

Andrea Clini

PHD STUDENT IN MATHEMATICS · UNIVERSITY OF OXFORD

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Education

University of Milan

MSC IN PHYSICS

April 2023 - present

- Main subjects: particle physics, astrophysics, statistical mechanics
- GPA: 30/30 (ongoing)
- Expected completion date: December 2024

University of Oxford

PHD IN MATHEMATICS (CDT MATHEMATICS OF RANDOM SYSTEMS)

Oct. 2020 - present

- Research topics: (stochastic) PDEs, interacting particle systems, large deviations
- Advisors: José A. Carrillo, Benjamin Fehrman
- Expected completion date: September 2024

Scuola Normale Superiore di Pisa

DIPLOMA DI LICENZA IN MATEMATICA (ALLIEVO ORDINARIO), 100/100 CUM LAUDE

2017 - 2019

University of Pisa

MSC IN MATHEMATICS, 110/110 CUM LAUDE

2017 - 2019

- Thesis: An introduction to the Chern conjecture (differential geometry, algebraic topology)
- Advisor: Roberto Frigerio
- GPA: 30/30

BSC IN MATHEMATICS, 110/110 CUM LAUDE

2014 - 2017

- Thesis: La congettura di Los (mathematical logic)
- Advisor: Alessandro Berarducci
- GPA: 29/30

Publications

PREPRINTS

A central limit theorem for nonlinear conservative SPDEs, A. Clini, B. Fehrman, October 2023, submitted to **Stochastic Partial Differential Equations: Analysis and Computations**, [link](#)

ACCEPTED

On the fluctuations of an SDE system modelling grid cells, A. Clini, February 2023, to appear on **Annales de l'Institut Henri Poincaré, Probabilités et Statistiques**, [link](#)

Porous media equations with nonlinear gradient noise and Dirichlet boundary conditions, A. Clini, April 2022, **Stochastic Processes and their Applications**, [link](#)

The mean field limit of stochastic differential equation systems modelling grid cells, J.A. Carrillo, A. Clini, S. Solem, December 2021, **SIAM Journal on Mathematical Analysis**, [link](#)

Awards & Fellowships

2020-2024	CDT in Mathematics of Random Systems Award, EPSRC , University of Oxford	full doctoral fellowship
2017-2019	Fellowship for graduate Math students (allievo ordinario), Scuola Normale Superiore , awarded through an international competition (concorso per allievo ordinario del IV anno) and renewed upon strict satisfactory progress	full MSc fellowship
2018	AILA prize 2017-18 for BSc degree (Italian association of logic and its applications) , awarded for the best BSc thesis concerning mathematical logic in Italy	
2014-2017	Fellowship for undergraduate Math students, INDAM (Italian institute of advanced mathematics) , awarded through a national competition and renewed upon strict satisfactory progress	4.000€/year

Teaching Experience

at the University of Oxford

- Win. 2023 **B7.3 Further Quantum Mechanics**, Tutor
B7.2 Electromagnetism, Tutor
- Fall 2023 **C7.5 General relativity I**, Tutor
C8.1 Stochastic Differential Equations, Tutor
- Win. 2023 **C8.2 Stochastic analysis & PDEs**, Tutor and Teaching Assistant
C4.6 Fixed point methods for nonlinear PDEs, Tutor and Teaching Assistant
- Fall 2022 **C8.1 Stochastic differential equations**, Tutor and Teaching Assistant
B4.1 Functional analysis I, Tutor and Teaching Assistant
B5.2 Applied PDEs, Tutor and Teaching Assistant
- Win. 2022 **C3.11 Riemannian geometry**, Teaching Assistant
C4.6 Fixed point methods for nonlinear PDEs, Teaching Assistant
- Fall 2021 **C7.5 General relativity I**, Teaching Assistant

at Liceo Gioia, Piacenza

- Win. 2020 **High School teacher of Mathematics and Physics**, 4 classes of ~ 30 students each from 2nd year (age 15-16) to final year (age 18-19)

Conferences & Talks

INVITED TALKS

- 27 Nov –1 Dec 2023. *Order and Randomness in PDEs: stochastic flows*. Institut Mittag-Leffler, Stockholm.
- 15 Nov 2023. *Junior Analysis Seminar*. Imperial College London.
- 23-24 March 2023. *Oxbridge PDE Conference 2023*. DPMMS, University of Cambridge.

SELECTED CONTRIBUTED TALKS

- February 2023. *Internal Stochastic Analysis Seminar*. Mathematical Institute, Oxford
- September 2022. *Oxford-Berlin IRTG Summer School in Mathematics of Random Systems*. St Hugh's College, Oxford
- June 2022. *Third Italian Meeting on Probability and Mathematical Statistics*. Università di Bologna
- April 2022. *Frontiers in the Interplay Between Probability and Kinetic Theory*, ICMS, Bayes Centre, Edinburgh
- September 2021. *Berlin-Oxford IRTG Stochastic Analysis in Interaction Summer School*, Harnack-Haus, Berlin
- September 2021. *Graduate School Maths of Random Systems*, Imperial College London

SELECTED CONFERENCES ATTENDED

- 18-22 March 2024. *Oxbridge PDE Conference 2024*, Mathematical Institute, University of Oxford
- 31 Jan. - 2 Feb. 2024. *Turbulence on the Banks of the Arno*, Scuola Normale Superiore, Pisa
- 10-13 July 2023. *VII Riemann International School of Mathematics*, Villa Toeplitz, Varese
- 8-10 June 2023. *Interacting Particles, Fluctuating Systems, and SPDEs*, Mathematical Institute, University of Oxford
- 23-24 March 2023. *Oxbridge PDE Conference 2023*. DPMMS, University of Cambridge
- 25-30 September 2022. *Oxford-Berlin IRTG Summer School in Mathematics of Random Systems*. St Hugh's College, Oxford
- 13-16 June 2022. *Third Italian Meeting on Probability and Mathematical Statistics*. Università di Bologna.
- 25-29 April 2022. *Probability/PDE Interactions: Interface Models and Particle Systems*. CIRM, Marseille.
- 11-13 April 2022. *Oxbridge PDE Conference 2022*. Mathematical Institute, University of Oxford
- 4-8 April 2022. *Frontiers in the Interplay Between Probability and Kinetic Theory*. ICMS, Bayes Centre, Edinburgh