

TrungTin Nguyen

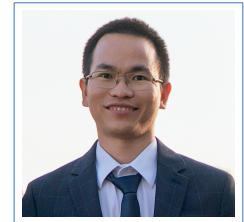
Curriculum Vitae

Postdoctoral Research Fellow/Lecturer
Queensland University of Technology

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📄 **Homepage:** trung-tinnguyen.github.io

🔗 [Short CV Version](#), June 14, 2026



"The book of nature is written in the language of mathematics." (Galileo G., 1623).

"Essentially, all models are wrong, but some models that know when they are wrong are useful." (adapted from George E.P. Box, 1979).

Academic Appointment

- 10/02/2025–
present **Postdoctoral Research Fellow/Lecturer (Level B)**, [School of Mathematical Sciences, Queensland University of Technology](#), Brisbane, Australia.
Topic: Computational Statistics and Inference for the [ARC Centre of Excellence for the Mathematical Analysis of Cellular Systems \(MACSYS\)](#).
Member of the [QUT Centre for Data Science](#), focusing on [Fundamental Methods in Data Science and AI](#).
Mentors: [Christopher Drovandi](#).
- 04/12/2023–
03/12/2024 **Postdoctoral Research Fellow (Level A)**, [School of Mathematics and Physics, The University of Queensland](#), Brisbane, Australia.
Topic: Mathematical analysis of operator learning with artificial neural networks.
Mentors: [Hien Duy Nguyen](#), and [Xin Guo](#).
- 01/01/2022–
30/11/2023 **Postdoctoral Research Fellow (Contract Inria + Contract UGA MIAI Grenoble Alpes during 01/05/2023–30/09/2023)**, [Statify Team, Inria centre at the University Grenoble Alpes](#), Grenoble, France.
Topic: Bayesian model selection and simulated-based inference for complex and high-dimensional models.
Mentors: [Florence Forbes](#), and [Julyan Arbel](#).

Education

- 2019–2022 **Doctor of Philosophy**, [Normandie Université](#), Caen, France.
Major in Statistics and Data Science.
Thesis title: [Model selection and approximation in high-dimensional mixture of experts models: from theory to practice](#).
Advisors: [Faïcel Chamroukhi](#). **Rapporteurs:** [Sylvain Arlot](#), and [Judith Rousseau](#).
Committee members: [Christophe Biernacki](#), [Hien Duy Nguyen](#), and [Gaëlle Chagny](#).
- 2017–2019 **Master of Science, Technology and Health**, [Université d'Orléans](#), Orléans, France, GPA: 18/20.
Mention: *Très Bien*. Major in Applied Mathematics.
Thesis title: Reinforcement learning for resource allocation problems using a partially observable Markov decision process.
Advisor: [Le Thi Hoai An](#).
- 2013–2017 **Bachelor of Science**, [Vietnam National University-Ho Chi Minh University of Science \(VNU-HCM\)](#), Ho Chi Minh City, Vietnam, GPA: 9.17/10. Rank: 2/1557, Summa Cum Laude.
Honors Program in Mathematics and Computer Science. Major in Probability and Statistics.
Thesis title: Multiplicative censoring model.
Advisor: [Dang Duc Trong](#).

Research Interests

TrungTin Nguyen is an applied statistician and mathematician whose research focuses on elucidating the mechanisms and interactions between natural and artificial intelligence, with applications including the construction of virtual biological cells and the development of trustworthy and robust foundational artificial intelligence systems. His current work involves developing genotype-phenotype mapping methods for high-dimensional, heterogeneous biological data, leveraging artificial intelligence techniques (such as modular deep learning, including mixture of experts, large language models, and physics-/biologically informed neural networks) alongside statistical learning approaches (including Bayesian inference, model selection, handling of missing data, and probabilistic graphical models). His research also focuses on developing mathematical and statistical frameworks for calibrating large-scale scientific machine learning models using experimental data, as well as advancing methods for the integration, interpretation, and application of multi-omics data.

Statistical learning **Model selection** (minimal penalties and slope heuristics, non-asymptotic oracle inequalities), **simulation-based inference** (approximate Bayesian computation, Bayesian synthetic likelihood, method of moments), **Bayesian nonparametrics** (Gibbs-type priors, Dirichlet process mixture), **high-dimensional statistics** (variable selection via Lasso and penalization, graphical models), **uncertainty estimation**, **missing data** (imputation methods, likelihood-based approaches with missing data).

Machine learning **Supervised learning** (deep hierarchical mixture of experts, deep neural networks), **unsupervised learning** (clustering via mixture models, dimensionality reduction via principal component analysis, deep generative models via variational autoencoders, generative adversarial networks and normalizing flows), **reinforcement learning** (partially observable Markov decision process), **structured prediction** (probabilistic graphical models), **scientific machine learning** (physics-informed/biologically-informed neural networks).

Optimization **Robust and effective optimization algorithms for mixture models** (MM algorithm, expectation–maximization, variational Bayesian inference, Markov chain Monte Carlo methods), **difference of convex algorithm**, **optimal transport** (Wasserstein distance, voronoi loss function)

Applications **Natural language processing** (large language model, text classification/retrieval, openChat), **remote sensing** (planetary science, e.g., retrieval of Mars surface physical properties from hyper-spectral images), **signal processing** (sound source localization), **biological data** (genomics, transcriptomics, proteomics, cellular systems), **computer vision** (image segmentation, image classification/retrieval), **quantum chemistry, drug discovery, and materials science** (supervised and unsupervised learning on molecular modeling).

Publications and Research Impact

My research develops mathematically grounded, computationally efficient statistical methods for trustworthy, energy-efficient artificial intelligence, with impact in health, biology, and climate-sensitive modelling by improving reliability while reducing computational cost. Since 2020, my work has attracted over 555 citations (h-index 13; i10-index 14) according to [Google Scholar](#) (accessed June 2026). My current publication record comprises 40 outputs, including 10 peer-reviewed journal publications, 17 peer-reviewed conference publications, 4 peer-reviewed workshop publications, 1 Ph.D. thesis, and 8 preprints. Annual citations have risen strongly over time, and my work has combined mathematical rigour with practical statistical methodology for reliable and computationally efficient AI. Over 85% of my journal outputs appear in Q1–Q2 venues (SNIP quartiles), and one key paper achieved a Field-Weighted Citation Impact (FWCI) of 6.60.

Total: 40 Peer-reviewed Journal Publications (10 papers: Electronic Journal of Statistics, Statistics and Computing, Bayesian Analysis, Econometrics and Statistics, , Journal of Statistical Distributions and Applications, Annals of the Institute of Statistical Mathematics, Transactions on Machine Learning Research, Journal of Nonparametric Statistics, Communications in Statistics - Theory and Methods and Cogent Mathematics & Statistics) + **Peer-reviewed Conference Publications** (17 papers: 1 ICLR, 3 ICML, 4 NeurIPS (1 Spotlight), 2 AISTATS (1 Spotlight), 1 EMNLP, 1 IJCNN, 1 AJCAI, 2 JDS 2022, 1 ISBA 2021, and 1 BNP13 2022)+ **Peer-reviewed Workshop Publications** (4 papers: 1 ICML 2025 Generative AI and Biology Workshop, 1 ICML 2026 Hypothesis Testing Workshop, 1 AdaptFM: Resource-Adaptive Foundation Model Inference, 1 ICML 2025 Workshop on Multi-modal Foundation Models and Large Language Models for Life Sciences)+ **Thesis** (1 Ph.D.) + **Preprints** (8 papers).

