

Kyle Loh

Email: kloh2023@fau.edu
Personal Website: kyledloh.com
[LinkedIn](#): Kyle Loh
[Google Scholar](#): Kyle Loh

Education

Florida Atlantic University

M.S. Mathematics, GPA: 4.00/4.00

Boca Raton, FL

2025–2027

- Thesis: The Topology of Optimizers at the Edge of Stability
- Advised by Dr. Jason Mireles-James

Florida Atlantic University

B.S. Mathematics, GPA: 4.00/4.00

Boca Raton, FL

2023–2026

- Activities: Phi Kappa Phi Honors Society, American Mathematical Society, IEEE

Florida Atlantic University High School

High School Diploma, GPA: 4.00/4.00

Boca Raton, FL

2023–2027

- Concurrently dual-enrolled in combined BS-MS program

Academic Experience

Florida Atlantic University

Undergraduate/Graduate Researcher – Dynamical Systems

Boca Raton, FL

January 2025 – Present

- Advised by Dr. Jason Mireles-James
- Research topics: chaos theory, computational topology, computer-assisted proofs
- Languages and tools: MATLAB, Python, PyTorch, C++, Julia

Florida Atlantic University

Undergraduate Researcher – Information Theory

Boca Raton, FL

January 2026 – Present

- Advised by Dr. Yu Xiang
- Research topics: decentralized novelty detection, nonparametric statistics, source coding
- Languages and tools: Python, PyTorch

Massachusetts Institute of Technology

SGI Research Fellow – Geometric Processing

Cambridge, MA

July 2026 – August 2026

- Research topics: computer vision, image processing, data encryption
- Languages and tools: Python

Emory University

REU Research Fellow – Scientific ML and Data Science

Atlanta, GA

June 2025 – August 2025

- Advised by Dr. Matthias Chung
- Research topics: scientific machine learning, inverse problems, linear algebra
- Languages and tools: Python, PyTorch

Publications

Conference Publications

Journal Articles & Preprints

1. A. DeLise, **K. Loh**, K. Patel, M. Teague, A. Arnold, M. Chung. "Optimal Linear Baseline Models for Scientific Machine Learning." American Institute of Mathematical Sciences, Foundations of Data Science, 2026.
[arXiv:2508.05831](#)
2. **K. Loh**, Y. Xiang. "Decentralized Conformal Novelty Detection via Quantized Model Exchange," 2026.
[arXiv:2605.08263](#)

Presentations

Contributed Talks

1. Jan 2026. *Joint Mathematics Meetings, AMS Contributed Paper Session on Computer Science, Information, and Communication*, Washington, DC.
Optimal Rank-Constrained Mappings for Linear ED Architectures

Poster Presentations

1. Apr 2026. *FAU Undergraduate Research Symposium*, Florida Atlantic University, Boca Raton, FL. The Convergence Behavior of RMSProp
2. Jan 2026. *Joint Mathematics Meetings AMS-PME Student Poster Session*, Washington D.C., Optimal Rank-Constrained Mappings for Linear ED Architectures [\[pdf\]](#)
3. Aug 2025. *CMDS REU Poster Presentation*, Emory University, Atlanta, GA.
Optimal Rank-Constrained Mappings for Linear ED Architectures [\[pdf\]](#)

Honors and Awards

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|---|---------------|
| • Barry M. Goldwater Scholar (\$7500), Florida Atlantic University | March 2026 |
| • Florida Sunshine State Scholar, State of Florida | March 2026 |
| • Phi Kappa Phi Honor Society Scholarship (\$1000), Florida Atlantic University | March 2026 |
| • Soar-in-4 Scholar, Florida Atlantic University | February 2026 |
| • OURI Research Grant (\$600), Florida Atlantic University | January 2026 |
| • Florida Launch Scholar (\$610), Florida Atlantic University | October 2025 |
| • Mu Alpha Theta Summer Grant (\$2000), Florida Atlantic University | June 2024 |