





PERSONAL INFORMATION

Hien Duy Nguyen

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ACADEMIC AND RESEARCH

EMPLOYMENT

- 2023– **Professor**
Institute of Mathematics for Industry
Kyushu University, Fukuoka, Japan
- 2023– **Associate Professor**
Department of Mathematical and Physical Sciences
La Trobe University, Melbourne, Australia
- 2021–2023 **Senior Lecturer**
School of Mathematics and Physics
University of Queensland, Brisbane, Australia
- 2019–2021 **Senior Lecturer**
Department of Mathematics and Statistics
La Trobe University, Melbourne, Australia
- 2016–2020 **DECRA Research Fellow**
Australian Research Council (ARC) grant number: DE170101134.
La Trobe University, Melbourne, Australia
- 2016–2019 **Lecturer**
Department of Mathematics and Statistics
La Trobe University, Melbourne, Australia
- 2015–2016 **Postdoctoral Research Fellow**
School of Mathematics and Physics, and Centre for Advanced Imaging
University of Queensland, Brisbane, Australia
- Predoctoral Positions**
- 2010 **Vacation Research Scholar**
Diamantina Institute, University of Queensland, Brisbane, Australia
- 2009 **Research Assistant**
Commonwealth Scientific and Industrial Research Organisation, Australia
- 2008 **Vacation Research Scholar**
Commonwealth Scientific and Industrial Research Organisation, Australia

HONORARY, ADJUNCT, AND

SERVICE APPOINTMENTS

- 2023– **Honorary Associate Professor**
School of Mathematics and Physics
University of Queensland, Brisbane, Australia

- 2021–2023 **Adjunct Senior Lecturer**
Department of Mathematics and Statistics
La Trobe University, Melbourne, Australia
- 2020–2021 **Deputy Head of Department**
Department of Mathematics and Statistics
La Trobe University, Melbourne, Australia
- 2018, 2019 **Visiting Research Fellow**
Statify (previously Mistis) Team
Inria Centre at the University Grenoble Alpes, France
- 2015, 2019 **Visiting Research Fellow**
SIMEXP Laboratory
Centre de Reserche de l'Institut Universitaire de Geriatrie de Montreal, Canada
- 2017, 2018 **Visiting Research and Teaching Fellow**
Lab of Mathematics: Nicolas Oresme
University of Caen, Normandy, France

TERTIARY EDUCATION

- 2011–2015 **PhD in Statistics** (Dean's Award for Outstanding RHD Theses)
University of Queensland, Brisbane, Australia
Supervisors: Prof Geoffrey McLachlan, Dr Ian Wood, and Dr Andrew Janke
Thesis title: Finite mixture models for linear regression data
- 2006–2011 **Bachelor of Science with First Class Honours in Statistics** (Mathematics and Statistics majors; University Medal)
University of Queensland, Brisbane, Australia
Supervisors: Dr Ian Wood and Dr Andrew George
Thesis title: Variable selection in linear models using metaheuristic algorithms with applications in genome-wide association studies
- 2010 **Study Abroad** (Scholarship; Spring Semester)
University of California, Berkeley, USA
- 2006–2010 **Bachelor of Economics**
University of Queensland, Brisbane, Australia

TEACHING AND COURSE

COORDINATION

Teaching

- 2022, 2023 **Mathematics for Data Science 1** (MATH7501, University of Queensland; Undergraduate)
- 2022, 2023 **Problems and Applications in Modern Statistics** (STAT3500, University of Queensland; Undergraduate)
- 2021–2023 **Statistical Learning** (STAT3006, University of Queensland; Undergraduate)
- 2020, 2021 **Models for bioinformatics** (STA5MB, La Trobe University; Postgraduate)
- 2016 **Experimental design** (STAT3003, University of Queensland; Undergraduate)

Coordination

- 2020, 2021 **Models for bioinformatics** (STA5MB, La Trobe University; Postgraduate)
- 2020 **Biostatistics** (STA2BS, La Trobe University; Undergraduate)
- 2020 **Engineering probability and statistics** (STM2EPS, La Trobe University; Undergraduate)

Predocutorial Teaching

- 2009–2014 **Tutor** (School of Economics, University of Queensland)
- 2007–2014 **Tutor** (School of Mathematics and Physics, University of Queensland)