Main: 35 ^fFirst/Co-first author (18 papers), ^eMain experimental contribution/co-contribution (3 papers), ^tMain theoretical contribution/co-contribution (14 papers).

Other: 5 ⁱIdea/Writing contribution/co-contribution (5 papers).

Selected Publications

- 2026 Hien Duy Nguyen, Mayetri Gupta, Jacob Westerhout, and **TrungTin Nguyen**ⁱ. [On the large-sample limits of some Bayesian model evaluation statistics](#). *Econometrics and Statistics*, 2026.
- 2026 Duy Minh Ho Nguyen, Trung Quoc Nguyen, Ha Thi Hong Le, Mai Thanh Nhat Truong, **TrungTin Nguyen**^t, Nhat Ho, Khoa D. Doan, Duy Duong-Tran, Li Shen, Daniel Sonntag, James Zou, Mathias Niepert, Hyojin Kim, and Jonathan E. Allen. [FACET: A Fragment-Aware Conformer Ensemble Transformer](#). In *The Fourteenth International Conference on Learning Representations, ICLR 2026, Acceptance rate 28% over close to 19000 submission*, 2026.
- 2026 Do Tien Hai^f, Trung Nguyen Mai^f, **TrungTin Nguyen**^f, Nhat Ho, Binh T Nguyen, and Christopher Drovandi. [Dendrograms of Mixing Measures for Softmax-Gated Gaussian Mixture of Experts: Consistency Without Model Sweeps](#). In *Proceedings of The 29th International Conference on Artificial Intelligence and Statistics, AISTATS 2026 Spotlight, Acceptance rate 2.5% over 2102 submissions*, 2026.
- 2025 Hien Duy Nguyen, **TrungTin Nguyen**^t, Julyan Arbel, and Florence Forbes. [Revisiting Concentration Results for Approximate Bayesian Computation](#). *Bayesian Analysis*, March 2025.
- 2025 Duy M. H. Nguyen, Nghiem T. Diep, Trung Q. Nguyen, Hoang-Bao Le, Tai Nguyen, Tien Nguyen, **Nguyen, TrungTin**^t, Nhat Ho, Pengtao Xie, Roger Wattenhofer, James Zhou, Daniel Sonntag, and Mathias Niepert. [LoGra-Med: Long Context Multi-Graph Alignment for Medical Vision-Language Model](#). In *Advances in Neural Information Processing Systems, NeurIPS 2025, Acceptance rate 24.52% over 21575 submissions*, December 2025.
- 2025 Binh H Ho^f, Long Nguyen Chi^f, **TrungTin Nguyen**^f, Binh T Nguyen, Van Ha Hoang, and Christopher Drovandi. [A Unified Framework for Variable Selection in Model-Based Clustering with Missing Not at Random](#). In *Advances in Neural Information Processing Systems, NeurIPS 2025, Acceptance rate 24.52% over 21575 submissions*, December 2025.
- 2024 Hoai-Chau Tran, Duy MH Nguyen, Manh-Duy Nguyen, **TrungTin Nguyen**^t, Ngan Hoang Le, Pengtao Xie, Daniel Sonntag, James Zou, Binh T. Nguyen, and Mathias Niepert. [Accelerating Transformers with Spectrum-Preserving Token Merging](#). In *Advances in Neural Information Processing Systems, NeurIPS 2024, Acceptance rate 25.8% over 15671 submissions*, December 2024.
- 2024 **TrungTin Nguyen**^f, Florence Forbes, Julyan Arbel, and Hien Duy Nguyen. [Bayesian nonparametric mixture of experts for inverse problems](#). *Journal of Nonparametric Statistics*, October 2024.
- 2024 Huy Nguyen^f, **TrungTin Nguyen**^f, Khai Nguyen, and Nhat Ho. [Towards Convergence Rates for Parameter Estimation in Gaussian-gated Mixture of Experts](#). In *Proceedings of The 27th International Conference on Artificial Intelligence and Statistics, AISTATS 2024, Acceptance rate 27.6% over 1980 submissions*, May 2024.

- 2023 Huy Nguyen, **TrungTin Nguyen**^e, and Nhat Ho. [Demystifying Softmax Gating Function in Gaussian Mixture of Experts](#). In *Advances in Neural Information Processing Systems, NeurIPS 2023 Spotlight*, Acceptance rate 3.6% over 12343 submissions, December 2023.
- 2023 Truong Giang Do, Huy Khiem Le, Quang Pham, **TrungTin Nguyen**^t, Binh T. Nguyen, Thanh-Nam Doan, Chenghao Liu, Savitha Ramasamy, Xiaoli Li, and Steven HOI. [HyperRouter: Towards Efficient Training and Inference of Sparse Mixture of Experts](#). In *Proceedings of the 2023 Empirical Methods in Natural Language Processing, EMNLP 2023 Main*, Acceptance rate 14% over 1041 submissions, December 2023.
- 2022 **TrungTin Nguyen**^f, Hien Duy Nguyen, Faicel Chamroukhi, and Florence Forbes. [A non-asymptotic approach for model selection via penalization in high-dimensional mixture of experts models](#). *Electronic Journal of Statistics*, volume 16, pages 4742 – 4822, 2022. Publisher: Institute of Mathematical Statistics and Bernoulli Society.
- 2022 Florence Forbes, Hien Duy Nguyen^t, **TrungTin Nguyen**^t, and Julian Arbel. [Summary statistics and discrepancy measures for approximate Bayesian computation via surrogate posteriors](#). *Statistics and Computing*, volume 32, page 85, October 2022.
- 2021 Hien Duy Nguyen^f, **TrungTin Nguyen**^f, Faicel Chamroukhi, and Geoffrey John McLachlan. [Approximations of conditional probability density functions in Lebesgue spaces via mixture of experts models](#). *Journal of Statistical Distributions and Applications*, volume 8, page 13, 2021.

