# Levi Lingsch

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*LeviLingsch*
*Expected Graduation: August 2028*

## PhD Candidate in Applied Mathematics

## Education

2024–Present **PhD in Applied Mathematics, ETH AI Center Fellow**, *ETH Zürich*, Switzerland.
- Research Focus: Neural Operators, Tokenization, Large-Scale PDE Simulation
- Advisor: Prof. Siddhartha Mishra, Co-Advisor: Prof. Sebastian Schemm

2021–2024 **MSc in Computational Science and Engineering**, *ETH Zürich*, Switzerland.
- Thesis: Neural Operators for Forward and Inverse Problems, GPA: 5.4/6

2016–2020 **BSc in Aerospace Engineering (Summa Cum Laude, 3.98/4.0)**, *Embry-Riddle Aeronautical University*, Florida, USA.

## Experience

Nov. 2024–Feb. 2025 **Open Source Contributor**, *NVIDIA*, Zürich, Switzerland.
- Collaborating with the Zürich team to implement unstructured spherical harmonics in PyTorch
- Reviewed, refactored, and maintained high-performance GPU code adhering to best practices

2022–2024 **Research Assistant**, *Scientific Computing Group, ETH Zürich*, Switzerland.
- Developed Fourier- and Graph-based Neural Operator architectures for PDEs on unstructured meshes
- Implemented large-scale experiments with PyTorch, CUDA, and MPI on multi-GPU clusters
- Contributed to multiple top-tier publications (ICML 2024, NeurIPS 2024/2025)

May–Aug 2021 **Systems Engineering Intern**, *Sierra Nevada Corporation*, Plano, Texas, USA.
- Automated hardware test procedures using Python and MATLAB, reducing manual testing time by 40%
- Collected and analyzed large-scale systems data for fault diagnosis

Jun–Sep 2020 **Research Intern**, *MIT Little Devices Lab*, Cambridge, Massachusetts, USA.
- Developed rapid prototyping tools and conducted alpha/beta testing for hardware/software integration

Oct 2022–May 2023 **IDEA League Scholar**, *IDEA League Challenge Program*, Europe.
- Collaborated with peers from 5 universities to analyze sustainable aviation strategies for KLM Airlines

## Selected Publications

*ICML 2026* O. Oikonomou, **L. Lingsch**, et al., "Neuro-Symbolic AI for Analytical Solutions of Differential Equations."

*NeurIPS 2025* S. Wen, A. Kuhmbat, **L. Lingsch**, et al., "Geometry-Aware Operator Transformer for PDEs on Arbitrary Domains."

*NeurIPS 2025* S. Mousavi, S. Wen, **L. Lingsch**, et al., "RIGNO: A Graph-based Framework for Robust Operator Learning."

*NeurIPS 2024* **L. Lingsch**, et al., "FUSE: Fast Unified Simulation and Estimation for PDEs."

*ICML 2024* **L. Lingsch**, et al., "Beyond Regular Grids: Fourier Neural Operators on Arbitrary Domains."

## Technical Skills

Programming Python, CUDA, High-Performance CPU & GPU Computing (OpenMP, MPI)

Domains ML for Scientific Computing, Neural Operators, Tokenization

## Awards and Recognition

2025 **IBM** Funding Award, **AI Center** PhD Fellowship, Top Reviewer NeurIPS 2025, Golden Reviewer ICML 2026