PEER-REVIEWED

PUBLICATIONS

Journal Articles

- [1] X V To, H D Nguyen, P Cumming, P Curpen, and F A Nasrallah. Contemporaneous outcomes multiple imputation (KOMI) can communicate missing Glasgow Outcome Scale – Extended (GOSE) scores: A multi-domains imputation for GOSE in the Transforming Research and Clinical Knowledge in Traumatic Brain Injury (TRACK-TBI) data. *Journal of the Neurological Sciences*, to appear, 2025.
- [2] H Nguyen, TT Nguyen, J Arbel, and F Forbes. Revisiting concentration results for approximate Bayesian computation. *Bayesian Analysis*, to appear, 2025.
- [3] A Hoe, E Freer, P K T Goh, D Ong, H Nguyen, and T Weir. Predictability of mesiodistal tip of maxillary central incisors in clear aligner therapy. *American Journal of Orthodontics and Dentofacial Orthopedics*, 167:568–577, 2025.
- [4] K Chan, T Weir, E Freer, D Ong, and H Nguyen. Predictability of incisal labiolingual inclination, overjet, and overbite changes, and the prevalence of open gingival embrasures in patients with mandibular incisor extraction treated with Invisalign: A retrospective cohort study. *American Journal of Orthodontics and Dentofacial Orthopedics*, to appear, 2025.
- [5] L Truong, T Weir, H Nguyen, E Freer, and D Ong. Mesiodistal tip expression of lower anterior teeth in lower incisor extraction cases treated with Invisalign aligners. *American Journal of Orthodontics and Dentofacial Orthopedics*, 166:538–548, 2024.
- [6] S Roohi, R Scarbez, and H D Nguyen. A Reliable uncertainty estimation in emotion recognition in conversation using conformal prediction framework. *Natural Language Processing*, to appear, 2024.
- [7] T T Nguyen, F Forbes, J Arbel, and H D Nguyen. Bayesian nonparametric mixture of experts for inverse problems. *Journal of Nonparametric Statistics*, (to appear), 2024.
- [8] H Nguyen. PanIC: consistent information criteria for general model selection problems. *Australian and New Zealand Journal of Statistics*, 66:441–466, 2024.
- [9] S Grot, S Smine, S Potvin, M Darcey, V Pavlov, S Genon, H Nguyen, and P Orban. Label-based meta-analysis of functional brain dysconnectivity across mood and psychotic disorders. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 131(110950), 2024.
- [10] P K T Goh, A Pulemotov, H Nguyen, N Pinto, and R Olive. Treatment duration by morphology and location of impacted maxillary canines: a CBCT investigation. *American Journal of Orthodontics and Dentofacial Orthopedics*, 166:160–170, 2024.
- [11] Q Duong, H Gilbert, and H Nguyen. A novel framework for crash frequency prediction: Geographic support vector regression based on agent-based activity models in Greater Melbourne. *Accident Analysis and Prevention*, 207(107747), 2024.
- [12] M Chiu Chong, H D Nguyen, and TT Nguyen. Risk bounds for mixture density estimation on compact Domains via the h-lifted Kullback–Leibler divergence. *Transactions of Machine Learning Research*, (OpenReview: IAKvQO4vHj), 2024.
- [13] F Almasi, M J Stear, M Khansefid, H Nguyen, A Desai, and J E Pryce. Innovative use of sensor technology to study grazing behaviour and its associations with parasitic resistance in sheep. *Small Ruminant Research*, 232(107223), 2024.
- [14] T P Wallis, A Jiang, K Young, H Hou, K Kudo, A J McCann, N Durisic, M Joensuu, D Oelz, H Nguyen, R S Gormal, and F A Meunier. Super-resolved trajectory-derived nanoclustering analysis using spatiotemporal indexing. *Nature Communications*, 14:3353, 2023.
- [15] T T Nguyen, F Chamroukhi, H D Nguyen, and G J McLachlan. Approximation of probability density functions via location-scale finite mixtures in Lesbegue spaces. *Communications in Statistics - Theory and Methods*, 52:5048–5059, 2023.
- [16] H D Nguyen and M Gupta. Finite sample inference for empirical Bayesian methods. *Scandinavian Journal of Statistics*, 50:1616–1640, 2023.
- [17] H D Nguyen, D Fryer, and G J McLachlan. Order selection with confidence for finite mixture models. *Journal of the Korean Statistical Society*, 52:154–184, 2023.
- [18] R Navarathna, D T Le, A R Hamann, H D Nguyen, T M Stace, and A Fedorov. Passive superconducting circulator on a chip. *Physical Review Letters*, 130:037001, 2023.
- [19] J Arbel, S Girard, H D Nguyen, and A Usseglio-Carleve. Multiple expectile-based distribution: properties, Bayesian inference and applications. *Journal of Statistical Planning and Inference*, 225:146–170, 2023.
- [20] F Almasi, M Stear, M Khansefid, H Nguyen, A Desai, and J E Pryce. The repeatability and heritability of traits derived from accelerometer sensors associated with grazing and rumination time in an extensive sheep farming system. *Frontiers in Animal Science*, 4(1154797), 2023.
- [21] S Urchs, A Tam, P Orban, C Moreau, Y Benhajali, H D Nguyen, A C Evans, and P Bellec. Subtypes of functional connectivity associate robustly with ASD diagnosis. *eLife*, 11:e56257, 2022.
- [22] R Sohi, A Carroll, H Nguyen, Z Almasi, J Miller, J Trompf, A Bervan, B I Godoy, M Stear, A Desai, and M Jois. Determination of ewe behaviour around lambing time and prediction of parturition seven days prior to lambing by tri-axial accelerometer sensors in an extensive farming system. *Animal Production Science*, 62:1729–1738, 2022.
- [23] D C Phan, L T Truong, H D Nguyen, and R Tay. Modelling the safety effects of train commuters' access modes. *Journal of Advanced Transportation*, 2022:3473397, 2022.
- [24] T T Nguyen, H D Nguyen, F Chamroukhi, and F Forbes. A non-asymptotic approach for model selection via penalization in high-dimensional mixture of experts. *Electronic Journal of Statistics*, 16:4742–4822, 2022.

- [25] H D Nguyen and F Forbes. Global implicit function theorems and the online expectation–maximisation algorithm. *Australian and New Zealand Journal of Statistics*, 64:255–281, 2022.
- [26] J Gao, D A Burgard, B J Tschärke, F Y Lai, J W O’Brien, H D Nguyen, Q Zheng, J Li, P Du, X Li, D Wang, S Castiglioni, C Cruz-Cruz, J A Baz-Lomba, V Yargeau, E Emke, K V Thomas, J F Mueller, and P K Thai. Refining the estimation of amphetamine consumption by wastewater-based epidemiology. *Water Research*, 225:119182, 2022.
- [27] F Forbes, H D Nguyen, T T Nguyen, and J Arbel. Approximate Bayesian computation with surrogate posteriors. *Statistics and Computing*, 32:85, 2022.
- [28] J-B Durand, F Forbes, C D Phan, L Truong, H D Nguyen, and F Dama. Bayesian nonparametric spatial prior for traffic crash risk mapping: a case study of Victoria, Australia. *Australian and New Zealand Journal of Statistics*, 64:171–204, 2022.
- [29] F Almasi, H Nguyen, D Heydarian, R Sohi, S Nikbin, C J Jenvey, E Halliwell, E N Ponnampalam, A Desai, M Jois, and M J Stear. Quantification of behavioural variation among sheep grazing on pasture using accelerometer sensors. *Animal Production Science*, 62:1527–1538, 2022.
- [30] H D Nguyen, T T Nguyen, F Chamroukhi, and G McLachlan. Approximations of conditional probability density functions in Lesbegue spaces via mixture of experts models. *Journal of Statistical Distributions and Applications*, 8(13), 2021.
- [31] D V Fryer, I Strümke, and H Nguyen. Explaining the data or explaining a model? Shapley values that uncover non-linear dependencies. *PeerJ Computer Science*, 7(e582), 2021.
- [32] D Fryer, I Strümke, and H Nguyen. Shapley values for feature selection: the good, the bad, and the axioms. *IEEE Access*, 9:144352 – 144360, 2021.
- [33] M Vladimirova, S Girard, H Nguyen, and J Arbel. Sub-Weibull distributions: generalizing sub-Gaussian and sub-Exponential properties to heavier-tailed distributions. *Stat*, 9:e318, 2020.
- [34] E Redivo, H Nguyen, and M Gupta. Bayesian clustering of skewed and multimodal data using geometric skew normal distributions. *Computational Statistics and Data Analysis*, 152:107044, 2020.
- [35] T T Nguyen, H D Nguyen, F Chamroukhi, and G J McLachlan. Approximation by finite mixtures of continuous density functions that vanish at infinity. *Cogent Mathematics and Statistics*, 7:1750861, 2020.
- [36] H D Nguyen, F Forbes, and G J McLachlan. Mini-batch learning of exponential family finite mixture models. *Statistics and Computing*, 30:731–748, 2020.
- [37] H D Nguyen, J Arbel, H Lü, and F Forbes. Approximate Bayesian computation via the energy statistic. *IEEE Access*, 8:131683–131698, 2020.
- [38] D V Fryer, I Strümke, and H D Nguyen. Shapley value confidence intervals for attributing variance explained. *Frontiers in Applied Mathematics and Statistics*, 6:587199, 2020.
- [39] J Bagnall, A Jones, N Karavarsamis, and H Nguyen. The fully-visible Boltzmann machine and the Senate of the 45th Australian Parliament in 2016. *Journal of Computational Social Science*, 3:55–81, 2020.
- [40] J Arbel, O Marchal, and H D Nguyen. On strict sub-Gaussianity, optimal proxy variance and symmetry for bounded random variables. *ESAIM: Probability and Statistics*, 24:39–55, 2020.
- [41] L Truong, H Nguyen, H Nguyen, and H Vu. Pedestrian overpass use and its relationship with digital and social distractions, and overpass characteristics. *Accident Analysis and Prevention*, 131:234–238, 2019.
- [42] H D Nguyen, Y Yee, G J McLachlan, and J P Lerch. False discovery rate control for grouped or discretely supported p-values with application to a neuroimaging study. *SORT*, 43:1–22, 2019.
- [43] H D Nguyen and G J McLachlan. On approximation via convolution-defined mixture models. *Communications in Statistics - Theory and Methods*, 48:3945–3955, 2019.
- [44] H D Nguyen, F Chamroukhi, and F Forbes. Approximation results regarding the multiple-output mixture of linear experts model. *Neurocomputing*, 366:208–214, 2019.
- [45] H D Nguyen. Asymptotic normality of the time-domain generalized least squares estimator for linear regression models. *Stat*, 8(e248), 2019.
- [46] A T Jones, J J Bagnall, and H D Nguyen. BoltzMM: an R package for maximum pseudolikelihood estimation of fully-visible Boltzmann machines. *Journal of Open Source Software*, 4:1193, 2019. <https://doi.org/10.21105/joss.01193>.
- [47] D Fryer, H Nguyen, and P Orban. studentlife: tidy handling and navigation of a valuable mobile-health dataset. *Journal of Open Source Software*, 4(40), 2019.
- [48] F Chamroukhi and H D Nguyen. Model-based clustering and classification of functional data. *WIREs Data Mining and Knowledge Discovery*, e1298, 2019.
- [49] P Orban, C Dansereau, L Desbois, V Mongeau-Perusse, C-E Giguere, H Nguyen, A Mendrek, E Stip, and P Bellec. Multisite generalizability of schizophrenia diagnosis classification based on functional brain connectivity. *Schizophrenia Research*, 192:167–171, 2018.
- [50] H D Nguyen, D H Wang, and G J McLachlan. Randomized mixture models for probability density approximation and estimation. *Information Sciences*, 467:135–148, 2018.
- [51] H D Nguyen, G J McLachlan, J F P Ullmann, V Voleti, W Li, E M C Hillman, D C Reutens, and A L Janke. Whole-volume clustering of time series data from zebrafish brain calcium images via mixture modeling. *Statistical Analysis and Data Mining*, 11:5–16, 2018.