Complete Publications

Scalability and robustness in scientific statistical machine learning

- 2026 TrungKhang Tran^f, **TrungTin Nguyen**^f, Gersende Fort, Tung Doan, Hien Duy Nguyen, Binh T Nguyen, Florence Forbes, and Christopher Drovandi. [Revisiting Incremental Stochastic Majorization-Minimization Algorithms with Applications to Mixture of Experts](#). *arXiv preprint arXiv:2601.19811*, 2026.
- 2026 TrungKhang Tran^f, **TrungTin Nguyen**^f, Md Abul Bashar, Nhat Ho, Richi Nayak, and Christopher Drovandi. [Fast Model Selection and Stable Optimization for Softmax-Gated Multinomial-Logistic Mixture of Experts Models](#). *arXiv preprint arXiv:2602.07997*, 2026.
- 2026 **TrungTin Nguyen**^f, Binh H. Ho^f, Michael Pan, Jennifer A. Flegg, Michael J. McDonald, and Christopher Drovandi. [Bayesian Parameter Balancing Enables Robust and Consistent Estimation of Kinetic Parameter Uncertainty](#). *bioRxiv*. Cold Spring Harbor Laboratory, 2026.
- 2026 Nguyen, Duy Minh Ho and Tran, Tuan Anh and Nguyen, Thuy-Duong Khanh and Xie, Siwei and Nguyen, Trung Quoc and Truong, Mai Thanh Nhat and Palenicek, Daniel and Le, An Thai and Barz, Michael and Hannus, Eric and **TrungTin Nguyen**^t and Dam, Tuan Quang and Le, Tran Nguyen and Le, Ngan and VU, Minh Nhat and Doan, Khoa D. and Ngo, Vien Anh and Xie, Pengtao and Zou, James and Sonntag, Daniel and Peters, Jan and Niepert, Mathias. [StructSAM: Structure- and Spectrum-Preserving Token Merging for Segment Anything Models](#). In *ICML 2026 Workshop on AdaptFM: Resource-Adaptive Foundation Model Inference*, 2026.
- 2026 Minh Long Nguyen, Thanh Long Vu, Christopher Drovandi, Leah F. South, and **TrungTin Nguyen**^f. [Lambda-PSD: Scalable Approximate SNR-Optimised Polynomial Stein Discrepancies](#). In *The ICML 2026 Workshop on Hypothesis Testing*, 2026.
- 2026 Duy MH Nguyen, Tuan A Tran, Duong Nguyen, Siwei Xie, Trung Q Nguyen, Mai TN Truong, Daniel Palenicek, An T Le, Michael Barz, **TrungTin Nguyen**^t, and Tuan Dam, Ngan Le, Minh Vu, Khoa Doan, Vien Ngo, Pengtao Xie, James Zou, Daniel Sonntag, Jan Peters, Mathias Niepert. [StructSAM: Structure-and Spectrum-Preserving Token Merging for Segment Anything Models](#). *arXiv preprint arXiv:2603.07307*, 2026.

- 2026 Do Tien Hai^f, Trung Nguyen Mai^f, **TrungTin Nguyen^f**, Nhat Ho, Binh T. Nguyen, and Christopher Drovandi. [Dendrograms of Mixing Measures for Softmax-Gated Gaussian Mixture of Experts: Consistency Without Model Sweeps](#). In *Proceedings of The 29th International Conference on Artificial Intelligence and Statistics, AISTATS 2026 Spotlight*, Acceptance rate 2.5% over 2102 submissions, 2026.
- 2025 Tuan Thai^f, **TrungTin Nguyen^f**, Dat Do, Nhat Ho, and Christopher Drovandi. [Model Selection for Gaussian-gated Gaussian Mixture of Experts Using Dendrograms of Mixing Measures](#). *arXiv preprint arXiv:2505.13052*, 2025.
- 2024 Hoai-Chau Tran, Duy MH Nguyen, Manh-Duy Nguyen, **TrungTin Nguyen^t**, Ngan Hoang Le, Pengtao Xie, Daniel Sonntag, James Zou, Binh T. Nguyen, and Mathias Niepert. [Accelerating Transformers with Spectrum-Preserving Token Merging](#). In *Advances in Neural Information Processing Systems, NeurIPS 2024*, Acceptance rate 25.8% over 15671 submissions, December 2024.
- 2023 Truong Giang Do, Huy Khiem Le, Quang Pham, **TrungTin Nguyen^t**, Binh T. Nguyen, Thanh-Nam Doan, Chenghao Liu, Savitha Ramasamy, Xiaoli Li, and Steven HOI. [HyperRouter: Towards Efficient Training and Inference of Sparse Mixture of Experts](#). In *Proceedings of the 2023 Empirical Methods in Natural Language Processing, EMNLP 2023 Main*, Acceptance rate 14% over 1041 submissions, December 2023.

Model selection

- 2026 Hien Duy Nguyen and **TrungTin Nguyenⁱ**. [Modifications of the BIC for order selection in finite mixture models](#). *Annals of the Institute of Statistical Mathematics*, 2026.
- 2026 Hien Duy Nguyen, Mayetri Gupta, Jacob Westerhout, and **TrungTin Nguyenⁱ**. [On the large-sample limits of some Bayesian model evaluation statistics](#). *Econometrics and Statistics*, 2026.
- 2023 **TrungTin Nguyen^f**, Dung Ngoc Nguyen^f, Hien Duy Nguyen, and Faicel Chamroukhi. [A non-asymptotic risk bound for model selection in high-dimensional mixture of experts via joint rank and variable selection](#). In *Australasian Joint Conference on Artificial Intelligence 2023, AJCAI 2023 Long Oral Presentation*, Acceptance rate 11% over 213 submissions, Brisbane, Australia, November 2023.
- 2022 **TrungTin Nguyen^f**, Hien Duy Nguyen, Faicel Chamroukhi, and Florence Forbes. [A non-asymptotic approach for model selection via penalization in high-dimensional mixture of experts models](#). *Electronic Journal of Statistics*, volume 16, pages 4742 – 4822, 2022. Publisher: Institute of Mathematical Statistics and Bernoulli Society.
- 2022 **TrungTin Nguyen^f**, Faicel Chamroukhi, Hien Duy Nguyen, and Florence Forbes. [Model selection by penalization in mixture of experts models with a non-asymptotic approach](#). In *JDS 2022 - 53èmes Journées de Statistique de la Société Française de Statistique (SFdS)*, Lyon, France, June 2022.
- 2021 **TrungTin Nguyen^f**. [Model Selection and Approximation in High-dimensional Mixtures of Experts Models: From Theory to Practice](#). Ph.D. Thesis, Normandie Université, December 2021.
- 2020 **TrungTin Nguyen^f**, Hien D Nguyen, Faicel Chamroukhi, and Geoffrey J McLachlan. [An \$l_1\$ -oracle inequality for the Lasso in high-dimensional mixtures of experts models](#). *arXiv preprint arXiv:2009.10622*, 2020.

Approximation capabilities and convergence rates of the mixture of experts models

- 2025 Hien Duy Nguyen, **TrungTin Nguyenⁱ**, Jacob Westerhout, and Xin Guo. [Approximation rates for finite mixtures of location-scale models](#). *arXiv preprint arXiv:2508.10612*, 2025.
- 2024 Huy Nguyen^f, **TrungTin Nguyen^f**, Khai Nguyen, and Nhat Ho. [Towards Convergence Rates for Parameter Estimation in Gaussian-gated Mixture of Experts](#). In *Proceedings of The 27th International Conference on Artificial Intelligence and Statistics, AISTATS 2024*, Acceptance rate 27.6% over 1980 submissions, May 2024.

