Paul Lutkus

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EDUCATION

University of Southern California, Viterbi School of Engineering
Cumulative GPA: 3.85/4.0   *Fall 2025 --*
PhD Student
Advisors: Lars Lindemann, Stephen Tu
Major: *Computer Science*
Concentration: *Control Theory and Machine Learning*

University of Pennsylvania, School of Engineering and Applied Science   *May 2023*
Masters of Engineering
Major: *Electrical and Systems*
Concentration: *Decision and Information Systems*

Tufts University, School of Arts and Sciences   *May 2021*
Bachelor of Science
Major: *Physics* (Highest thesis honors)
Minor: *Computer Science*

George School   *May 2017*

RELEVANT EXPERIENCE

Algorithmic Systems Theory Laboratory (Prof. Lars Lindemann) - USC/ETH-Z
Stat. Learning for Dynamics and Control Laboratory (Prof. Stephen Tu) - USC
Research Assistant:

- (CDC 2025) *Latent Representations for Control Design with Provable Stability and Safety Guarantees* (arxiv.org/abs/2505.23210)
- (CDC 2025) *Nonconvex Obstacle Avoidance using Efficient Sampling-Based Distance Functions* (arxiv.org/abs/2504.09038)
- (CDC 2025) *Incremental Composition of Learned Control Barrier Functions in Unknown Environments* (arxiv.org/abs/2409.12382)

Tufts Neutrino Group | *Undergraduate Researcher, Full-time* | 2018–2021
- Built generative deep learning models to simulate high-energy physics readings from the Fermilab collider
- Authored ICLR 2021 Paper: *Towards Designing and Exploiting Generative Networks for Neutrino Physics Experiments using Liquid Argon Time Projection Chambers* (arxiv.org/abs/2204.02496)