- [52] H D Nguyen and G J McLachlan. Some theoretical results regarding the polygonal distribution. *Communications in Statistics - Theory and Methods*, 47:5083–5095, 2018.
- [53] H D Nguyen and G J McLachlan. Chunked-and-averaged estimators for vector parameters. *Statistics and Probability Letters*, 137:336–342, 2018.
- [54] H D Nguyen, A T Jones, and G J McLachlan. Stream-suitable optimization algorithms for some soft-margin support vector machine variants. *Japanese Journal of Statistics and Data Science*, 1:81–108, 2018.
- [55] H D Nguyen and F Chamroukhi. An introduction to the practical and theoretical aspects of mixture-of-experts modeling. *WIREs Data Mining and Knowledge Discovery*, e1246, 2018.
- [56] H D Nguyen. Near universal consistency of the maximum pseudolikelihood estimator for discrete models. *Journal of the Korean Statistical Society*, 47:90–98, 2018.
- [57] L R Lloyd-Jones, H D Nguyen, and G J McLachlan. A globally convergent algorithm for lasso-penalized mixture of linear regression models. *Computational Statistics and Data Analysis*, 119:19–38, 2018.
- [58] A T Jones, H D Nguyen, and G J McLachlan. logKDE: log-transformed kernel density estimation. *Journal of Open Source Software*, 3:870, 2018.
- [59] C Oyarzun, A Sanjurjo, and H Nguyen. Response functions. *European Economic Review*, 98:1–31, 2017.
- [60] H D Nguyen, G J McLachlan, P Orban, P Bellec, and A L Janke. Maximum pseudolikelihood estimation for a model-based clustering of time series data. *Neural Computation*, 29:990–1020, 2017.
- [61] H D Nguyen and G J McLachlan. Progress on a conjecture regarding the triangular distribution. *Communications in Statistics - Theory and Methods*, 46:11261–11271, 2017.
- [62] H D Nguyen. An introduction to MM algorithms for machine learning and statistical estimation. *WIREs Data Mining and Knowledge Discovery*, 7(e1198), 2017.
- [63] H D Nguyen and I A Wood. Asymptotic normality of the maximum pseudolikelihood estimator for fully visible Boltzmann machines. *IEEE Transactions on Neural Networks and Learning Systems*, 27:897–902, 2016.
- [64] H D Nguyen and I A Wood. A block successive lower-bound maximization algorithm for the maximum pseudolikelihood estimation of fully visible Boltzmann machines. *Neural Computation*, 28:485–492, 2016.
- [65] H D Nguyen, G J McLachlan, and I A Wood. Mixtures of spatial spline regressions for clustering and classification. *Computational Statistics and Data Analysis*, 93:76–85, 2016.
- [66] H D Nguyen, G J McLachlan, J F P Ullmann, and A L Janke. Spatial clustering of time-series via mixture of autoregressions models and Markov Random Fields. *Statistica Neerlandica*, 70:414–439, 2016.
- [67] H D Nguyen, G J McLachlan, J F P Ullmann, and A L Janke. Laplace mixture autoregressive models. *Statistics and Probability Letters*, 110:18–24, 2016.
- [68] H D Nguyen and G J McLachlan. Maximum likelihood estimation of triangular and polygonal distributions. *Computational Statistics and Data Analysis*, 106:23–36, 2016.
- [69] H D Nguyen and G J McLachlan. Linear mixed models with marginally symmetric nonparametric random-effects. *Computational Statistics and Data Analysis*, 106:151–169, 2016.
- [70] H D Nguyen and G J McLachlan. Laplace mixture of linear experts. *Computational Statistics and Data Analysis*, 93:177–191, 2016.
- [71] H D Nguyen, L R Lloyd-Jones, and G J McLachlan. A universal approximation theorem for mixture-of-experts models. *Neural Computation*, 28:2585–2593, 2016.
- [72] H D Nguyen, L R Lloyd-Jones, and G J McLachlan. A block minorization-maximization algorithm for heteroscedastic regression. *IEEE Signal Processing Letters*, 23:1031–1135, 2016.
- [73] L R Lloyd-Jones, H D Nguyen, G J McLachlan, W Sumpton, and Y-G Wang. Mixture of time dependent growth models with an application to blue swimmer crab length-frequency data. *Biometrics*, 72:1255–1265, 2016.
- [74] H D Nguyen and G J McLachlan. Maximum likelihood estimation of Gaussian mixture models without matrix operations. *Advances in Data Analysis and Classification*, 9:371–394, 2015.
- [75] H D Nguyen, G J McLachlan, N Cherbuin, and A L Janke. False discovery rate control in magnetic resonance imaging studies via Markov random fields. *IEEE Transactions on Medical Imaging*, 33:1735–1748, 2014.
- [76] L R Lloyd-Jones, H D Nguyen, Y-G Wang, and M F O'Neill. Improved estimation of size-transition matrices using tag-recapture data. *Canadian Journal of Fisheries and Aquatic Sciences*, 71:1385–1394, 2014.
- [77] D Chen, A Shah, H Nguyen, D Loo, K Inder, and M Hill. Online quantitative proteomics p-value calculator for permutation-based statistical testing of peptide ratios. *Journal of Proteomics Research*, 13:4184–4191, 2014.
- [78] H D Nguyen, M M Hill, and I A Wood. A robust permutation test for quantitative SILAC proteomics experiments. *Journal of Integrated OMICS*, 2(80-93), 2012.
- [79] K L Inder, Y Z Zheng, M J Davis, H Moon, D Loo, H Nguyen, J A Clements, R G Parton, L J Foster, and M M Hill. Expression of PRTF in PC-3 cells modulated cholesterol dynamics and actin cytoskeleton impacting secretion pathways. *Molecular and Cellular Proteomics*, 11(M111.012245), 2012.