- 2024 Huy Nguyen, Pedram Akbarian, **TrungTin Nguyen^e**, and Nhat Ho. [A General Theory for Softmax Gating Multinomial Logistic Mixture of Experts](#). In *Proceedings of the 41st International Conference on Machine Learning, ICML 2024*, Acceptance rate 27.5% over 9,473 submissions, July 2024.
- 2024 Mark Chiu Chong, Hien Duy Nguyen, and **TrungTin Nguyenⁱ**. [Risk Bounds for Mixture Density Estimation on Compact Domains via the h-Lifted Kullback–Leibler Divergence](#). *Transactions on Machine Learning Research*, 2024.
- 2023 Huy Nguyen, **TrungTin Nguyen^e**, and Nhat Ho. [Demystifying Softmax Gating Function in Gaussian Mixture of Experts](#). In *Advances in Neural Information Processing Systems, NeurIPS 2023 Spotlight*, Acceptance rate 3.6% over 12343 submissions, December 2023.
- 2022 **TrungTin Nguyen^f**, Faicel Chamroukhi, Hien D. Nguyen, and Geoffrey J. McLachlan. [Approximation of probability density functions via location-scale finite mixtures in Lebesgue spaces](#). *Communications in Statistics - Theory and Methods*, pages 1–12, May 2022.
- 2021 Hien Duy Nguyen^f, **TrungTin Nguyen^f**, Faicel Chamroukhi, and Geoffrey John McLachlan. [Approximations of conditional probability density functions in Lebesgue spaces via mixture of experts models](#). *Journal of Statistical Distributions and Applications*, volume 8, page 13, 2021.
- 2020 **TrungTin Nguyen^f**, Hien D Nguyen, Faicel Chamroukhi, and Geoffrey J McLachlan. [Approximation by finite mixtures of continuous density functions that vanish at infinity](#). *Cogent Mathematics & Statistics*, volume 7, page 1750861. Cogent OA, 2020.
- [Deep neural networks](#)
- 2026 Duy Minh Ho Nguyen, Trung Quoc Nguyen, Ha Thi Hong Le, Mai Thanh Nhat Truong, **TrungTin Nguyen^t**, Nhat Ho, Khoa D. Doan, Duy Duong-Tran, Li Shen, Daniel Sonntag, James Zou, Mathias Niepert, Hyojin Kim, and Jonathan E. Allen. [FACET: A Fragment-Aware Conformer Ensemble Transformer](#). In *The Fourteenth International Conference on Learning Representations, ICLR 2026*, Acceptance rate 28% over close to 19000 submission, 2026.
- 2025 Duy Minh Ho Nguyen, Trung Quoc Nguyen, Ha Thi Hong Le, Mai Thanh Nhat Truong, **Nguyen, TrungTin^t**, Nhat Ho, Khoa D. Doan, Duy Duong-Tran, Li Shen, Daniel Sonntag, James Zou, Mathias Niepert, Hyojin Kim, and Jonathan E. Allen. [From Fragments to Geometry: A Unified Graph Transformer for Molecular Representation from Conformer Ensembles](#). In *ICML 2025 Generative AI and Biology (GenBio) Workshop*, 2025.
- 2025 Duy Minh Ho Nguyen, Nghiem Tuong Diep, Trung Quoc Nguyen, Hoang-Bao Le, Tai Nguyen, Anh-Tien Nguyen, **Nguyen, TrungTin^t**, Nhat Ho, Pengtao Xie, Roger Wattenhofer, Daniel Sonntag, James Zou, and Mathias Niepert. [Enriched Instruction-Following Graph Alignment for Efficient Medical Vision-Language Models](#). In *ICML 2025 Workshop on Multi-modal Foundation Models and Large Language Models for Life Sciences*, 2025.
- 2025 Duy M. H. Nguyen, Nghiem T. Diep, Trung Q. Nguyen, Hoang-Bao Le, Tai Nguyen, Tien Nguyen, **Nguyen, TrungTin^t**, Nhat Ho, Pengtao Xie, Roger Wattenhofer, James Zhou, Daniel Sonntag, and Mathias Niepert. [LoGra-Med: Long Context Multi-Graph Alignment for Medical Vision-Language Model](#). In *Advances in Neural Information Processing Systems, NeurIPS 2025*, Acceptance rate 24.52% over 21575 submissions, December 2025.
- 2024 Quang Pham, Giang Do, Huy Nguyen, **TrungTin Nguyenⁱ**, Chenghao Liu, Mina Sartipi, Binh T Nguyen, Savitha Ramasamy, Xiaoli Li, Steven Hoi, and Nhat Ho. [CompeteSMoE–Effective Training of Sparse Mixture of Experts via Competition](#). *arXiv preprint arXiv:2402.02526*, 2024.
- 2024 Duy MH Nguyen, Nina Lukashina, Tai Nguyen, An T Le, **TrungTin Nguyen^t**, Nhat Ho, Jan Peters, Daniel Sonntag, Viktor Zaverkin, and Mathias Niepert. [Structure-Aware E\(3\)-Invariant Molecular Conformer Aggregation Networks](#). In *Proceedings of the 41st International Conference on Machine Learning, ICML 2024*, Acceptance rate 27.5% over 9,473 submissions, July 2024.

Simulation-based inference

- 2025 Hien Duy Nguyen, **TrungTin Nguyen^t**, Julyan Arbel, and Florence Forbes. [Revisiting Concentration Results for Approximate Bayesian Computation](#). *Bayesian Analysis*, March 2025.
- 2024 Hien Duy Nguyen, **TrungTin Nguyen^t**, and Florence Forbes. [Bayesian Likelihood Free Inference using Mixtures of Experts](#). In *International Joint Conference on Neural Networks, IJCNN 2024*, Acceptance rate 52% over 3272 submissions, June 2024.
- 2022 Florence Forbes, Hien Duy Nguyen^t, **TrungTin Nguyen^t**, and Julyan Arbel. [Mixture of expert posterior surrogates for approximate Bayesian computation](#). In *JDS 2022 - 53èmes Journées de Statistique de la Société Française de Statistique (SFdS)*, Lyon, France, June 2022.
- 2022 Florence Forbes, Hien Duy Nguyen^t, **TrungTin Nguyen^t**, and Julyan Arbel. [Summary statistics and discrepancy measures for approximate Bayesian computation via surrogate posteriors](#). *Statistics and Computing*, volume 32, page 85, October 2022.
- 2021 Julyan Arbel, Florence Forbes, Hien Duy Nguyen^t, and **TrungTin Nguyen^t**. [Approximate Bayesian computation with surrogate posteriors](#). In *ISBA 2021 - World Meeting of the International Society for Bayesian Analysis*, Marseille, France, June 2021.

Asymptotic statistics

- 2024 Jacob Westerhout, **TrungTin Nguyen^e**, Xin Guo, and Hien Duy Nguyen. [On the Asymptotic Distribution of the Minimum Empirical Risk](#). In *Proceedings of the 41st International Conference on Machine Learning, ICML 2024*, Acceptance rate 27.5% over 9,473 submissions, July 2024.

Bayesian nonparametrics

- 2024 **TrungTin Nguyen^f**, Florence Forbes, Julyan Arbel, and Hien Duy Nguyen. [Bayesian nonparametric mixture of experts for inverse problems](#). *Journal of Nonparametric Statistics*, October 2024.
- 2022 **TrungTin Nguyen^f**, Florence Forbes, and Julyan Arbel. Bayesian nonparametric mixture of experts for high-dimensional inverse problems. In *BNP13 – 13th Conference on Bayesian Nonparametrics*, Puerto Varas, Chile, 2022.

Missing data

- 2025 Binh H Ho^f, Long Nguyen Chi^f, **TrungTin Nguyen^f**, Binh T Nguyen, Van Ha Hoang, and Christopher Drovandi. [A Unified Framework for Variable Selection in Model-Based Clustering with Missing Not at Random](#). In *Advances in Neural Information Processing Systems, NeurIPS 2025*, Acceptance rate 24.52% over 21575 submissions, December 2025.

