Tung T. LAM

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Education

2019–Present	**Doctor of Philosophy in Mathematics**, *State University of New York at Albany*.
	Advisors: Justin Curry and Michael Lesnick.
	(degree expected in 2024)
2017–2019	**Master of Arts in Mathematics**, *The University of Alabama*.
2009–2013	**Bachelor of Science with honors in Mathematics and Computer Science**, *University of Science, Vietnam National University*, Ho Chi Minh City, Vietnam.

Work and Experience

2023–now	**Lecturer**, *State University of New York at Albany*.
2022–2023	**Graduate Research Assistant**, *State University of New York at Albany*.
2019–2022	**Graduate Teaching Assistant**, *State University of New York at Albany*.
2017–2019	**Graduate Teaching Assistant**, *The University of Alabama, Tuscaloosa*.

Publications and Preprints

The Universal ℓ^p metrics on merge trees, w/ Robert Cardona, Justin Curry, and Michael Lesnick. SoCG2022. doi:10.4230/LIPIcs.SoCG.2022.24.

Algebraic and Geometric Models for Space Networking, w/ William Bernardoni, Robert Cardona, Jacob Cleveland, Justin Curry, Robert Green, Brian Heller, Alan Hylton, and Robert Kassouf-Short (Submitted). arXiv:2304.01150.

Delaunay Bifiltrations of Functions on Point Clouds, w/ Ángel Javier Alonso, Michael Kerber, and Michael Lesnick. The proceedings of SODA24. doi:10.1137/1.9781611977912.173.

ℓ_p-type Metrics on Reeb graphs, with Robert Cardona. (In preparation).

Bifunction and Interlevel Delaunay Trifiltrations, w/ Ángel Javier Alonso, Michael Kerber, Michael Lesnick, and Abhishek Rathod (Submitted).

Research Interests

Theory and Application of Topological Data Analysis; Persistence Theory; Computational Topology and Geometry; Computational Applied Topology for Time-varying Structure; Topological Machine Learning. Network Analysis.

Conference/Workshop/Summer School Attended

2024	AMS Northeastern Sectional Meeting, Fall 2024, *Albany*.
2024	Workshop on "Computational Persistence" - *online*.
2024	AMS-Mathematics Research Communities on Topological Data Analysis, Climate Science and Dynamical Systems Theory - *New York.*.

2023   Workshop on "Computational Persistence" - *online*.

2023   The Computational Geometry Week - *Dallas*.

2023   Joint Mathematics Meetings - *Boston*.

2021   Workshop on "Metrics in Multiparameter Persistence" (2021) - *online*.

2018   Summer School & Workshop on "Theory and Foundations of TGDA", *MBI, OSU*.

Talks

2024   **Delaunay Bifiltration**,
AMS Northeastern Sectional Meeting, Fall 2024 at Albany.

2023   **Delaunay-type Bifiltration**,
SUNY Albany Showcase Presentations, Albany.

2023   **ℓ^p-type Metrics on Reeb Graph**,
CGWeek: Workshop on Mobius inversion and Reeb spaces, Dallas.

2022   **ℓ^p-type Metric on Merge Trees**,
Workshop on Computational Persistence, online.

2022   **ℓ^p metrics on merge trees**,
Union College

2021   **Presentation Based Metrics for Merge Trees**,
ATiA seminar, SUNY Albany.

2024   **Delaunay Bifiltration**, AMS Northeastern Sectional Meeting, Fall 2024 at Albany.

2023   **Delaunay-type Bifiltration**, SUNY Albany Showcase Presentations, Albany.

2023   **ℓ^p-type Metrics on Reeb Graph**, CGWeek: Workshop on Mobius inversion and Reeb spaces, Dallas.

2022   **ℓ^p-type Metric on Merge Trees**, Workshop on Computational Persistence, online.

2022   **ℓ^p metrics on merge trees**, Union College, online.

2021   **Presentation Based Metrics for Merge Trees**, ATiA seminar, SUNY Albany.

Teaching

Fall 2024   AMAT108 - Elementary Statistics (2 sections), SUNY at Albany.

Spring 2024   AMAT108 - Elementary Statistics (2 sections), SUNY at Albany.

Fall 2023   AMAT112 - Calculus 1 (2 sections), SUNY at Albany.

Spring 2023   AMAT502 - Modern Computing for Mathematician, SUNY at Albany.
Graduate-level course (Teaching Assistant).

Fall 2022   AMAT502 - Modern Computing for Mathematicians, SUNY at Albany.
Graduate-level course (Teaching Assistant).

Spring 2022   AMAT100 - Precalculus, SUNY at Albany.

Fall 2021   AMAT100 - Precalculus, SUNY at Albany.

Summer 2016   Multivariable Calculus, APCS, University of Science, VNU-HCMC.
(Teaching Assistant)

Awards and Research Supports

Spring 2025   NSF travel award for JMM 2025.

Spring 2025   Travel award for AMS-MRC meeting at JMM.

Fall 2024	Travel award for AMS Southeastern Sectional Meeting - cancelled (Declined)
Summer 2024	Travel award for AMS-MRC on Topological Data Analysis, Climate Science and Dynamical Systems Theory. (Declined)
Summer 2024	Travel award for SPIRES Workshop, Oxford, UK. (Declined)
Summer 2023	NSF travel award for CGWeek 2023.
Winter 2022	NSF travel award for JMM 2023.
2017	Graduate Council Fellowship, The University of Alabama.
2009-2013	Awards for Outstanding Students, University of Science, HCMUS.

Languages

Vietnamese (Mother tongue), English, French

Programming Languages

MATLAB/SciLab, Python, C/C++, FORTRAN