- [80] J Westerhout, T T Nguyen, X Guo, and H D Nguyen. On the asymptotic distribution of the minimum empirical risk. In *Forty-first International Conference on Machine Learning*, 2024.
- [81] S Roohi, R Skarbez, and H D Nguyen. Beyond factualism: an investigation of calibration in LLMs through the lens of emotion recognition in conversation. In *Proceedings of the 37th Australasian Joint Conference on Artificial Intelligence*, 2024.
- [82] D Fryer, H Nguyen, I Strümke, and D Lowing. Multi-choice explanations for feature and parameter importance. In *Proceedings The 22nd Australasian Data Science and Machine Learning Conference*, 2024.
- [83] F Forbes, H D Nguyen, and T T Nguyen. Bayesian likelihood free inference using mixtures of experts. In *Proceedings of the International Joint Conference on Neural Networks*, 2024.
- [84] S Roohi, R Skarbez, and H Nguyen. Reliable emotion recognition in conversation: quantifying and communicating uncertainty. In *IJCNN Workshop on Trustworthy and Responsible AI: theory, applications and challenges*, 2023.
- [85] TT Nguyen, D N Nguyen, H D Nguyen, and F Chamroukhi. A non-asymptotic risk bound for model selection in high-dimensional mixture of experts via joint rank and variable selection. In *Proceedings of the Australasian Joint Conference on Artificial Intelligence (AJCAI)*. Springer, 2023.
- [86] D Fryer, D Lowing, I Strümke, and H Nguyen. Multi-choice Explanations: a new cooperative game structure for XAI. In *IJCNN Workshop on Trustworthy and Responsible AI: theory, applications and challenges*, 2023.
- [87] T T Nguyen, F Chamroukhi, H D Nguyen, and F Forbes. Model selection by penalization in mixture of experts models with a non-asymptotic approach. In *53emes Journees de Statistique de la Societe Française de Statistique (SFdS)*, 2022.
- [88] H Nguyen, F Forbes, G Fort, and O Cappe. An online Minorization–Maximization Algorithm. In *Proceedings of the International Federation of Classification Societies*, 2022.
- [89] F Almasi, M Khansefid, H Nguyen, A Desai, J E Pryce, and M Stear. Repeatability estimates of grazing and rumination activity of Merino sheep measured using wearable sensors. In *Proceedings of the World Congress on Genetics Applied to Livestock Production*, 2022.
- [90] D C Phan, L T Truong, H D Nguyen, and R Tay. Can walking and cycling for train access improve road safety? In *Australian Road Safety Conference (ARSC2021)*, 2021.
- [91] D Fryer, H Nguyen, and P Castellazzi. k -means on positive definite matrices, and an application to clustering in radar image sequences. In *Proceedings of the IEEE Symposium Series on Computational Intelligence*, 2020.
- [92] H D Nguyen. An introduction to approximate Bayesian computation. In *Proceedings of the Research School on Statistics and Data Science (RSSDS)*, 2019.
- [93] F Chamroukhi, F Lecocq, and H D Nguyen. Regularized estimation and feature selection in mixtures of Gaussian-gated experts models. In *Proceedings of the Research School on Statistics and Data Science (RSSDS)*, 2019.
- [94] H D Nguyen, A T Jones, and G J McLachlan. Positive data kernel density estimation via the logKDE package for R. In *Proceedings of the Sixteenth Australasian Data Mining Conference*, 2018.
- [95] H D Nguyen and G J McLachlan. Iteratively-reweighted least-squares fitting of support vector machines: a majorization-minimization algorithm approach. In *Proceedings of the 2017 Future Technologies Conference (FTC)*, 2017.
- [96] H D Nguyen. A two-sample Kolmogorov-Smirnov-like test for Big Data. In *Proceedings of the Fifteenth Australasian Data Mining Conference*, 2017.
- [97] H D Nguyen and G J McLachlan. Asymptotic inference for hidden process regression models. In *Proceedings of the IEEE Statistical Signal Processing Workshop*, 2014.
- [98] H D Nguyen, A L Janke, N Cherbuin, G J McLachlan, P Sachdev, and K J Anstey. Spatial false discovery rate control for magnetic resonance imaging studies. In *Proceedings of the 2013 Digital Imaging: Techniques and Applications (DICTA) Conference*, 2013.
- [99] H D Nguyen and I A Wood. Variable selection in statistical models using population-based incremental learning with applications to genome-wide association studies. In *Proceedings of the 2012 IEEE Congress on Evolutionary Computation (CEC)*, 2012.