Supervision and Mentoring Experiences

Beyond my research activities, I actively mentor and supervise students who demonstrate curiosity and motivation in both their academic and professional development. Some of the students I have worked with include:

- 04/2026–
09/2026 **Research Supervision and Mentoring Topic: “Uncertainty Quantification and Scalable Methods for Large Language Models and Multimodal Data Fusion”** (Chief Investigator: Dr **TrungTin Nguyen**; Co-Investigators: Professor Chris Drovandi, Professor Richi Nayak, and Dr Md Abul Bashar; Research Assistant: [Mr Thanh Long \(Oliver\) Vu](#); supported by DataSparks, QUT Centre for Data Science’s early-career researcher grant scheme), *Queensland University of Technology*, Australia.
- 2026– **PhD Thesis Title: “Modèles génératifs frugaux multimodaux pour les données industrielles (Frugal multimodal generative models for industrial data)”** (Associate Supervisor with [Professor Faïcel Chamroukhi](#) , PhD Student: [Mr Rayen BEN MASSEUD](#)), *Université Paris-Saclay*, France.
- 08/2025– **PhD Thesis Title: “Robust Bayesian Inference for Differential Equation Models with Applications in Biology”** (Associate Supervisor with [Professor Christopher Drovandi](#), PhD Student: Ms [Jiamin XU](#)), *Queensland University of Technology*, Australia.

- 07/2025– **Research Seminar and Bachelor's Thesis Topic: "Adaptive Multivariate Density Estimation for Clustering with Gaussian Mixtures"** (Co-Supervisor with **Prof. Dang Duc Trong**, Student in Honors Program in Mathematics and Computer Science: **Mr Phi Khoa Nguyen**), *Vietnam National University-Ho Chi Minh University of Science (VNU-HCM)*. He will join *Université de Toulouse* as a Master 2 "Research & Innovation" of Applied and Pure Mathematics, France.
- 02–06/2025 **Data Science Capstone Project 2B (DATA7903)** (Academic Supervision and Assessment: 4 students [Ms Ruth Simtim Rebecca + Mr Patrick Cashman + Mr Ishan Chandrashekhar Patle + Mr Patrick Cashman]). Responsible professor: **Dr. Nan Ye**, *Postgraduate Coursework, The University of Queensland*, Australia.
- 09/2024– **Master Thesis Title: "Model-Based Clustering with Variable Selection for Missing Data"** (Co-Supervisor with **Dr. Van Ha Hoang**, Master Student: **Mr Binh H. Ho.**), *Vietnam National University-Ho Chi Minh University of Science (VNU-HCM)*. He will join *University of Maryland, College Park, US*, as a PhD student scholarship recipient in Statistics, working with *Professor Lizhen Lin*, US.
- 09/2024– **Research Seminar and Bachelor's Thesis Topic: "Revisiting Model Selection and Parameter for Gaussian-gated Gaussian Mixture of Experts Using Dendrograms of Mixing Measures"** (Co-Supervisor with **Prof. Dang Duc Trong**, Student in Honors Program in Mathematics and Computer Science: **Mr Tuan Thai**), *Vietnam National University-Ho Chi Minh University of Science (VNU-HCM)*. He joined *Università degli studi di Verona* and *University Grenoble Alpes* as a Master EMJM Scholarships Recipient at the MATHS-DISC programme, France and Italy.
- 09/2024– **Research Seminar and Bachelor's Thesis Topic: "Model Selection in Mixture of Experts Models via Penalized Likelihood Approach"** (Co-Supervisor with **Prof. Dang Duc Trong**, Student in Honors Program in Mathematics and Computer Science: **Mr Son Hai Nguyen**), *Vietnam National University-Ho Chi Minh University of Science (VNU-HCM)*. He was awarded Academic Merit Scholarships from the *Franco–Vietnamese Master's Program in Applied Mathematics* and undertake his Master's thesis under the supervision of *Dr Thomas Bonis (Université Gustave Eiffel, Paris)*, *Prof. Pham Ngoc Thanh Mai (Sorbonne Paris Nord)*, and *Prof. Tran Viet Chi (Centre Inria de l'Université de Lille)*, France.
- 09/2024– **Research Seminar and Bachelor's Thesis Topic: "Revisiting and Empirical Validation of the Convergence Rates of Variational Posterior Distributions"** (Co-Supervisor with **Prof. Dang Duc Trong**, Student in Honors Program in Mathematics and Computer Science: **Mr Tien Dung Do**), *Vietnam National University-Ho Chi Minh University of Science (VNU-HCM)*. He was awarded Academic Merit Scholarships from the *Franco–Vietnamese Master's Program in Applied Mathematics* and undertake his Master's thesis under the supervision of *Prof. Olivier LEY and Dr. Othmane Jerhaoui (Institut de Recherche Mathématique de Rennes, INSA de Rennes)*, France.
- 09/2024– **Research Supervision and Mentoring Topics: "Model-Based Clustering with Variable Selection for Missing Data"** (Mr. Long Nguyen Chi – Student in School of Information, Communication & Technology, *Hanoi University of Science and Technology (HUST)*). He joined *College of Engineering and Computer Science - VinUniversity* as a Research Assistant, Vietnam.
- 09/2024– **Research Supervision and Mentoring Topics: "Model Selection in Mixture of Experts Models Using Dendrograms of Mixing Measures"** (Mr. Trung Nguyen Mai – Student in the Advanced Program in Computer Science Programming), *Vietnam National University-Ho Chi Minh University of Science (VNU-HCM)*, Vietnam.
- 09/2024– **Research Supervision and Mentoring Topics: "Model Selection in Mixture of Experts Models Using Dendrograms of Mixing Measures"** (Mr. Tien Hai Do – Student in Honors Program in Mathematics and Computer Science), *Vietnam National University-Ho Chi Minh University of Science (VNU-HCM)*. He will join *Mathematics Institute, LMU Munich, Germany*, as a Master student scholarship recipient, mentoring by *Prof. Dr. Phan Thành Nam*, Germany.

- 07–11/2024 **Data Science Capstone Project 1 (DATA7901)** (Academic Supervision and Assessment: 4 students [Ms Ruth Simtim Rebecca + Mr Patrick Cashman + Mr Ishan Chandrashekhar Patle + Mr Patrick Cashman]). Responsible professor: **Dr. Slava Vaisman**, *Postgraduate Coursework, The University of Queensland*, Australia.
- 05/2024– **Research Supervision and Mentoring Topics: “Revisiting Incremental Stochastic Majorization-Minimization Algorithms with Applications to Mixture of Experts”** (Mr. TrungKhang Tran – **ASEAN Undergraduate Scholarship Student in Computer Science**), *National University of Singapore*, Singapore.
- 05/2024– **Research Supervision and Mentoring Topics: “A Globally Convergent Minorization-Maximization Algorithm for Gaussian Mixture of Experts Models”** (Mr. Tung Doan – **AI Project Lead at Artificial Intelligence Solutions for Industrial Applications Research Lab**, *Vietnam National University-Ho Chi Minh University of Science (VNU-HCM)*). He joined *Griffith University* as a *PhD student scholarship recipient at the School of Medicine*, Australia.

Teaching Experiences

In my teaching, I believe that true understanding is demonstrated by the ability to explain complex ideas in simple and accessible terms. I strive to foster this clarity in my own instruction, ensuring that students not only grasp technical details but also develop the confidence to articulate concepts in a way that others can understand. Teaching is not only a way to share knowledge but also one of the most powerful methods for deepening one's own understanding. In my experience, guiding students through challenging material often enhances my own clarity and leads to new insights. I therefore view teaching as a reciprocal and evolving learning process, in which clarity, simplicity, and active engagement are central. My goal is to foster an environment where students feel encouraged to ask questions, think critically, and build confidence in their ability to learn and apply complex ideas. In particular, I believe it is far more important to equip students with problem-solving skills than to have them memorize numerous redundant technical details.

