possible applications in equilibrium and non-equilibrium physics, including active matter.
JUL 2023 - SEP 2023	Bachelor Thesis Research under Prof. L. F. Tocchio / Politecnico di Torino Simulations of the 2D Ising model performed to study phase transitions using Monte Carlo techniques.

ACADEMIC PROJECTS AND EVENTS

JAN 2026	Journées de Physique Statistique 2026 / Paris Official Website
SPRING 2025	Spring College in the Physics of Complex Systems / ICTP, Trieste Spring College Official Website

WORK EXPERIENCE

SEP 2022 - SEP 2024	Teaching Tutor / Politecnico di Torino Project's aim was to assist first-year students with Mathematical Analysis I and Physics I through frontal exercise sessions. Improved communication and mentoring skills.
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TECHNICAL SKILLS

PROGRAMMING:	Python (NumPy, Torch, SciPy), Julia, Java, MATLAB, $\LaTeX$, HTML
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LANGUAGES

ITALIAN	Native
ENGLISH	Proficient (C1)
FRENCH	Intermediate (B1)
Common European Framework of Reference for Languages	