Book Chapters

- [100] G J McLachlan, S K Ng, and H D Nguyen. EM Algorithm. In *Wiley StatsRef: Statistics Reference Online*. Wiley, Chichester, 2021.
- [101] H D Nguyen and A T Jones. Big data-appropriate clustering via stochastic approximation and Gaussian mixture models. In *Data Analytics: Concepts, Techniques, and Applications*. CRC Press, 2018.
- [102] H D Nguyen, G J McLachlan, and M M Hill. Permutation tests with false discovery corrections for comparative-profiling proteomics experiments. In *Methods in Molecular Biology: Proteomics Bioinformatics*. Springer, 2017.

OTHER PUBLICATIONS

- [103] H Nguyen, editor. *Statistics and Data Science: Proceedings of the 2019 Research School on Statistics and Data Science (RSSDS)*, Singapore, 2019. Springer.

- [104] H D Nguyen. Contribution to the discussion of paper by I Waudby-Smith and A. Ramdas. *Journal of the Royal Statistical Society B*, 86, 2024.
- [105] H Nguyen, S Lee, and F Forbes. A Festschrift for Geoff McLachlan. *Australian and New Zealand Journal of Statistics*, 64:111–116, 2022.
- [106] H D Nguyen, J Bagnall-Guerreiro, and A T Jones. Universal inference with composite likelihoods. In *Proceedings of the 63rd ISI World Statistics Congress*, 2021.
- [107] H D Nguyen. Finite sample inference for generic autoregressive models. In *Proceedings of FMfI 2021*, Math-for-Industry Lecture Notes. Institute of Mathematics for Industry, Kyushu University, 2021.
- [108] R Gray, H Nguyen, D Bressington, M Jones, and D Thompson. Comment on - Mothers' voices and white noise on premature infants' psychological reactions in a neonatal intensive care unit: A multi-arm randomised controlled trial. *International Journal of Nursing Studies*, (104050), 2021.
- [109] A T Jones, H D Nguyen, and J J Bagnall. BoltzMM: Boltzmann Machines with MM Algorithms. Software published in the Comprehensive R Archive Network, 2019. <https://CRAN.R-project.org/package=BoltzMM>.
- [110] H D Nguyen, A T Jones, and G J McLachlan. logKDE: Computing log-transformed kernel density estimates for positive data. Software published in the Comprehensive R Archive Network, 2018. <https://CRAN.R-project.org/package=logKDE>.
- [111] J Bagnall, A T Jones, and H Nguyen. Analysing the voting patterns of the Senate of the 45th Australian Parliament via fully-visible Boltzmann machines. Poster presented at UseR! 2018, 2018. <https://hal.archives-ouvertes.fr/hal-01838443v1>.
- [112] H D Nguyen. A novel algorithm for clustering of data on the unit sphere via mixture models. In *JSM Proceedings: Statistical Computing Section*, 2017.
- [113] G J McLachlan and H D Nguyen. Contribution to the discussion of paper by M. Drton and M. Plummer. *Journal of the Royal Statistical Society B*, 79:365, 2017.
- [114] A T Jones and H D Nguyen. lowmemtkmeans: Low memory use trimmed k-means. Software published in the Comprehensive R Archive Network, 2016. <https://CRAN.R-project.org/package=lowmemtkmeans>.
- [115] H D Nguyen. NostalgIR: Advanced text-based plots. Software published in the Comprehensive R Archive Network, 2015. <https://CRAN.R-project.org/package=NostalgIR>.
- [116] H D Nguyen. *Finite mixture models for regression problems*. PhD thesis, University of Queensland, 2015. <https://doi.org/10.14264/uql.2015.584>.

GRANTS AND RESEARCH

FUNDING

- 2025–2027 **Discovery Project** (531,000 AUD; DP250100860)
Australian Research Council
Co-investigators: Professor Shu-Kay Angus Ng (Griffith University), Dr Florence Forbes (Inria Centre at the University Grenoble Alpes), and A Prof Liming Xiang (Nanyang Technological University, Singapore)
Project: Advancing statistical models for clustering data with structured dependence
- 2023–2026 **Inria Associate Teams** (48,000 EURO)
Co-investigator: Dr Florence Forbes (Inria Centre at the University Grenoble Alpes)
Project: Variance-reduced Optimization Methods and Bayesian Approximation Techniques for scalable inference (WOMBAT)
- 2023–2025 **Discovery Project** (360,000 AUD; DP230100905)
Australian Research Council
Co-investigators: Dr Xin Guo (University of Queensland), Dr Florence Forbes (Inria Centre at the University Grenoble Alpes), and A Prof Gersende Fort (CNRS)
Project: Stochastic majorization–minimization algorithms for data science
- 2021–2023 **Australian Government Road Safety Innovation Fund** (101,248 AUD)
Co-investigator: Dr Long Truong (La Trobe University)
Project: Development of planning-stage crash prediction tools for use at the planning stages
- 2019–2021 **Inria Associate Teams** (36,000 EURO)
Co-investigator: Dr Florence Forbes (Inria Centre at the University Grenoble Alpes)
Project: Latent analysis, adversarial networks, and DimEnsionality Reduction (LANDER)
- 2018–2021 **Discovery Project** (242,194 AUD; DP180101192)
Australian Research Council
Co-investigators: Prof Geoffrey McLachlan (University of Queensland) and Dr Sharon Lee (University of Queensland)
Project: Classification methods for providing personalised and class decisions

- 2017–2020 **Discovery Early Career Research Award** (360,000 AUD; DE170101134)
Australian Research Council
Project: Feasible algorithms for big inference
- 2018 **AFRAN Call for Initiatives** (3,000 AUD)
Australian-French Association for Research and Innovation
Project: Research School on Statistics and Data Science
- 2018 **FASIC RESEARCHERS Program** (2,545 EURO)
Ministry of Europe and Foreign Affairs, and Ministry of Higher Education, Research and Innovation (France)
Co-awardee: Dr Florence Forbes (Inria Centre at the University Grenoble Alpes)
Project: Latent analysis, adversarial networks, and dimensionality reduction
- 2017–2019 **Start Up Grant** (15,000 AUD)
La Trobe University