- 07–11/2025 **MXB241 Probability and Stochastic Modelling 2 (Lecturer, Unit Coordination, Workshop, Marking)**, Year 2: *Bachelor of Science/Master of Data Science, Bachelor of Mathematics (Statistics), Queensland University of Technology*, Australia.
- 02–11/2024 **Introduction to Data Science (DATA7001) (Guest Lecturer, Tutorial Content and Practical Session, 30h, Marking)**. Responsible professor: **Dr. Xin Guo**, *Postgraduate Coursework, The University of Queensland*, Australia.
- 01–04/2023 **Statistical analysis and document mining (Lecturer for Complementary Course, 17h, Marking)**. Responsible professor: **Dr. Pedro Rodrigues**, *Master 1 of Applied Mathematics, Université Grenoble Alpes*, France.
- 09–12/2022 **Méthodes statistiques pour la biologie - STA301 (Lecturer and Tutorial Content, 23h, Marking)**. Responsible professor: **Dr. Julien Chevallier**, *Licence Sciences et Technologies - BIO, Université Grenoble Alpes*, France.
- Fall 2018 **Mathematical and numerical foundations of modeling and simulation using partial differential equations (Lecturer for Preparatory Course, 24h)**. Responsible professor: **Dr. Jing-Rebecca Li (IDEFIX team, Inria)**, *French-Vietnam Master 2 in Applied Mathematics, VNU-HCM*, Vietnam.
- Fall 2017 **Principles of Mathematical Analysis (Teaching Assistant, 30h)**. Responsible professor: **Prof. Duong Minh Duc**, *Bachelor in Mathematics and Computer Science, VNU-HCM*, Vietnam.

Professional Services

Journal Reviewing

Canadian Journal of Statistics (Wiley): 2 papers.

Transactions on Machine Learning Research: 1 paper.

IEEE Transactions on Information Theory (The Institute of Electrical and Electronics Engineers): 2 papers.

Electronic Journal of Statistics (Institute of Mathematical Statistics, Bernoulli Society for Mathematical Statistics and Probability): 3 papers.

Journal of the American Statistical Association (Taylor Francis): 2 papers.

Statistics and Computing (Springer): 2 papers.

Computational Statistics and Data Analysis (Elsevier): 4 papers.

Neurocomputing (Elsevier): 1 paper.

Biometrical Journal (Wiley): 2 papers.

Australian & New Zealand Journal of Statistics (Wiley): 2 paper.

Communications in Statistics - Theory and Methods (Taylor Francis): 2 papers.

Conference Reviewing

International Conference on Machine Learning (ICML): 1 paper.

International Joint Conference on Neural Networks (IJCNN): 1 paper.

International Conference on Artificial Intelligence and Statistics (AISTATS): 2 papers.

International Conference on Learning Representations (ICLR): 3 papers.

Annual Conference on Neural Information Processing Systems (NeurIPS): 10 papers.

Annual Meeting of the Association for Computational Linguistics (ACL): 3 papers.

Proceedings of the Research School on Statistics and Data Science (RSSDS 2019) (Springer): 2 papers.

Competitive Grants

U.S. Department of Energy (DOE), Office of Science, Advanced Scientific Computing Research Early Career Research Program: Invited Reviewer for the funding opportunity on "Scalable Scientific Artificial Intelligence and Automation".

The National Foundation for Science and Technology Development of Vietnam (NAFOSTED): Peer Reviewer.

Editorial Board/Program Committee

MACSYS Theme 1 Workshop @ QUT – Workshop in Mathematical, Statistical and Computational Foundations of Whole Cell Modelling (21–22 May 2026): Scientific Program Committee.

Australian Statistical Conference 2025 (ASC2025): Scientific Program Committee.

MACSYS Monash Workshop 12-13 June 2025: Scientific Program Committee.

The IEEE World Congress on Computational Intelligence – The International Joint Conference on Neural Networks (IJCNN 2024): Session Chair.

The Queensland Branch of the Statistical Society of Australia (SSA QLD 2024, 2025): General Councillor.

Research School on Statistics and Data Science (RSSDS 2019, Springer): Program Committee.

Projects and Research Funding

- | | |
|-----------|--|
| 2026–2027 | Principal investigator of Discovery Early Career Researcher Award (DECRA) from the Australian Research Council (A\$677,700.00, Awaiting reply from Funder). |
| 2025–2026 | Principal investigator of QUT Centre for Data Science DataSparks Funding Scheme (\$10,000) from Centre for Data Science's early-career researcher grant scheme. |
| 2024–2027 | Member/MACSYS Postdoctoral Research Fellow (Applied Statistics) of the MACSYS (ARC Centre of Excellence for the Mathematical Analysis of Cellular Systems). |
| 2023–2025 | Member/Postdoctoral Research Fellow of the DP230100905: Stochastic majorization–minimization algorithms for data science. |

- 2023–2026 **Member of the WOMBAT (Variance-reduced Optimization Methods and Bayesian Approximation Techniques for scalable inference).**
- Principal investigator:
 - [Florence Forbes](#) (Statify Inria Grenoble, France),
 - [Hien Duy Nguyen](#) (School of Computing, Engineering and Mathematical Sciences, La Trobe University, Bundoora, Victoria, Australia).
 - Other participants:
 - Queensland University of Technology, Brisbane, Australia,
 - The University of Queensland, Brisbane, Australia,
 - Swinburne University of Technology, Melbourne, Australia
 - The University of Adelaide, Australia.
 - Université de Caen Normandie, France.
 - Website: <https://team.inria.fr/statify/projects/WOMBAT/>
- 2019–2021 **Member of the LANDER (Latent Analysis, Adversarial Networks, and DimEnsionality Reduction).**
- Principal investigator:
 - [Florence Forbes](#) (Mistis Inria Grenoble Rhone-Alpes, France),
 - [Hien Duy Nguyen](#) (School of Mathematics and Physics, The University of Queensland, Australia).
 - Other participants:
 - Queensland University of Technology, Brisbane, Australia,
 - Swinburne University of Technology, Melbourne, Australia
 - Université de Caen Normandie, France.
 - Website: <https://team.inria.fr/statify/projects/lander/>
 - My contributions in this project: [A non-asymptotic approach for model selection via penalization in high-dimensional mixture of experts models](#). *Electronic Journal of Statistics*, 2022.

