Noa Vikman

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University of Fribourg, Chemin du Musée 23, 1700 Fribourg, Switzerland

EDUCATION

2023–Now **PhD Mathematics**, University of Fribourg. Supervised by Professor Stefan Wenger. Part of the Swiss National Science Foundation (SNSF) project 212867.

2021–2023 **MSc Mathematics**, KTH Royal Institute of Technology and Stockholm University. Exchange year at ETH Zürich 2022–2023.

2018–2021 **BSc Engineering Physics**, KTH Royal Institute of Technology.

RESEARCH

with S. Wenger: *Filling Lipschitz spheres in metric spaces*, ArXiv Preprint (2026).

with O. Chodosh: *Macroscopic scalar curvature bounds on surfaces*, Presentation of AI-generated Proof, ArXiv Preprint (2026).

with T. Ikonen and D. Marti: *Systolic inequalities for metric surfaces via filling minimality*, ArXiv Preprint (2026).

with D. Meier and S. Wenger: *Monotone Sobolev extensions in metric surfaces and applications to uniformization*, Proc. Amer. Math. Soc. 154 (2026), 3809–3821..

with D. Meier and S. Wenger: *Energy minimizing harmonic 2-spheres in metric spaces*, J. Reine Angew. Math. 838 (2026), 137–169..

Recent Proofs of Gromov's Theorem on Groups of Polynomial Growth, MSc Thesis supervised by Prof. U. Lang at ETHZ (2023).

ORGANIZING AND COMMITTEES

Bern-Fribourg Graduate Seminar, University of Fribourg and University of Bern (2025–2026).

Swiss Mathematical Society Doctoral Day, University of Fribourg, 9 May 2025.

Co-founder & Organizer, Stockholm Master's in Mathematics Seminar, Stockholm Mathematics Centre (2021–2023).

Course Evaluation Board, KTH Royal Institute of Technology (2019–2021).

TEACHING

University of Fribourg, Teaching assistant for: Analysis I, Analysis II, Analysis III and Numerical Analysis

KTH Royal Institute of Technology, Teaching assistant for: Analysis in One Variable, Linear Algebra, Numerical Analysis and Introductory Mathematics.

OUTREACH ACTIVITIES

Representation of the Math department during *Explora* and *Journée Futur en tous genres* outreach days at the University of Fribourg.

FELLOWSHIPS AND GRANTS

2026 **SNSF Project Mobility Grant**, CHF 10750 supporting my planned extended stay at the University of Toronto.

2025 **Hausdorff Research Institute of Mathematics (HIM) Fellowship**, supporting my extended stay in Bonn.

2022 **Erasmus+ Scholarship**, supporting my studies at ETH Zurich.

2018 **Swedish Junior Water Prize**, awarded for my research project of that year.

EXTENDED STAYS

August 2026 - January 2027 **International Visiting Graduate Student**, University of Toronto. Research visit to the group of Professor Yevgeny Liokumovich.

2nd half of June 2026 **Simons Semester Geometric Analysis**, IMPAS Warsaw.

Jaunuary-April 2025 **Trimester Program: Metric Analysis**, HIM, Bonn. Including the winter school: *Analysis and geometry on groups and spaces*, the conference: *Differential geometry beyond Riemannian manifolds* and the Felix Klein lectures.

TALKS

2026 **Analysis and Applied Math Seminar**, University of Toronto.

2026 **Simons Seminar in Geometric Analysis**, IMPAN Warsaw.

2026 **Modern Advances in Geometric Analysis**, Będlewo, Poland - Lightning talk.

2026 **The Geometry and Topology seminar**, University of Luxembourg.

2026 **The Swiss Mathematical Society Doctoral Day**, ETH Zurich.

2026 **Geometry and Spectra of Compact Riemann Surfaces**, EPFL - Lightning talk.

2026 **Vienna Geometric Analysis Seminar**, University of Vienna.

2025 **Conférence Universitaire de Suisse Occidentale (CUSO) Graduate Colloquium**, University of Basel.

2025 **Differential geometry and general relativity seminar**, KTH Royal Institute of Technology.

2025 **Analysis seminar**, University of Jyväskylä.

2024 **Geometry Graduate Colloqium**, ETH Zürich.

2024 **Bern-Fribourg Graduate Seminar**, University of Bern.

2021 **Water Dialogues – What's underground? The Undervalued Groundwater**, Stockholm International Water Institute.

ATTENDED CONFERENCES

2026 **Math in May**, ETH Zurich.

2026 **Workshop on bubbling phenomena in geometric analysis**, ETH Zurich .

2025 **CUSO Summer School in Mathematics**, Centro Magliaso.

2025 **Quasiweekend III**, University of Helsinki.

2024 **Metric Geometry and Geometric Measure Theory**, University of Fribourg.

2024 **Geometry and Analysis on Metric Surfaces**, Polish Academy of Sciences Warsaw.

2024 **Challenges in Analysis and Geometry**, ETH Zürich.

2024 **13th School on Analysis and Geometry in Metric Spaces**, University of Trento.

2024 **Conference en Mémoire d'André Haefliger**, University of Geneva.

2023 **CUSO Graduate Colloquium**, University of Fribourg.

2023 **Riemannian Topology Meeting**, University of Fribourg.

2023 **Swiss Geometry Day**, UniDistance Suisse Campus Brig.

2022 **Twinned Conference on Homotopy Theory with Applications to Arithmetic and Geometry**, Max Planck Institute for Mathematics in Bonn.

EARLIER RESEARCH

with G. Romare: *Models of the Universe: An analysis of the asymptotic behaviour of non-linear dynamical systems*, BSc Thesis supervised by Prof. H. Ringström at KTH (2021).

Gold Nanoparticles as a Potential Colorimetric Sensor of Arsenic in Ground Water, High school diploma project supervised by Prof. J. Dutta and Dr. A. Uheida at KTH (2018).

OTHER WORK

2022–2023 **Junior Consultant in Data and Analytics**, Victri Advice.

Summer 2020 **Tech Summer Intern**, Storytel, Back end development.

OTHER ACCOMPLISH-MENTS

2018 **China Adolecent Science Technology Innovation Contest**, Chonqing, awarded second prize in the international category for my research project of that year.

2017 **World School's Debating Championship**, Bali, competed in the Swedish national team.

CV compiled on 2026-11-09.