SCHOLARSHIPS AND PRIZES

- 2015 **AK Head Travelling Scholarship** (13,000 AUD)
Australian Academy of Science
- 2011–2014 **ASPRE-ENVISION Scholarship** (21,000 AUD)
Australian National University
- 2011–2014 **Advantage RHD Scholarship** (17,500 AUD)
University of Queensland
- 2011–2014 **Australian Postgraduate Award** (87,000 AUD)
University of Queensland
- 2010 **Honours Research Scholarship** (5,000 AUD)
Commonwealth Scientific and Industrial Research Organization
- 2010 **Summer Research Scholarship** (3,000 AUD)
University of Queensland
- 2009 **Economics Jubilee Scholarship** (8,000 AUD)
University of Queensland
- 2009 **National Priority Scholarship** (2,000 AUD)
University of Queensland
- 2008 **Vacation Research Scholarship** (8,500 AUD)
Commonwealth Scientific and Industrial Research Organization
- 2008 **Elizabeth Norworthy Power Industry Bursary** (7,500 AUD)
Stanwell Corporation Limited
- 2008 **Prize for Third Year Statistics** (500 AUD)
Department of Education, Employment and Workplace Relations
- 2007, 2008 **Undergraduate Scholarship** (8,000 AUD)
Australian Bureau of Statistics
- 2006, 2007 **Commonwealth Educational Cost Scholarship** (4,000 AUD)
University of Queensland
- 2006 **Kenneth Swanwick Memorial Prize** (100 AUD)
University of Queensland
- 2006 **John Black Prize** (100 AUD)
University of Queensland

TEACHING AWARDS

- 2013, 2014 **Distinguished Teaching Award**
School of Economics, University of Queensland

2012 **Excellence in Tutoring Award**
School of Mathematics and Physics, University of Queensland

POST-DOCTORAL SUPERVISION

2023–2025 **Trung Tin Nguyen** (University of Queensland)
Co-supervised with Dr Xin Guo, University of Queensland
Project: Stochastic optimization algorithms for mixtures of experts

2021–2023 (Inria Centre at the University of Grenoble Alpes)
Co-supervised with Dr Florence Forbes, Inria Centre at the University Grenoble Alpes
Project: Non-asymptotic methods for Bayesian computation

STUDENT SUPERVISION

2024– **Jiading Liu** (PhD, University of Queensland)
Co-supervised with Dr Xin Guo, University of Queensland
Project: Kernel learning methods

2024– **Jacob Westerhout** (PhD, University of Queensland)
Co-supervised with Dr Xin Guo, University of Queensland
Project: Weak convergence of empirical processes and the delta method

2023 (Honours, University of Queensland)
Project: Asymptotic distributions of optimal values arising from sample averaging processes

2019–2024 **Daniel Fryer** (PhD, University of Queensland)
Co-supervised with Prof Geoffrey McLachlan and Dr Ian Wood, University of Queensland
Project: Interpretable methods in AI and statistics

2019–2024 **Fazel Almasi** (PhD, La Trobe University)
Co-supervised with Profs Michael Stear, Jennie Pryce, Aniruddha Desai, and Drs Markandeya Jois and Eric Pon-nampalam, La Trobe University
Project: Parasitological and behavioral study of lambs using sensor technology

2023— **Samad Roohi** (PhD, La Trobe University)
Co-supervised with Dr Richard Skarbez, La Trobe University
Project: Natural language models for affective conversation systems

2023 **Qingyuan Zhang** (Honours, University of Queensland)
Project: Determination of optimal constraints for regularization problems in the Ivanov form

2022–2023 **Mark Chiu Chong** (Honours, University of Queensland)
Project: Risk bounds for mixture density estimation on compact sets via Bregman divergences

2022 **Callum Macfarlane** (Honours, University of Queensland)
Co-supervised with Em Prof Alan Mark and Dr Martin Stroet, University of Queensland
Project: Optimisation methods of refined point charge fitting for molecular modelling forcefields

2021–2022 **Nicholas Williams** (Honours, University of Queensland)
Co-supervised with Dr Ramiro Lafuente, University of Queensland
Project: Links between maximum likelihood estimation and geometric invariant theory

2019–2022 **Cong Duc Phan** (M Engineering, La Trobe University)
Co-supervised with Dr Long Truong, La Trobe University
Project: Exploring the Network-wide Road Safety Impacts of Public Transport Usage and Congestion Levels

2018–2021 **Trung Tin Nguyen** (PhD, University of Caen, Normandy)
Co-supervised with Prof Faicel Chamroukhi, University of Caen, Normandy
Project: Learning and approximation theory of mixture models and mixture of experts

2020 **Nauvoo Perez** (AMSI Vacation Scholar, La Trobe University)
Project: Statistical learning for time-to-relapse of colorectal cancer patients

CONFERENCE PRESENTATIONS

Talks

- 2024 **Lp approximation rates for location-scale mixture densities and other matters**
Conference: Joint Meeting of the NZMS, AustMS and AMS
Location: Auckland, New Zealand
- 2024 **Bayesian Likelihood Free Inference using Mixtures of Experts**
Conference: International Society for Bayesian Analysis World Meeting
Location: Venice, Italy
- 2023 **PanIC: an information criterion approach for generic model selection problems**
Conference: Australian Statistical Conference
Location: Wollongong, Australia
- 2023 **A non-asymptotic risk bound for model selection in a high-dimensional mixture of experts via joint rank and variable selection**
Conference: Australasian Joint Conference for Artificial Intelligence
Location: Brisbane, Australia
- 2023 **Convergence of Bayesian posterior statistics and related quantities**
Conference: Sequential Monte Carlo Down Under
Location: Brisbane, Australia
- 2022 **(SAM)²: a family of sequential sample averaging algorithms via majorization–minimization**
Conference: CSDA and EcoSta Workshop on Statistical Data Science
Location: Bologna, Italy (Delivered online)
- 2022 **An online MM algorithm**
Conference: 17th conference of the International Federation of Classification Societies
Location: Porto, Portugal
- 2021 **Finite sample inference for nonlinear autoregressive models**
Conference: 15th International Conference of the ERCIM WG on Computational and Methodological Statistics (CM-Statistics)
Location: London, UK (Delivered online)
- 2021 **Universal inference with composite likelihoods**
Conference: ISI World Statistics Congress
Location: Online
- 2021 **Distance-based ABC procedures**
Conference: ABC in Svalbard
Location: Melbourne, Australia (Delivered onsite and online)
- 2020 **Global implicit function theorems and the online EM algorithm**
Conference: 14th International Conference of the ERCIM WG on Computational and Methodological Statistics (CM-Statistics)
Location: London, UK (Delivered online)
- 2019 **Mixture of autoregressive moving average models**
Conference: 13th International Conference of the ERCIM WG on Computational and Methodological Statistics (CM-Statistics)
Location: London, UK
- 2019 **Approximate Bayesian computation with discrepancy measurements**
Conference: Research School on Statistics and Data Science (RSSDS2019)
Location: Melbourne, Australia
- 2019 **Mixtures of local logistic regressions for nonlinear classification when data are heterogeneous**
Conference: 3rd International Conference on Econometrics and Statistics (EcoSta 2019)
Location: Taichung, Taiwan
- 2018 **Fast Gaussian mixture model estimation using online EM algorithms**
Conference: 11th International Conference of the ERCIM WG on Computational and Methodological Statistics (CM-Statistics)