Conference, Seminar, Workshop Presentations

- 05/2026 Bayesian Parameter Balancing Enables Robust and Consistent Estimation of Kinetic Parameter Uncertainty at [ARC Centre of Excellence for the Mathematical Analysis of Cellular Systems Theme 1 Workshop at Queensland University of Technology](#), Australia (Invited Speaker).
- 02/2026 Towards Mathematical Foundations for Trustworthy and Scalable AI and Data Science through Multimodality and Sparsity in Bayesian and Frequentist Perspectives at [Bayes on the Beach 2026](#), University of Wollongong, Australia (Poster presentation).
- 12/2025 Mathematical Foundations of AI and Data Science for Trustworthy Systems: Leveraging Multimodality and Sparsity at [The 69th Annual Meeting of the Australian Mathematical Society](#), La Trobe University, Australia (Invited Speaker).
- 12/2025 Towards Understanding Parameter Estimation and Bayesian Model Selection in Gaussian Mixture of Experts Models at [The 19th International Joint Conference on Computational and Financial Econometrics \(CFE\) and Computational and Methodological Statistics \(CMStatistics\) \(CFE-CMStatistics 2025\)](#), Birkbeck, University of London (Invited Speaker).
- 09/2025 Mathematical Foundations of AI and Data Science for Trustworthy Systems: Leveraging Multimodality and Sparsity at [School of Mathematical Sciences Research Seminar](#), Queensland University of Technology, Australia (Invited Speaker).
- 08/2025 Revisiting Parameter Estimation and Model Selection in Gaussian Mixture of Experts Models at [The 8th International Conference on Econometrics and Statistics \(EcoSta 2025\)](#), Tokyo, Japan (Invited Speaker).
- 02/2025 Accelerating Transformers with Spectrum-Preserving Token Merging at [Seminar@SystemX](#), Institute for Technological Research (IRT) SystemX, Research & Technology Organisation of Paris-Saclay, Palaiseau, France (Invited Speaker).
- 07/2024 Towards Understanding Mixture of Experts at [Bayesian Learning and Network Analysis Workshop](#), Vietnam Institute for Advanced Study in Mathematic, Hanoi, Vietnam (Invited Speaker).
- 07/2024 Bayesian Likelihood Free Inference Using Mixtures of Experts at [The IEEE World Congress on Computational Intelligence](#), Yokohama, Japan (Oral presentation).

- 06/2024 Demystifying Softmax Gating Function in Gaussian Mixture of Experts at [The Ninth Pacific Rim Conference in Mathematics](#), Mathematical Sciences Institute (MSI), Australian National University (ANU), Darwin, Australia (Contributed Talk and Poster Session).
- 05/2024 Towards Convergence Rates for Parameter Estimation in Gaussian-gated Mixture of Experts at [The Grenoble Artificial Intelligence for Physical Sciences](#), Université Grenoble Alpes, Grenoble, France (Poster Session).
- 05/2024 Demystifying parameter estimation in mixtures of experts at [Bayes-Duality Seminar](#), The Bayes-Duality Project, Online (Invited Speaker).
- 08/2023 Summary statistics and discrepancy measures for approximate Bayesian computation via surrogate posteriors at [Math & Applied Sciences Seminars, University of Economics Ho Chi Minh City](#), Ho Chi Minh City, Vietnam (Invited Speaker).
- 08/2023 Summary statistics and discrepancy measures for approximate Bayesian computation via surrogate posteriors at [The 10th Vietnam Mathematical Congress](#), Da Nang, Vietnam (Oral presentation).
- 04/2023 A non-asymptotic-approach for model selection via penalization in high-dimensional mixture of experts models at [Department of Statistical Sciences, Università di Padova](#), Padova, Italy (Invited Speaker).
- 07/2023 Summary statistics and discrepancy measures for approximate Bayesian computation via surrogate posteriors at [Summer school on Bayesian statistics and computation](#), Ho Chi Minh, Vietnam (Poster presentation).
- 12/2022 A non-asymptotic approach for model selection via penalization in high-dimensional mixture of experts models at [2022 IMS International Conference on Statistics and Data Science \(ICSDS\)](#), Florence, Italy (Oral presentation).
- 11/2022 A non-asymptotic approach for model selection via penalization in high-dimensional mixture of experts models at [Séminaire Données et Aléatoire Théorie & Applications, Laboratoire Jean Kuntzmann](#), Grenoble, France (Invited Speaker).
- 10/2022 Bayesian nonparametric mixture of experts for high-dimensional inverse problems at [BNP13 – 13th Conference on Bayesian Nonparametrics](#), Puerto Varas, Chile (Oral presentation).
- 06/2022 Model selection by penalization in mixture of experts models with a non-asymptotic approach at [JDS 2022 - 53èmes Journées de Statistique de la Société Française de Statistique \(SFdS\)](#), Lyon, France (Oral presentation).
- 05/2022 A non-asymptotic approach for model selection via penalization in high-dimensional mixture of experts models at [Seminar on Applied Statistics, Vietnam Institute for Advanced Study in Mathematics, Vietnam](#) (Invited Speaker).
- 04/2022 A non-asymptotic approach for model selection via penalization in mixture of experts models at [Statlearn 2022, Institut d'Etudes Scientifiques de Cargèse](#), Corsica (Poster presentation)
- 03/2022 A non-asymptotic model selection in mixture of experts models at [Séminaire de Statistique Rennais, ENSAI École Nationale de Statistique et Analyse de l'Information](#), Rennes, France (Invited Speaker).
- 10/2021 Model Selection and Approximation in High-dimensional mixture of experts Models: From Theory to Practice at [Jed 2021: Journée scientifique de l'École Doctorale 2021](#), Le Havre, France (Oral presentation).
- 09/2021 Approximation and non-asymptotic model selection in mixture of experts models at [Journée Thématique: "Intelligence Artificielle - Applications et défis mathématiques"](#), INSA Rouen Normandie, Rouen, France (Poster session).
- 06/2021 Non-asymptotic model selection in mixture of polynomial experts models at [MHC2021 Mixtures Hidden Markov model Clustering](#), Institut de Mathématique d'Orsay, Paris, France (Poster session).
- 04/2021 Non-asymptotic model selection for the Gaussian-gated localized mixture of experts regression models at [MiMo 2021: Workshop on Mixture Models](#), Laboratoire de Mathématiques Raphaël Salem, Université de Rouen Normandie, France (Invited speaker).

Fellowships and Awards

- 02/2026 Travel Funding Scheme (1500 AUD) for Bayes on the Beach | Bayesian Statistical Conference 2026 granted by [QUT Centre for Data Science](#), [Queensland University of Technology](#), Australia.
- 2025–2027 Postdoctoral Research Fellowships granted by [The ARC Centre for the Mathematical Analysis of Cellular Systems](#), [Queensland University of Technology](#), Australia.
- 06/2024 [Early Career Travel Award](#) (1000 AUD) granted by [The Ninth Pacific Rim Conference in Mathematics](#).
- 2023–2024 Postdoctoral Research Fellowships granted by [Australian Research Council Discovery Projects 230100905](#), [The University of Queensland](#), Australia.
- 10/2022 [BNP13 Junior Travel Award](#) (1000 USD) granted by [International Society for Bayesian Analysis](#).
- 2022–2025 [Qualifications aux fonctions de Maître de Conférences](#). Section 26. [Mathématiques appliquées et applications des mathématiques](#). *Designated rapporteurs*: [Fabienne Comte](#), and [Fanny Villers](#).
- 2022–2023 Postdoctoral Fellowships granted by [Inria centre at the University Grenoble Alpes](#) and [MIAI Grenoble Alpes](#), France.
- 2018–2021 Ph.D. Scholarship granted by [Ministère de l'Enseignement Supérieur et de la Recherche](#), France.
- 2017 Highest Distinction Graduation Award and Outstanding Student Award, [VNU-HCM](#), Vietnam.
- 2014–2017 Scholarship of the National Program for the Development of Mathematics 2010–2020 of [Vietnam Institute for Advanced Study in Mathematics \(VIASM\)](#), Vietnam.

Collaborators (in random order, updated in November 2025)

One of the central challenges in my research has been effective communication across disciplines. Collaborating with experts from diverse fields, each with distinct terminologies, frameworks, and methodologies, can be demanding. However, these interdisciplinary engagements have significantly enriched my work by deepening my appreciation for integrative approaches, broadening my knowledge, and fostering innovative solutions to complex scientific problems that are only possible through cross-disciplinary collaboration.

