Giovanni Ambrosioni

Place and Date of Birth:	Bellinzona, Switzerland | 30 November 1997
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EDUCATION

2021 - 2026	PhD in **Mathematics**, ETH Zürich Supervised by Prof. Paul Biran
2019 - 2021	MSc in **Pure Mathematics**, *with distinction*, ETH Zürich Thesis: *Immersed Lagrangian quantum cohomology*, supervised by Prof. Paul Biran
2016 - 2020	BSc in **Mathematics**, ETH Zürich Thesis: *Lagrangian cutting*, supervised by Prof. Ana Cannas da Silva

RESEARCH INTERESTS

Symplectic topology: Persistence structures on Fukaya categories and related categorical measurements.

PUBLICATIONS

1. Filtered Fukaya categories, *J. Symplectic Geom.*, Volume 23 (2025) Number 2, [10.4310/JSG.250624013956](https://doi.org/10.4310/JSG.250624013956).

PREPRINTS AND THESES

3. *Approximability for Lagrangian submanifolds*, with Paul Biran and Octav Cornea, 2026, [10.48550/arXiv.2601.12506](https://doi.org/10.48550/arXiv.2601.12506).

2. *Immersed Lagrangian quantum homology*, MSc Thesis, 2021.

1. *Lagrangian cutting*, BSc Thesis, 2020.

TALKS

6. Invited speaker at *Symplectic Topology, Hamiltonian Dynamics, and Persistence Structures. A conference in honour of Octav Cornea*, ETH Zürich, June 2026.

5. *Geometry seminar*, St. Andrews University, 28th November 2025.

4. *Symplectic geometry seminar*, ETH Zürich, 10th November 2025.

3. *Symplectic zoominar*, 31st October 2025.

2. *Symplectic geometry seminar*, Stanford University, 20th October 2025.

1. *Symplectic geometry seminar*, ETH Zürich, 24th October 2022.

Junior talks

5. *Introduction to Fukaya TPCs: algebra and geometry*, Junior symplectic geometry seminar, ETH Zürich, 25th March 2025.

4. *Triangle inequality for spectral invariants*, Junior symplectic geometry seminar, ETH Zürich, 3rd December 2024.

3. *Generating and split-generating Fukaya categories*, Junior symplectic geometry seminar, ETH Zürich, 16th May 2023.

2. *Morse-Bott functions from Moment Maps*, Junior symplectic geometry seminar, ETH Zürich, 3rd November 2022.

1. *A_∞-algebras and immersed Floer homology*, Junior symplectic geometry seminar, ETH Zürich, 17th May 2021.

Scientific visits

4. St. Andrews University, November 2025. Sponsored by Prof. Jeff Hicks.

3. University of Edinburgh, November 2025. Sponsored by Prof. Nick Sheridan.

2. Sorbonne Université, Paris, November 2025. Sponsored by Prof. Claude Viterbo and Prof. Vincent Humiliere.

1. Stanford University, October 2025. Sponsored by Prof. Mohammed Abouzaid and Prof. Yakov Eliashberg.

Other Academic and Teaching Experience

Teaching and didactics:

2021 - 2025	Teaching Assistant, Department of Mathematics, ETH Zürich • Organized and taught courses: Differential Geometry I/II, Analysis I/II, Mathematics I, Algebraic Topology I/II, Funktionentheorie (complex analysis). • Responsibilities included teaching exercise classes, as well as writing, organizing, and grading exams.
2020 - 2021	Substitute teacher in Mathematics and Physics Liceo Cantonale Bellinzona, Scuola Cantonale di Commercio, Bellinzona and Scuola media, Giubiasco.
2019 - 2021	Scientific assistant at TraM-Studie, Department of Mathematics, ETH Zürich Title of the project: *Enhancing Mathematics Learning by means of cognitive activation: Classroom Intervention studies in advanced placement schools.* Funded by SNF, grant number 179186.

Students mentored:

- Elisa Luraschi, *A proof of Lefschetz's Hyperplane Theorem via Morse Theory*, BSc thesis, ETH Zürich, Spring semester 2025.

- Mentored MSc level students for the informal seminar *Triangulated persistence categories and symplectic geometry*, co-organised with Baptiste Serraille, ETH Zürich, Spring semester 2025.

- Mentored MSc level students for the seminar *Quasimorphisms and symplectic geometry*, co-organised with Valentin Bosshard, ETH Zürich, Spring semester 2024.

Languages

- Italian: native

- English: proficient, C1

- German: fluent, B2

- French: fluent, B2

Skills

- Latex

- Git

- Programming (Python, C++)

- Data analysis (R, SQL)

- Ongoing: IBM Machine Learning Professional Ceritficate

REFERENCES

Prof. Dr. Paul Biran, Full professor of Mathematics, ETH Zürich
Email: paul.biran@math.ethz.ch
Prof. Dr. Octavian Cornea, Professor of Mathematics, Université de Montréal
Email: cornea@dms.umontreal.ca
Prof. Dr. Sobhan Seyfaddini, Full professor of Mathematics, ETH Zürich
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Prof. Dr. Ana Cannas da Silva, Adjunct professor of Mathematics, ETH Zürich
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