- Location: Pisa, Italy
- 2018 **On approximations via convolution-defined mixture models**
Conference: 2nd Italian-French Statistical Seminar
Location: Grenoble, France
- 2017 **Stream-suitable optimization algorithms for some soft-margin support vector machines**
Conference: 10th International Conference of the ERCIM WG on Computational and Methodological Statistics (CM-Statistics)
Location: London, UK
- 2017 **Iteratively-reweighted least-squares fitting of support vector machines: a majorization-minimization algorithm approach** (Best Paper Award)
Conference: 2nd Future Technologies Conference
Location: Vancouver, Canada
- 2017 **A two-sample Kolmogorov-Smirnov-like test for Big Data**
Conference: 15th Australasian Data Mining Conference
Location: Melbourne, Australia
- 2017 **Novel algorithm for clustering of data on the unit sphere via mixture models**
Conference: Joint Statistics Meeting
Location: Baltimore, USA
- 2016 **Fast model-based clustering of functional data via Gaussian mixture models**
Conference: 9th International Conference of the ERCIM WG on Computational and Methodological Statistics (CM-Statistics)
Location: Seville, Spain
- 2015 **Spatial clustering of time-series via mixtures of autoregressive models and Markov random fields**
Conference: 8th International Conference of the ERCIM WG on Computational and Methodological Statistics (CM-Statistics)
Location: London, UK
- 2013 **Spatial false discovery rate control for magnetic resonance imaging studies**
Conference: International Conference on Digital Image Computing: Techniques and Applications (DICTA)
Location: Hobart, Australia
- 2012 **Variable selection in statistical models using population-based incremental learning with applications to genome-wide association studies**
Conference: IEEE Congress on Evolutionary Computation
Location: Brisbane, Australia
- Posters**
- 2014 **Asymptotic inference for hidden process regression models**
Conference: IEEE Statistical Signal Processing Workshop
Location: Gold Coast, Australia

INVITED PRESENTATIONS AND

WORKSHOPS

- 2025 **Approximation and estimation of density functions by finite mixture models** (I2CNER-IMI Joint International Workshop)
Location: Kyushu University, Japan
- 2024 **Lp approximation rates for location-scale mixture densities and other matters** (Sydney Workshop on Mathematics of Data Science)
Location: University of Sydney, Australia
- 2024 **The limits of some Bayesian model evaluation statistics** (VIASM, Workshop on Bayesian learning and network analysis)
Location: VIASM Hanoi, Vietnam
- 2024 **The limits of some Bayesian model evaluation statistics** (Kyushu University, Statistical Science Seminar)

- Location: Kyushu University, Japan
- 2024 **MM Algorithms for Optimization of Statistical Models** (4-day Intensive Course for the Joint Graduate School of Mathematics for Innovation)
Location: Kyushu University, Japan
- 2023 **PanIC at the Boathouse**
Conference: ANU RSFAS Summer Research Camp
Location: Canberra, Australia
- 2022 **Asymptotic concentration of the ABC posterior estimator without identifiability** (ICASM)
Location: University of Economics, Ho Chi Minh City, Vietnam (Delivered online)
- 2021 **Finite sample inference for generic autoregressive models** (Math for Industry Forum)
Location: VIASM, Hanoi, Vietnam (Delivered online)
- 2021 **Approximate Bayesian computation** (Intellectual Climate Fund Seminar)
Location: La Trobe University, Melbourne (Delivered online)
- 2021 **Universal inference with composite likelihoods** (Research School of Finance, Actuarial Studies and Statistics Seminar)
Location: Australian National University, Canberra (Delivered online)
- 2021 **Order selection with confidence for mixture models** (Department of Mathematics and Statistics Colloquium)
Location: Macquarie University, Sydney (Delivered online)
- 2020 **Machine learning for statistical analysis – it's just a game!** (AgriBio, Intellectual Climate Fund talk)
Location: La Trobe University, Melbourne (Delivered online)
- 2020 **Multivariate analyses—A normal approach** (AgriBio, Intellectual Climate Fund talk)
Location: La Trobe University, Melbourne (Delivered online)
- 2020 **The multiple testing problem in high-throughput biology** (AgriBio Lectures in Mathematical Biology)
Location: La Trobe University, Melbourne (Delivered online)
- 2020 **Approximate Bayesian computation via the energy statistic** (One World Approximate Bayesian Computation (ABC) Seminar)
Location: University of Warwick, UK (Delivered online)
- 2020 **Shapley values for linear regression models and its application to explainable AI**
Location: University of Sydney, Australia
- 2019 **Approximation by finite mixtures of continuous density functions that vanish at infinity**
Location: University of Glasgow, Scotland
- 2019 **Approximate Bayesian computation using the energy statistic** (CDAC Seminar)
Location: La Trobe University, Australia
- 2018 **Optimization theory for statistics and machine learning** (4-week course)
Location: University of Caen, France
- 2018 **Minibatch and incremental learning of exponential family mixtures**
Location: RMIT, Australia
- 2018 **Minibatch and incremental learning of exponential family mixtures, and the soft k-means clustering problem**
Location: Inria Centre at the University Grenoble Alpes, France
- 2018 **The fully-visible Boltzmann machine, maximum pseudolikelihood estimation, and the Senate of the 45th Australian Parliament** (Monash Econometrics and Business Statistics Seminar)
Location: Monash University, Australia
- 2018 **A maximum likelihood oddity** (Statistics Seminar)
Location: La Trobe University, Australia
- 2018 **MM algorithms for statistical inference and machine learning problems** (S4D)
Location: University of Caen, France

- 2018 **Theory of statistical inference: a lazy approach to obtaining asymptotic results in parametric models (S4D)**
Location: University of Caen, France
- 2017 **False discovery rate control under rounding of p-values**
Location: Centre de Reserche de l'Institut Universitaire de Geriatrie de Montreal, Canada
- 2017 **The Stone-Weierstrass theorem and neural networks (Kyushu-Latrobe Joint Seminar)**
Location: La Trobe University, Australia
- 2017 **False discovery rate control under rounding of p-values**
Location: Inria Centre at the University Grenoble Alpes, France
- 2017 **Majorization–minimization (MM) algorithms for statistical inference and machine learning problems (Research Summer School in Statistics and Big Data Science)**
Location: University of Caen, France
- 2017 **Chunked-and-averaged estimators for statistically embarrassingly parallel computation and online learning (Workshop on Big Data Analysis)**
Location: La Trobe University, Australia
- 2016 **Whole-volume clustering of calcium imaged zebrafish brains via model-based functional data analysis**
Location: La Trobe University, Australia
- 2016 **A novel approach to clustering time series data in large spatial arrays (Centre for Advanced Imaging Seminar Series)**
Location: University of Queensland, Australia
- 2016 **Model-based methods for clustering of spatial time series data (3-day Invited Workshop for the School of Computer Science and Software Engineering)**
Location: University of Western Australia, Australia
- 2015 **Finite mixture models and false discovery rate control in MRI studies (Mouse Imaging Research Centre)**
Location: Toronto Centre for Phenogenomics, Canada
- 2015 **Finite mixture models and false discovery rate control in MRI studies (Feindel Brain Imaging Lecture Series at the McConnell Brain Imaging Centre)**
Location: McGill University, Canada
- 2013 **Spatial false discovery rate control for magnetic resonance imaging studies (Neuroimaging and Brain Lab)**
Location: Australian National University, Australia
- 2010 **The beginner's guide to genetic algorithms (General Interest/Lay Audience Seminar at the School of Mathematics and Physics)**
Location: University of Queensland, Australia