1. [Christopher Drovandi](#): Professor of Statistics, [School of Mathematical Sciences](#), [Queensland University of Technology](#), Brisbane, Australia.
2. [Hien Duy Nguyen](#): Associate Professor, [School of Computing, Engineering and Mathematical Sciences](#), [La Trobe University](#), Bundoora, Victoria, Australia; and Professor, [Institute of Mathematics for Industry](#), [Kyushu University](#), Fukuoka, Japan.
3. [Xin Guo](#): Senior Lecturer, [School of Mathematics and Physics](#), [The University of Queensland](#), Brisbane, Australia.
4. [Florence Forbes](#): Senior Researcher (Director of Research), [Statify Team](#), [Inria centre at the University Grenoble Alpes](#), Grenoble, France.
5. [Julyan Arbel](#): Associate Researcher (Chargé de Recherche), [Statify Team](#), [Inria centre at the University Grenoble Alpes](#); [Laboratoire Jean Kuntzmann](#), member of [Université Grenoble Alpes Grenoble](#), Grenoble, France.
6. [Faïcel Chamroukhi](#): Professor of Statistics and Data Science, [Université de Caen Normandie](#), [Lab. of Mathematics Nicolas Oresme \(LMNO\)](#), [UMR CNRS 6139](#); Scientific head of Data Science and Artificial Intelligence, [IRT SystemX](#), the Research & Technology Organisation of [Université Paris-Saclay](#), Palaiseau, France.
7. [Nhat Ho](#): Assistant Professor, [Department of Statistics and Data Sciences](#), [The University of Texas at Austin](#), Austin, Texas, United States.
8. [Geoff McLachlan](#): Professor of Statistics (Personal Chair), [School of Mathematics and Physics](#), [The University of Queensland](#), Brisbane, Australia.
9. [Binh Nguyen](#): Associate Professor of Computer Science and the Head of the Department of Computer Science, [Faculty of Mathematics and Computer Science](#), [University of Science \(VNUHCM-US\)](#), [Vietnam National University \(VNUHCM\)](#), Ho Chi Minh City, Vietnam.
10. [James Zou](#): Associate Professor, Biomedical Data Science and, by courtesy, of Computer Science and Electrical Engineering, [Stanford University](#), California, United States.
11. [Ngan Le](#): Assistant Professor, [AICV Lab](#), [University of Arkansas](#), Arkansas, United States.

12. **Quang Pham**: Research Scientist, [Machine Intellection department](#), [Institute for Infocomm Research \(I2R\)](#), [A*Star](#), Singapore.
13. **Huy Nguyen**: PhD Candidate, [Department of Statistics and Data Sciences](#), [The University of Texas at Austin](#), Austin, Texas, United States.
14. **Dat Do**: William H. Kruskal Instructor of Statistics, [Department of Statistics](#), [The University of Chicago](#), Chicago, United States.
15. **Khai Nguyen**: Phd Candidate, [Department of Statistics and Data Sciences](#), [The University of Texas at Austin](#), Austin, Texas, United States.
16. **Dung Ngoc Nguyen**: Postdoctoral Research Fellow, [CSIRO \(Commonwealth Scientific and Industrial Research Organisation\) Agriculture and Food Canberra](#), ACT, Australia.
17. **Ho Minh Duy Nguyen**: PhD Candidate, [Max Planck Research School for Intelligent Systems & DFKI](#), Stuttgart, Germany.
18. **Giang Truong Do**: PhD Candidate, [Applied Artificial Intelligence Institute \(A2I2\)](#), [Deakin University](#), Australia.
19. **Le Huy Khiem**: PhD Student, [University of Notre Dame](#), Indiana, United States.
20. **Jacob Westerhout**: PhD Student, [School of Mathematics and Physics](#), [The University of Queensland](#), Brisbane, Australia.
21. **Binh Huu Ho**: Master Student, [Faculty of Mathematics and Computer Science](#), [University of Science \(VNUHCM-US\)](#), [Vietnam National University \(VNUHCM\)](#), Ho Chi Minh City, Vietnam.

Selected Academic Experiences

12/2022 **Accomplished an online course [Machine Learning Specialization](#)**, *Stanford University, USA*, instructed by [Professor Andrew Ng et al.](#)

Including 3 courses:

- Supervised Machine Learning: Regression and Classification. Grade: 100%.
- Advanced Learning Algorithms. Grade: 100%.
- Unsupervised Learning, Recommenders, Reinforcement Learning. Grade: 100%.

Course Certificates:

<https://coursera.org/share/a9473e1b59c38bbde2f413bed53f3ebf>

07/2019 **Participated in [3rd International Summer School on Deep Learning \(39 hours\)](#)**, *Warsaw, Poland*.

Including some featured courses:

- *Deep Generative Models* by [Aaron Courville](#) (University of Montréal, Canada).
- *Dive into Deep Learning* by [Alex Smola](#) (Amazon, USA).
- *Mathematics of Deep Learning* by [Rene Vidal](#) (Johns Hopkins University, USA).

06-09/2018 **Accomplished an online course [Deep Learning Specialization](#)**, *Stanford University, USA*, instructed by [Professor Andrew Ng et al.](#)

Including 5 courses:

- Neural Networks and Deep Learning. Grade: 100%.
- Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization. Grade: 100%.
- Structuring Machine Learning Projects. Grade: 98.3%.
- Convolutional Neural Networks. Grade: 98.9%.
- Sequence Models. Grade: 100%.

Course Certificates:

<https://coursera.org/share/3d5d2ffa4a112d75883b62a22d4a132c>

Languages

Vietnamese **Mother tongue**

English **IELTS 7.0/9.0 (2017)**

Excellent reading and listening skills, good at writing and speaking.

French **Intermediate B2**

Good reading and writing skills, can understand isolated sentences and common phrases in listening and speaking.

Computer Skills

Programming Languages Advanced R, Advanced Python (Pytorch, Sci-kit Learn, Numpy, Matplotlib), Julia, MATLAB, C++, SAS.
Operating Systems macOS, Linux, Microsoft Windows.
Softwares LaTeX, Microsoft Offices.

Referees

Christopher Drovandi

Professor of Statistics

School of Mathematical Sciences

Queensland University of Technology, Australia

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Hien Duy Nguyen

Associate Professor

*School of Computing, Engineering
and Mathematical Sciences*

La Trobe University, Australia

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Florence Forbes

Senior Researcher

Head of the Statify team

Inria centre at the University Grenoble Alpes, France

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Faïcel Chamroukhi

Professor of Statistics and Data Science

Head of Data Science and Artificial Intelligence

IRT SystemX, France

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Geoffrey McLachlan

Professor of Statistics

School of Mathematics and Physics

The University of Queensland, Australia

✉ g.mclachlan@uq.edu.au

Nhat Ho

Assistant Professor

Department of Statistics and Data Sciences

The University of Texas at Austin, United States

✉ minhnhhat@utexas.edu

Julyan Arbel

Associate Researcher

Associate Researcher of the Statify team

Inria centre at the University Grenoble Alpes, France

✉ julyan.arbel@inria.fr

Le Thi Hoai An

Full Professor of Exceptional Class

Director of Computer science and Applications Department

University of Lorraine, France

✉ hoai-an.le-thi@univ-lorraine.fr