

Antoine Gagnebin,

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🏠 Simon Fraser University, Department of Mathematics 8888 University Drive, Burnaby, BC V5A 1S6, Canada

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Education

- 2020 – 2026 📖 **Ph.D. in Mathematics, ETH Zürich.**
Thesis title: *Landau damping for Vlasov-type equation..*
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

- 2026 – ... 📖 **PIMS Postdoctoral Fellow**, at Simon Fraser University, Burnaby, Canada.
- 2020 – 2026 📖 **Teaching assistant**, at ETH Zürich, Switzerland.
- 2021 📖 **Civil service**, at University hospital Zürich, Switzerland.
Division of infectious diseases and hospital epidemiology.
- 2018 – 2020 📖 **Teaching assistant**, at University of Neuchâtel, Switzerland.
- 📖 **Supply teacher** at the high school of Neuchâtel, Switzerland.
- 2018 📖 **Internship** at the national centre for nuclear research in Warsaw, Poland.
Simulation of X-ray spectra emitted in tokamak plasmas.

Teaching

2020 – 2026

ETH Zürich

Mathematik II, Exercise sessions in 1st-year B.Sc. medical students, Spring 2026.
Mathematik I, Exercise sessions in 1st-year B.Sc. medical students, Fall 2025.
Bachelor thesis, topics in analysis, co-supervision with Prof. Mikaela Iacobelli, Fall 2024.
Analysis III, Exercise sessions in 2nd-year B.Sc. engineering students, Fall 2024.
Euclidean Harmonic Analysis, Exercise sessions for M.Sc maths students, Spring 2024.
Bachelor thesis, topics in analysis, co-supervision with Prof. Mikaela Iacobelli, Spring 2024.
Analysis III, Exercise sessions in 2nd-year B.Sc. engineering students, Fall 2023.
Analysis III, Exercise sessions in 2nd-year B.Sc. engineering students, Fall 2022.
An Introduction to Mean-Field Limits for Vlasov Equations, Student seminar for M.Sc maths students, Spring 2022.
Topics in Non-Collisional Kinetic Theory, Student seminar for M.Sc maths students, Spring 2021.
Mathematical method in physics, Exercise sessions in 2nd-year B.Sc. maths students, Fall 2020.

2018 – 2020

University of Neuchâtel

Physics, Exercise sessions in 1st-year B.Sc. maths students.

Talks

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| December 2025 | ■ Analysis and PDE Seminar, BICMR, Peking University, China.
Title: Quasineutral limit for the relativistic Vlasov-Maxwell system. |
| November 2024 | ■ Arpilysm 1: Applications of Mathematics to Mathematics, Arpino, Italy.
Title: Landau damping and Final data problem on the torus. |
| 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. |
| 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 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,” *Annales de l’Institut Henri Poincaré C, Analyse Non Linéaire*, 2025.  DOI: 10.4171/AIHPC/159.
- 2 **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.
- 3 **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 I. Ben-Porat, **A. Gagnebin**, M. Iacobelli, and J. Junné, *Propagation of velocity moments for the magnetized Vlasov-Poisson system with space-time dependent magnetic fields*, 2025. arXiv: 2510.22753 [math.AP].  URL: <https://arxiv.org/abs/2510.22753>.
- 2 **A. Gagnebin**, M. Iacobelli, A. Rege, and S. Rossi, *From relativistic Vlasov-Maxwell to electron-mhd in the quasineutral regime*, 2025. arXiv: 2505.11428 [math.AP].  URL: <https://arxiv.org/abs/2505.11428>.