Antoine Gagnebin, Ph.D.

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ETH Zürich, Department of Mathematics Rämistrasse 101, 8092 Zurich, Switzerland

Education

2020 – · · · ·
Ph.D. in Mathematics, ETH Zürich .
Advisor: *Prof. Mikaela Iacobelli*

2018 – 2020
M.Sc. in Mathematics, University of Neuchâtel.
Thesis title: *The Vlasov-Poisson equation*.
Advisor: *Prof. Mikaela Iacobelli*

2015 – 2018
B.Sc. in Mathematics, University of Neuchâtel

Employment History

2020 – · · · ·
Teaching assistant, at ETH Zürich.

2018 – 2020
Teaching assistant, at University of Neuchâtel.

Supply teacher at the high school of Neuchâtel.

2018
Internship at the national centre for nuclear research in Warsaw, Poland.
Simulation of X-ray spectra emitted in tokamak plasmas.

Teaching

2020 – · · · ·
ETH Zürich
Topics in Non-Collisional Kinetic Theory, Student seminar for M.Sc maths students.
An Introduction to Mean-Field Limits for Vlasov Equations, Student seminar for M.Sc maths students.
Euclidean Harmonic Analysis, Exercise sessions for M.Sc maths students.
Mathematical method in physics, Exercise sessions in 2nd-year B.Sc. maths students.
Analysis III, Exercise sessions in 2nd-year B.Sc. engineering students.

2018 – 2020
Teaching assistant, at University of Neuchâtel.
Physics, Exercise sessions in 1st-year B.Sc. maths students.

Talks

September 2024
SwissMAP Annual General Meeting, Les Diablerets, Switzerland.
Title: Final data problem for Vlasov-type equations.

May 2024
Swiss Mathematical Society Doctoral Day 2024, University of Basel, Switzerland.
Title: Asymptotic time behaviour of Vlasov-type equations.

April 2024
Minisymposium on PDE and Mathematical Physics, ETH Zürich, Switzerland.
Title: Landau damping for Vlasov-type systems on the torus.

Talks (continued)

January 2024 — Vlasovia 2024, Florence, Italy.
Title: Landau damping in Plasma physics.

November 2023 — Oberwolfach Graduate Seminar, Będlewo, Poland.
Title: Landau damping for Vlasov-type systems.

September 2023 — SwissMAP Annual General Meeting, Les Diablerets, Switzerland.
Title: Landau damping for Vlasov-type systems.

Research Publications

Published papers

1. A. Gagnebin, "Backward problem for the 1d ionic vlasov-poisson equation," *Kinetic and Related Models*, vol. 17(2), pp. 312–330, 2024, ISSN: 0022-0396,1090-2732. DOI: 10.3934/krm.2023024.
2. A. Gagnebin and M. Iacobelli, "Landau damping on the torus for the Vlasov-Poisson system with massless electrons," *J. Differential Equations*, vol. 376, pp. 154–203, 2023, ISSN: 0022-0396,1090-2732. DOI: 10.1016/j.jde.2023.08.020.

Preprints

1. D. Benedetto, E. Caglioti, A. Gagnebin, M. Iacobelli, and S. Rossi, *Scattering problem for vlasov-type equations on the d-dimensional torus with gevrey data*, 2024. URL: https://arxiv.org/abs/2405.10182.