



Dat Do

Curriculum Vitae

Personal Informations

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Education

2019–2025 **Graduate**, *University of Michigan*, Department of Statistics, Ann Arbor, MI, America.
(Expected) Advised by Professor Jonathan Terhorst and XuanLong Nguyen; GPA : 4/4
2015–2019 **Undergraduate**, *Hanoi University of Science*, Honor Program in Mathematics, Hanoi, Vietnam.
Advised by Professor Cong Son Ta and Tien Dung Nguyen; GPA : 3.88/4

Publications

* stands for equal contribution.

1. **Do, Dat**, Linh Do, Scott A. McKinley, Jonathan Terhorst, XuanLong Nguyen. "Dendrogram of mixing measures: Hierarchical clustering and model selection for finite mixture models." arXiv preprint (2024) [Paper link] ArXiv:2403.01684, under review with *Journal of the American Statistical Association*.
2. Zhu, Jiacheng*, Aritra Guha*, **Dat Do***, Mengdi Xu, XuanLong Nguyen, and Ding Zhao. "Functional optimal transport: regularized map estimation and domain adaptation for functional data." *Journal of Machine Learning Research* 25, no. 276 (2024): 1-49. [Paper link] ArXiv:2102.03895.
3. **Do, Dat***, Huy Nguyen*, Khai Nguyen, and Nhat Ho. "Minimax optimal rate for parameter estimation in multivariate deviated models." *Advances in Neural Information Processing Systems* 36 (2024) [Paper link] ArXiv:2301.11808.
4. **Do, Dat***, Nhat Ho*, and XuanLong Nguyen. "Beyond Black Box Densities: Parameter Learning for the Deviated Components." *Advances in Neural Information Processing Systems* 35 (NeurIPS 2022) [Paper link] ArXiv:2202.02651.
5. **Do, Dat**, Linh Do, XuanLong Nguyen. "Strong identifiability and parameter learning in regression with heterogeneous response." arXiv preprint (2022) [Paper link] ArXiv:2212.04091, under major revision with *Electronic Journal of Statistics*.

6. Khang Le, Dung Le, Huy Nguyen, **Dat Do**, Tung Pham, and Nhat Ho. "Entropic gromov-wasserstein between gaussian distributions." *In International Conference on Machine Learning*, pp. 12164-12203. PMLR, 2022 [Paper link] ArXiv: 2108.10961.
7. TC Son, LV Dung, **Dat Do**, TT Trang. "Generalized Marcinkiewicz laws for weighted dependent random vectors in Hilbert spaces." *Theory of Probability & Its Applications* 67 (3), 434-451 [Paper link].

In preparation

1. **Do, Dat**, Sunrit Chakraborty, Jonathan Terhorst, XuanLong Nguyen. "Moment tensors of Dirichlet distributions and posterior contraction behavior of the Latent Dirichlet Allocation." To be submitted to *Annals of Statistics*.
2. **Do, Dat**, XuanLong Nguyen, Jonathan Terhorst. "On the convergence rate and model selection of admixture models."
3. Do, Linh*, **Dat Do***, Scott A. McKinley. "Dendrogram of signal functions for summarization and model selection in changepoint detection." To be submitted.

Talks

- 11/2024 "Inferring and Interpreting Heterogeneous Models with Dendrogram" Computation and Applied Math Seminar, Tulane University (New Orleans, Louisiana).
- 8/2024 "Dendrogram of mixing measures: Hierarchical clustering and model selection for finite mixture models." Joint Statistical Meetings (Portland, Oregon).
- 3/2024 "Dendrogram of mixing measures: Hierarchical clustering and model selection for finite mixture models." Michigan Student Symposium for Interdisciplinary Statistical Sciences 2024 (Ann Arbor, Michigan).
- 2/2022 "Functional optimal transport: map estimation and domain adaptation for functional data." AAAI Workshop 2022 on Optimal Transport and Structured Data Modeling (virtually).
- 3/2022 "Functional optimal transport: map estimation and domain adaptation for functional data." Michigan Student Symposium for Interdisciplinary Statistical Sciences 2022 (Ann Arbor, Michigan).
- 10/2022 "Strong identifiability and parameter learning in regression with heterogeneous response." 13th International Conference on Bayesian Nonparametrics (Puerto Varas, Chile).

Teaching and Advising

2019– **Graduate Student Instructor**, *Department of Statistics, University of Michigan*.

- STATS 425: Introduction to Probability
- STATS 412: Introduction to Probability and Statistics
- STATS 510: Probability and Distribution theory
- STATS 425: Introduction to Probability
- STATS 621: Probability Theory 2
- STATS 430: Applied Probability
- STATS 499: Honors Seminar

Computer skills

Programming Python, Julia, R, Java
 Python Influential in using JAX, tskit, Numpy, Matplotlib, PyTorch
 Demonstration Maple, LaTeX

Academic Awards, Titles, and Scholarships

- Junior Travel Awards, Bayesian Nonparametric Conference, Chile 2022
- Outstanding first-year Ph.D. student, Department of Statistics, University of Michigan 2020
- Valedictorian of Hanoi University of Science, Vietnam National University 2019
- Second Prize, Vietnam Mathematical Olympiad 2014
- First Prize, Vietnam Mathematical Olympiad 2013

Leaves and Modified Duties

2023 First child born on January 23; 3 weeks parental leaves.

References

- XuanLong Nguyen, Professor, Department of Statistics, University of Michigan.
- Jonathan Terhorst, Associate Professor, Department of Statistics, University of Michigan.
- Scott McKinley, Associate Professor, Department of Mathematics, Tulane University.