PROFESSIONAL SERVICE

- 2024– **Member of the Graduate Program of Mathematics for Innovation**
Joint Graduate School of Mathematics for Innovation
Institution: Kyushu University, Japan
- 2024– **La Trobe–Kyushu Joint Seminar Administrator**
Institute of Mathematics for Industry
Institution: Kyushu University, Japsan
- 2022–2023 **Chair of Engagement, Advancement and Internationalization**
School of Mathematics and Physics
Institution: University of Queensland, Australia
- 2022–2023 **UQ School of Mathematics and Physics Representative**
Institution: Australian Data Science Network
- 2022–2023 **Faculty and School Student Misconduct Committee Member**
School of Mathematics and Physics
Institution: University of Queensland, Australia

2022–2023 **Faculty EMCA Reference Group Representative and School EMCA Committee Member**

School of Mathematics and Physics

Institution: University of Queensland, Australia

2022–2023 **Mentoring Chair**

Research Committee, School of Mathematics and Physics

Institution: University of Queensland, Australia

2021–2023 **Statistics, Modelling and Operations Research Seminar Administrator**

School of Mathematics and Physics

Institution: University of Queensland, Australia

2020–2021 **Mathematics, Statistics, and Data Science Majors Course Advisor**

Bachelor of Science Program, College of Science, Health and Engineering

Institution: La Trobe University, Australia

2020–2021 **Elected Member of the Academic Board**

Levels C/D Representative

Institution: La Trobe University, Australia

2017, 2018 **Statistics Seminar Administrator**

Department of Mathematics and Statistics

Institution: La Trobe University, Australia

2012, 2013 **Treasurer**

Mathematics Students Society

Institution: University of Queensland, Australia

2011–2013 **First-Year Learning Centre Tutor**

School of Mathematics and Physics

Institution: University of Queensland, Australia

ACADEMIC SERVICE

Grant Assessor

2018 **Free University of Bozen-Bolzano, Italy**

2017– **Australian Research Council, Australia**

Discovery Early Career Research Awards; Discovery Projects; Linkage Projects; Future Fellowships; Laureate Fellowships

Editorial Positions

2024– **Executive Editor**

Statistical Analysis and Data Mining (Wiley)

2024– **Associate Editor**

Japanese Journal of Statistics and Data Science (Springer)

2024– **Associate Editor**

International Journal of Mathematics for Industry (World Scientific)

2023– **Book Review Editor**

Australian and New Zealand Journal of Statistics (Wiley)

2019– **Associate Editor (Statistics)**

Frontiers in Applied Mathematics and Statistics (Frontiers)

2019–2023 **Handling Editor (Statistical Computing)**

Australian and New Zealand Journal of Statistics (Wiley)

2018– **Technical Editor**

Australian and New Zealand Journal of Statistics (Wiley)

Conference Commitments

2023 **Organization Committee Member (Chair of Sponsorships)**

67th Annual Meeting of the Australian Mathematical Society (AustMS 2023), Brisbane Australia

- 2020 **Program Committee Member**
18th Australasian Data Mining Conference (AusDM), Canberra Australia
- 2019 **Workshop Co-chair**
Research School in Statistics and Data Science (RSSDS), Melbourne Australia
- 2019 **Program Committee Member**
17th Australasian Data Mining Conference (AusDM), Adelaide Australia
- 2018 **Program Committee Member and Tract Chair** (Statistics in Data Science)
16th Australasian Data Mining Conference (AusDM), Bathurst Australia
- 2018 **Program Committee Member**
Research Summer School on Statistics for Data Science (S4D)
- 2018 **Program Committee Member** (Applications and Technologies in Big Data)
2nd International Conference on Smart Grid Assisted Internet of Things (SGIoT)

Peer Review

Advances in Data Analysis and Classification (Springer); Applied Mathematical Modelling (Elsevier); Annals of Applied Statistics (Project Euclid); Annals of Statistics (Project Euclid); Australasian Journal of Information Systems (Australian Computer Society); Australian and New Zealand Journal of Statistics (Wiley); BMC Bioinformatics (BioMed Central); Computational Statistics (Springer); Biometrika (Oxford University Press); Computational Statistics and Data Analysis (Elsevier); Communications in Statistics – Simulation and Computation (Taylor Francis); Electronic Journal of Statistics (Project Euclid); IEEE Transactions on Fuzzy Systems (IEEE); IEEE Transactions on Image Processing (IEEE); IEEE Transactions on Information Theory (IEEE); IEEE Transactions on Medical Imaging (IEEE); Information Sciences (Elsevier); International Journal of Computers and Applications (Taylor Francis); International Journal of Forecasting (Elsevier); International Journal of Machine Intelligence and Sensory Signal Processing (Inderscience); Japanese Journal of Statistics and Data Science (Springer); Journal of the American Statistical Association (Taylor Francis); Journal of Classification (Springer); Journal of Computational and Graphical Statistics (Taylor Francis); Journal of Open Source Software (Open Source Initiative); Journal of Statistical Computation and Simulation (Taylor Francis); Journal of Statistical Planning and Inference (Elsevier); Knowledge-Based Systems (Elsevier); Royal Society Open Science (Royal Society); Statistical Modelling: An International Journal (SAGE); Statistical Analysis and Data Mining (Wiley); Statistics Surveys (Project Euclid); Statistics and Computing (Springer); Statistics in Medicine (Wiley); WIREs: Data Mining and Knowledge Discovery (Wiley)

PROFESSIONAL MEMBERSHIPS

- 2025– Institute of Mathematical Statistics (Regular Member)
- 2024– International Society for Bayesian Analysis (Regular Member)
- 2022– Australian Mathematical Society (Fellowship Committee Member 2022–)
- 2019– Statistical Society of Australia (Victoria Branch, Council Member 2020–2021; Queensland Branch, President 2023–2025)
- 2018– Australian-French Association for Research and Innovation (AFRAN)