

THUY LINH DO

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New Orleans, LA - 70118, USA

EDUCATION

- **Tulane University** Jul 2019 - May 2025* (expected)
Doctor of Philosophy - PhD in Applied Mathematics New Orleans, LA, USA
 - GPA: 4.00/4.00
- **Vietnam National University - University of Education** Sep 2013 - Jul 2017
Bachelor in Mathematics Teacher Education, Summa Cum Laude Hanoi, Vietnam
 - GPA: 3.81/4.00

RESEARCH INTERESTS

Mathematical and Statistical Modeling, Data Analysis, Change-Point Detection, Intracellular Transport, Machine Learning, Hierarchical Models, Bayesian Inference.

SKILLS

- **Programming:** Python, R, LaTeX, Maple, SQL, MatLab, Microsoft Office.
- **Python:** Influent in using JAX, tskit, Numpy, Matplotlib, PyTorch
- **R:** Influent in using RStudio, including R Script, R Markdown, packages ggplot2, tidyverse, dplyr, stats, MASS, caret, tidymodels, parallel
- **Languages:** Strong reading, writing and speaking competencies for English and Vietnamese.

EMPLOYMENT HISTORY

- **Tulane University** 2019 - present
PhD Candidate/Graduate Teaching Associate/Graduate Research Assistant New Orleans, LA, USA
- **NSF-Simons Southeast Center for Mathematics and Biology** 2022 - present
Junior Researcher Atlanta, GA, USA
- **Vietnam National University, University of Science** 2017 - 2019
Lecturer Hanoi, Vietnam

RESEARCH PUBLICATIONS

I= IN PREPARATION, B= BOOKS AND CHAPTERS, J=JOURNAL, S=IN SUBMISSION, T=THESIS

- [J.1] Dat Do, Linh Do, XuanLong Nguyen (2025). **Strong identifiability and parameter learning in regression with heterogeneous response**. *Electronic Journal of Statistics*, 19 (1) 131 - 203.
- [S.1] Dat Do, Linh Do, Scott A. McKinley, XuanLong Nguyen, Jonathan Terhorst (2024). **Dendrogram of mixing measures: Hierarchical Clustering and model selection for finite mixture models**. The manuscript is under review with *Journal of the American Statistical Association*.
- [S.2] Keisha J. Cook, Nathan Rayens, Linh Do, Christine K. Payne, and Scott A. McKinley (2024). **Considering experimental frame rates and robust segmentation analysis of piecewise-linear microparticle trajectories**. The manuscript is submitted for publication in *Mathematical Biosciences and Engineering*.
- [B.1] Nguyen, A.T., Pham, H.T.T, Trinh, Q.A, Linh Do, Dang, P.A, & Hens, L., (2021). **The geography of climate change adaptation in the vietnam northern mountains: A quantitative analysis for intentions of indigenous ethnic minorities using structural equation modeling (sem) and protection motivation theory (pmt)**. In: Rai, P.K., Singh, P., Mishra, V.N. (eds) Recent Technologies for Disaster Management and Risk Reduction. Earth and Environmental Sciences Library. Springer, Cham.
- [I.1] Linh Do and et al. **CPLASS - A segmentation analysis in noisy trajectories**. To be submitted to *Journal of Computational and Graphical Statistics*
- [I.2] Linh Do and et al. **Dendrogram of signal functions for summarization and model selection in changepoint detection**. In preparation for submission to the *Journal of Statistical Planning and Inference*.

PRESENTATIONS

- **Strong identifiability and parameter learning in regression with heterogeneous response.** 13th International Conference on Bayesian Nonparametrics (Puerto Varas, Chile). *Oct 2022.*
- **Mixture Model and the applications.** Graduate Colloquium at the Department of Mathematics, Tulane University. *Nov 2022.*
- **A new changepoint algorithm detecting multiple change-in-velocity.** NSF-Simons Southeast Center for Mathematics and Biology (SCMB). *Oct 2023.*
- **Dendrogram of mixing measures: Hierarchical clustering and model selection for finite mixture models.** Joint Statistical Meetings (Portland, Oregon). *Aug 2024*
- **Inferring and interpreting heterogeneous data using dendrograms.** Computational and Applied Math Seminar at the Department of Mathematics, Tulane University. *Nov 2024.*

TEACHING AND ADVISING

- **Graduate Teaching Assistant** 2019 - present
Tulane University - Department of Mathematics
 - MATH 1110: Probability and Statistics
 - MATH 1230: Statistics for Scientists
 - MATH 1210: Calculus I
 - MATH 1220: Calculus II
 - MATH 2210: Calculus III
- **Lecturer** 2017-2019
Vietnam National University, University of Science
 - Applied Statistics
 - Mathematical Statistics and Probability
 - Calculus I, II, III
 - Linear Algebra

HONORS AND AWARDS

- **Mathematical Sciences and Research Institute (MSRI) Summer Program Admission** 2022
MSRI & Courant Institute in New York
 - The award was being selected into the program. Mathematics of Machine Learning (INdAM and Courant Institute).
- **Toshiba Scholarship for young scientists** 2018
Toshiba
 - The Toshiba scholarship program aims to support students, graduate students, and graduate students (students) with excellent academic and research achievements.
- **Golden record of excellent valedictorians graduating from universities in Hanoi, Vietnam** 2017
Hanoi Municipal Party Committee - Hanoi People's Council - Hanoi People's Committee.
 - The program to honor outstanding valedictorians graduating from universities and academies in Hanoi in 2017, organized by the Hanoi Municipal Party Committee, the People's Council, and the People's Committee.
- **Prize for Outstanding Student Performance** 2017
Hanoi University of Science and Hanoi University of Education, VNU
 - For students with excellent achievement in learning and scientific research.

VOLUNTEER EXPERIENCE

- **Conference Organizer, Marketing and Photography** 2019
Math For All - Tulane University - New Orleans - Louisiana.
- **Session Leader** 2020
Boys at Tulane in STEM (BATS) - K-12 STEM Education Events - Tulane University - New Orleans - Louisiana.

REFERENCES

1. **Scott A. McKinley**
Associate Professor, Department of Mathematics
Tulane University
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Role: Thesis Advisor / Chair of Dissertation Committee
2. **Lifeng Han**
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4. **XuanLong Nguyen**
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5. **Viet Cuong Do**
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