Johann Wenckstern

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Education

2024 – present **EPFL**, PhD Studies in Computer Science — Lausanne, Switzerland
Supervisor: Prof. Dr. Charlotte Bunne

2022 – 2024 **ETH Zurich**, Mathematics MSc. with Distinction — Zurich, Switzerland
GPA: 6.0/6.0 (perfect)
Awarded **ETH Medal** and **Willi Studer Prize**
Thesis: Virtual Tissues - Self-Supervised Transformers for Multiplexed Images of Cancer Tissues
Supervisors: Prof. Dr. Charlotte Bunne, Dr. Gabriele Gut and Prof. Dr. Peter Bühlmann

2022 – 2023 **École Normale Supérieure - PSL**, Visiting Student — Paris, France

2018 – 2023 **ETH Zurich**, Mathematics BSc. with Distinction — Zurich, Switzerland
GPA: 5.8/6.0 (excellent)
Thesis: Instantaneuous Dynamic Equilibria in Time-Varying Networks
Supervisors: Prof. Dr. Rico Zenklusen and Dr. Leon Sering

2009 – 2017 **Gelehrtenschule des Johanneums**, Abitur — Hamburg, Germany
GPA: 1.0, graduated as best student of the year

2014 – 2015 **University of Hamburg**, Computer Science Studies — Hamburg, Germany
Participated in a program of the University of Hamburg to promote gifted high school students.
Attended two courses of the computer science bachelor program and passed both with 100%.

Research and Work Experience

2024 **Broad Institute of MIT and Harvard**, Visiting Research Scholar — Cambridge, USA
Project: Diffusion-based Representation Learning from Single-Cell Data
Supervisors: Prof. Gad Getz, Prof. David Sontag and Dr. Rebecca Boiarsky

2024 **ETH Zurich & University Hospital Zurich**, Research Student — Zurich, Switzerland
Project: Self-supervised Representation Learning on Spatial Cell Data
Supervisors: Prof. Dr. Charlotte Bunne, Dr. Gabriele Gut and Prof. Dr. Peter Bühlmann

2023 – 2024 **ETH Zurich**, Research Student — Zurich, Switzerland
Project: Incorporating Spatial Interactions into the Schrödinger Bridge Framework
Supervisors: Prof. Dr. Charlotte Bunne, Dr. Ya-Ping Hsieh and Prof. Dr. Andreas Krause

2023 **ETH Zurich**, Research Student — Zurich, Switzerland
Project: Matroid and Distribution Unknown Online Contention Resolution Schemes
Supervisors: Prof. Dr. Rico Zenklusen and Dr. Richard Santiago

2022 **Bain & Company**, Associate Consulting Intern — Zurich, Switzerland

2022 **Julius Bär**, Treasury Risk Control Intern — Zurich, Switzerland

2021 – 2022 **Zurich Insurance Group**, Data Science & Machine Learning Intern — Zurich, Switzerland

Honors and Awards

2026 **EPFL AI Center PhD Fellowship** awarded for outstanding PhD research
2025 **Best Paper Award** at ICLR25 MLGenX Workshop

2025 **ETH Medal** for outstanding master's thesis
2025 **Willi Studer Prize** for the best annual master's degree in Mathematics
2024 **EPFL Doctoral Fellowship** in Computer and Communication Sciences
2022 **Fellowship of the Swiss Study Foundation**
2017 **Bugenhagen Medal** for the best high school diploma of the year
2017 **Award of the German Mathematical Society** for best high school results
2017 **Award of the German Chemical Society** for best high school results
2017 **Award of the German Society for Classical Studies** for excellent results in Latin
2017 **Dr. Cropp Prize** awarded for best high school results in Geography

Publications, Preprints and Works under Submission

2026 **Johann Wenckstern***, Eeshaan Jain*, Benedikt von Querfurth*, Yexiang Cheng*, ..., Olivier Michielin, Andreas Wicki, Gabriele Gut, Charlotte Bunne. *The Virtual Tissues foundation model resolves spatial proteomics across scales*. *Nature*.

2026 Benedikt von Querfurth*, **Johann Wenckstern***, Eeshaan Jain*, Lukas Klein*, ..., Pascal Frossard, Andreas Wicki, Olivier Michielin, Charlotte Bunne. *spora: A Unified Multimodal Dataset for Spatial Proteomics*. *NeurIPS Evaluations & Datasets Track*.

2026 Benedikt von Querfurth, Lukas Klein, Cédric Vincent-Cuaz, ..., **Johann Wenckstern**, ..., Olivier Michielin, Martina Haberecker, Andreas Wicki, Pascal Frossard, Charlotte Bunne. *A multimodal foundation model for tissue proteomics and morphology in cancer*. In review at *Nature*.

2025 Rebecca Boiarsky, **Johann Wenckstern**, Nicholas J. Haradhvala, Gad Getz, David Sontag. *A Diffusion-Based Autoencoder for Learning Patient-Level Representations from Single-Cell Data*. Presented at *ICML Workshop on Generative AI and Biology*.

2025 Eeshaan Jain, **Johann Wenckstern**, Charlotte Bunne. *Test-time view selection for multi-modal decision making*. Presented at *ICLR Workshop on Machine Learning for Genomics Explorations*.

2024 Aurelio Sulser*, **Johann Wenckstern***, Clara Kümpel*. *GLAudio Listens to the Sound of the Graph*. Presented at *ICML Workshop on Geometry-grounded Representation Learning and Generative Modeling*.

Invited Talks

2026 **Invited Talk**, Cell Biology at Scale Symposium — Stockholm, Sweden
2025 **Invited Talk**, AstraZeneca Computational Pathology Journal Club — Virtual
2025 **Invited Talk**, Computational Spatial Biology Seminar — Virtual
2025 **Invited Talk**, CompMotifs Innovator Circle — Virtual

Supervision

Throughout my PhD studies, I had the fortune to advise many talented students:

2026 – present **Giacomo Porpiglia**, Semester Project Student
2026 – present **Alireza Malekhosseini**, Visiting Summer@EPFL Student
2026 – present **Silvan Bolt**, Visiting Summer@EPFL Student
2026 – present **Peize Hu**, Visiting Summer@EPFL Student
2025 – 2026 **Maddalena Detti**, Master's Thesis
2025 – 2026 **Yexiang Cheng**, Research Scholar
2025 **Shlesh Gholap**, Visiting Summer@EPFL Student
2025 **Benedikt von Querfurth**, Master's Thesis
2025 **Maria Vittoria Impagliazzo**, Master's Thesis

Teaching

2026 **Teaching Assistant**, Machine Learning — Lausanne, Switzerland
2025 **Teaching Assistant**, Foundation models and generative AI — Lausanne, Switzerland
2025 **Teaching Assistant**, Interaction design — Lausanne, Switzerland

2021 **Teaching Assistant**, Algebra II Zurich, Switzerland
2020 **Teaching Assistant**, Numerical analysis I Zurich, Switzerland

Skills and Languages

Python (PyTorch, PyTorch Geometric, SciKit), Java, Git, LaTeX
German (native), English (C1), French (C1), Latin (Latinum), Ancient Greek (Graecum)

Personal Interests

Tennis, Fitness, Skiing, Windsurfing, Reading, Cooking