Harris Hardiman-Mostow

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EDUCATION

Ph.D. in Mathematics	2021-2025 (expected)
University of California, Los Angeles	Los Angeles, CA
Applied Math track	

B.S. Mathematics and Mechanical Engineering	May 2021
Tufts University	Medford, MA
Summa Cum Laude (3.96 GPA)	

EXPERIENCE

Graduate Data Science Intern — Summer 2021
The MITRE Corporation — Bedford, MA

- Researched and implemented unsupervised algorithms for multivariate online and batch-based drift detection in time series data.

Undergraduate Researcher — May 2020–May 2021
Tufts University Department of Mathematics — Medford, MA

- Researched and implemented novel machine learning algorithms for signal reconstruction and anomaly detection in sparse spatio-temporal data.
- Submitted algorithm to the NSF Algorithms for Threat Detection Data Challenge, finishing in 4th nationally, including 2nd place in the final round of testing data.

PUBLICATIONS

In Review:

1. J.M. Murphy, **H. Hardiman-Mostow**, O. Esan, and M. Mueller, "Signal Reconstruction and Anomaly Detection with Mean-Flow Interpolation of Temporally Sparse Data," submitted to IEEE International Workshop on Machine Learning for Signal Processing.

INVITED TALKS AND PRESENTATIONS

4. "Anomaly Detection with Mean-flow Interpolation of Termporally Sparse Data," Tufts University Undergraduate Research Symposium, Tufts University, Medford, MA. May 2021.

3. O. Esan, **H. Hardiman-Mostow**, M. Mueller, "Anomaly Detection in Sparsely Sampled Traffic Flow," NSF Algorithms for Threat Detection Annual Workshop, University of Washington, Seattle, WA. November 2020.*

2. "Anomaly Detection on Spatiotemporal Graphs of Sparse Traffic Data," Tufts Summer Scholars Fall Poster Session, Tufts University, Medford, MA. October 2020.

1. "Investigating Anomaly Detection With Sparse Traffic Data," Tufts Summer Scholars Conference, Tufts University, Medford, MA. August 2020.

*Presenters listed alphabetically.
Note: Nos. 1-4 took place virtually due to the COVID-19 pandemic.

Grants and Awards

Grants:

- **NSF MENTOR Fellowship** (UCLA, 2021-2022). $34,000.
- **Tufts Summer Scholars Grant** (Tufts, 2020). $5,500. Awarded to student-professor pairs to fund summer research projects.

Honors and Awards:

- **Frederick Melvin Ellis Prize** (Tufts, 2021), awarded to students who have "demonstrated marked athletic versatility, a modest manner, successful academic achievement, and the potential for effective leadership."
- **Ralph S. Kaye Memorial Prize** (Tufts, 2021), awarded to the top mathematics student.
- **Tau Beta Pi** (Tufts, 2019), the national engineering honor society. Membership is awarded to 3rd year undergraduates in the top $1/8^{\text{th}}$ of their class.
- **Dean's List** (Tufts, all semesters)

Teaching

UCLA
- TBD

Tufts University
- Teaching Assistant, ES-2 (Introduction to Computing in Engineering). Spring 2019.

Activities and Leadership

Tufts Men's Varsity Rowing   September 2017–May 2021
Team Captain, 2019–May 2021
- First-Team All-Conference, Spring 2021. Conference All-Academic Team, Spring 2019, 2020, 2021.
- Committed 16 hours per week to racing and training, year-round.
- Aided in creating a new team leadership position to coordinate trainings aimed at combating bias.

Skills

- **Programming:**   Python (including numpy, pandas, scikit-learn, scipy, matplotlib), MATLAB.
- **Software:**   LaTeX, Microsoft Office, Mathematica, SOLIDWORKS, LabVIEW.