

ROBERT DAMIEN SALOMONE

CONTACT	Centre for Data Science Queensland University of Technology Brisbane QLD 4000	0417 748 153 www.robsalomone.com robert.salomone@qut.edu.au
CITIZENSHIP	Australian	
RESEARCH INTERESTS	My primary research interests lie in the development of computational methodology at the intersection of statistics and machine learning, with a focus on improved inference techniques (e.g., Markov chain Monte Carlo, sequential Monte Carlo, and variational approximations). More broadly, I am interested in all aspects of methodology in statistics and machine learning.	
PROFESSIONAL APPOINTMENTS	Queensland University of Technology <i>Postdoctoral Fellow</i> Centre for Data Science Supervisor: Professor Christopher Drovandi	Nov 2020–Present
	UNSW Sydney <i>Postdoctoral Research Fellow</i> Australian Centre of Excellence for Mathematical and Statistical Frontiers (ACEMS) Supervisors: Professor Robert Kohn	Jan 2019–Oct 2020
	The University of Queensland <i>Postdoctoral Research Fellow</i> Australian Centre of Excellence for Mathematical and Statistical Frontiers (ACEMS) Supervisor: Professor Dirk Kroese	Aug 2018–Jan 2019
RESEARCH AFFILIATIONS	<i>Associate Investigator</i> Australian Centre of Excellence for Mathematical and Statistical Frontiers (ACEMS)	Feb 2020–Present
EDUCATION	Ph.D. in Statistics The University of Queensland, Australia. Dissertation: <i>Advances in Monte Carlo Methodology</i> Advisor: Professor Dirk Kroese	2015–2018
	B.Sc. (Hons.) in Mathematics The University of Queensland, Australia. First Class Honours. Thesis: <i>Splitting Methods for Rare-Event Estimation and Counting Problems</i> Advisor: Professor Dirk Kroese	2010–2015
REFEREED PUBLICATIONS	<ol style="list-style-type: none">Salomone, R., Quiroz, M., Kohn, R., Villani, M., and Tran, M.N. (2020), <i>Spectral Subsampling MCMC for Stationary Time Series</i>. Proceedings of the International Conference of Machine Learning (ICML) 2020.Hodgkinson, L., Salomone, R., and Roosta, F. (2020), <i>Implicit Langevin Algorithms for Sampling from Log-concave Densities</i>, Journal of Machine Learning Research. Accepted, with minor revision (revision now submitted).Botev, Z.I., Salomone, R., Mackinlay, D. (2019), <i>Fast and accurate computation of the distribution of sums of dependent log-normals</i>, Annals of Operations Research, 280:19-46.	

COMPLETED MANUSCRIPTS	<ol style="list-style-type: none"> 4. Laub, P.J., Salomone, R., Botev, Z.I. (2019), <i>Monte Carlo estimation of the density of the sum of dependent random variables</i>, Mathematics and Computers in Simulation 161, 23-31. 5. Salomone, R., Vaisman, R., and Kroese, D.P. (2016). <i>Estimating the Number of Vertices in Convex Polytopes</i>, Proceedings of the Annual International Conference on Operations Research and Statistics, ORS 2016, 1-10. 6. Salomone, R., South, L.F., Johansen, A.M., Drovandi, C.C., and Kroese, D.P.. <i>Unbiased and Consistent Nested Sampling via Sequential Monte Carlo</i>. arXiv:1805.03924 7. Hodgkinson, L., Salomone, R., and Roosta, F., <i>The reproducing Stein kernel approach for post-hoc corrected sampling</i>. arXiv:2001.09266. 8. Kohn, R., Quiroz, M., Salomone, R., Villani M., <i>Spectral Subsampling MCMC for Multivariate Time Series</i>.
OTHER AUTHORSHIP	D.P. Kroese, Z.I. Botev, T. Taimre, R. Vaisman, and Salomone, R. , Solutions Manual for <i>Data Science and Machine Learning: Mathematical and Statistical Methods</i> .
TEACHING (LECTURING & COORDINATION)	<p>Unit Coordinator & Lecturer, Quantitative Methods in Science Sem 1, 2021 (SEB113) Queensland University of Technology</p> <p>Lecturer, Analysis of Scientific Data (STAT1201) 2017 The University of Queensland</p> <p style="padding-left: 2em;">- Overall Teaching Evaluation Score: 4.81/5 (Approx. 100 Enrolments, 26 Student Evaluations)</p> <p>Guest Lecturer, Advanced Analysis of Scientific Data (STAT1301) 2015 The University of Queensland</p>
TEACHING (TUTOR)	Tutor (Teaching Assistant) 2012–2018 The University of Queensland
WORKSHOPS	- <i>Automatic Differentiation: Theory and Practice</i> (half day). Australian Centre of Excellence for Mathematical and Statistical Frontiers (ACEMS) Retreat, Adelaide, October 2019.
INVITED TALKS	<ul style="list-style-type: none"> - <i>Monte Carlo Secrets Revealed</i>, Statistical Society of Australia: NSW Branch Meeting (Seminar), Brisbane, October 2020. - <i>Personal Career Talk</i>, Statistical Society of Australia: Careers and Networking Event, Sydney, October 2019. - <i>Implicit Langevin Algorithms for Sampling from Log-concave Densities</i>, 12th International Conference on Monte Carlo Methods and Applications (MCM2019), Sydney, July 2019. - <i>An Introduction to Stein Kernels</i>, ACEMS Workshop: Advances and Challenges in Monte Carlo Methods, Brisbane, November, 2018.

CONTRIBUTED
TALKS

- *Spectral Subsampling MCMC for Stationary Time Series*, International Conference on Machine Learning (ICML) 2020.
- *Estimating the Number of Vertices in Convex Polytopes*, Annual International Conference on Operations Research and Statistics, Singapore, January 2016.

PROFESSIONAL
SERVICE

Referee

- Annals of Statistics
- Journal of Computational and Graphical Statistics
- Statistics and Computing
- Statistics Surveys
- Australian & New Zealand Journal of Statistics

Program Committee Member & Referee

- 29th International Joint Conference on Artificial Intelligence and the 17th Pacific Rim International Conference on Artificial Intelligence (IJCAI-PRICAI-2020)
- 28th International Joint Conference on Artificial Intelligence (IJCAI-19)

Seminar Organization

- Organizer: QUT Reading Group on Measure-Theoretic Probability Theory (2021)
- Organizer: UNSW Sydney Computational Statistics and Machine Learning Reading Group (2019–2020).
- Organizer: University of Queensland Machine Learning Reading Group (2017–2018).

Outreach

- Facilitator: UNSW Sydney Data Science Work Experience (2019) for high school students (2 days).

PROGRAMMING
SKILLS

Python (Advanced), R, MATLAB

MACHINE
LEARNING
FRAMEWORKS

PyTorch, Pyro (Contributor), Stan

AWARDS &
FUNDING

- Chief Investigator: QUT Centre for Data Science First Byte Grant \$10000 2021
- UNSW National Computing Infrastructure (NCI) Resource Allocation Value of Computing Resources Awarded: Approx. \$2000 2020
- Award for Tutoring Excellence School of Mathematics and Physics, The University of Queensland 2017
- ACEMS Three Minute Thesis and Poster Competition (Winner) Prize: \$2000 research funding 2016