C u r r i c u l u m V i t a e

Sam Brilleman

Contact

Postal: School of Public Health and Preventive Medicine,
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Education

2015 – current Monash University, Australia
PhD

- Thesis title: Joint longitudinal and time-to-event models for applications in health research
- Supervisors: Professor Rory Wolfe (primary), Dr Michael Crowther, Dr Margarita Moreno-Betancur

2013 – 2014 University of Leicester, UK
MSc in Medical Statistics

- Grade: Distinction
- Dissertation title: Development and application of joint longitudinal and time-to-event models to estimate effects of multiple clinical markers on the durability of tenofovir disoproxil fumarate for treating HIV patients
- Dissertation supervisors: Professor Keith Abrams, Dr Michael Crowther

2003 – 2006 University of Otago, NZ
BSc(Hons), major in Statistics

- Grade: First class honours
- Dissertation title: Limitations of human running performance
- Dissertation supervisor: Professor Richard Barker

1997 – 2002 Hutt International Boys' School, Wellington, NZ

- Bursary subjects: Accounting (A), Physics (B), Calculus (A), Statistics (A)

Scholarships, fellowships and awards

Jan 2018	StanCon 2018 Scholarship
Jul 2017	International Society for Clinical Biostatistics (ISCB) 2017 Student Conference Award (StCA)
Jul 2017	School of Public Health and Preventive Medicine Travel Grant, Monash University, Australia
Feb 2015 – Feb 2018	NHMRC Postgraduate Scholarship, Monash University, Australia
Feb 2015 – Feb 2017	Victorian Centre for Biostatistics (ViCBiostat) top-up scholarship
Feb 2015 – Feb 2016	Faculty Postgraduate Excellence Award (Faculty of Medicine, Nursing and Health Sciences), Monash University, Australia
Dec 2014	Royal Statistical Society Prize, University of Leicester, UK - Awarded for overall performance on the MSc in Medical Statistics
Feb 2013 – Feb 2015	National Institute for Health Research Predoctoral Research Methods Fellowship, University of Bristol, UK
Dec 2006	Statistics New Zealand Prize
Apr 2006	Beverly Bursary in Mathematics and Statistics, University of Otago, NZ - Awarded to the top honours year graduate with a major in statistics

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Employment

May 2015 - current	Consultant Statistician School of Public Health and Preventive Medicine, Monash University, Australia - Responsible for providing consultative statistical support to doctoral students within the Faculty of Medicine, Nursing and Health Sciences as well as external researchers at the Baker IDI Heart and Diabetes Institute, Melbourne, Australia. - Part-time (0.15FTE)
Feb 2013 – Feb 2015	NIHR Predoctoral Research Methods Fellow School of Social and Community Medicine, University of Bristol, UK

- 2-year training fellowship in statistical methods funded by the National Institute for Health Research (NIHR), UK
- Projects included: a systematic review of methods used for dealing with non-adherence in the economic evaluation of RCTs; joint modelling of viral load and time-to-cessation of baseline drug regimens in HIV patients undergoing antiretroviral therapy; the use of Bayesian random change point models for estimating childhood height trajectories.

Apr 2012 – Aug 2012 Research Statistician
Research Centre for Gender, Health and Ageing (RCGHA), University of Newcastle, Australia

- Project looking at patterns of opioid use in Australian women and associated health outcomes
- Analysing linked data (administrative and survey datasets), use of SAS

Feb 2010 – Dec 2011 Research Associate (Statistics)
Academic Unit of Primary Care (within the School of Social and Community Medicine), University of Bristol, UK

- Project looking at the relationship between multimorbidity (the presence of multiple chronic conditions in a single individual) and primary care resource use in the UK
- Advanced models for cost data, managing large datasets, extensive use of Stata

May 2008 – Jul 2009 Research Biostatistician
Womens Health Australia, School of Population Health, University of Queensland, Australia

- Working on the Australian Longitudinal Study on Womens Health (ALSWH) (www.alswh.org.au)
- Responsible for the statistical analysis of observational data collected on approximately 30,000 Australian women as part of an ongoing longitudinal study spanning a period of at least 20 years
- Projects included: examining the reliability of participant reporting of life events in cohort studies; assessing the impact different forms of attrition may have on the generalisability of results from cohort studies of older people.
- Extensive use of SAS

Feb 2007 – Nov 2007 Statistics Tutor
Department of Mathematics and Statistics, University of Melbourne, Australia (Semesters 1 & 2)
Department of Mathematics and Statistics, Monash University, Australia (Semester 1 only)

- Responsible for teaching statistics modules to undergraduate students enrolled on a number of courses ranging from environmental sciences, health sciences and psychology

- Also included tutoring at a number of University of Melbourne colleges including University College, St Marys/Newman College and International House

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Casual employment or contract-based work

2017	Demonstrator, School of Population and Global Health, University of Melbourne, Melbourne, Australia
2016-2017	Consultant Statistician, Software Development in Stan and R Generable Inc. (formerly Stan Group Inc.), New York, US
2007	Consultant Statistician/Analyst Arthur Rylah Research Institute, Melbourne, Australia
2007	Consultant Statistician/Analyst Strategic Data Pty Ltd., Melbourne, Australia

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Teaching (tutor or demonstrator)

Year	Location	Course(s)	Role
2018	PAWS/PAGANZ 2018, Melbourne, Australia	Introduction to Stan (1 day workshop)	Co-facilitator
2017	School of Population and Global Health, University of Melbourne, Australia	Masters of Public Health, Survival Analysis	Demonstrator
2016	Murdoch Children's Research Institute, Royal Children's Hospital, Melbourne, Australia	Victorian Centre for Biostatistics (ViCBiostat) Winter School 2017: Survival Analysis	Demonstrator
2016	School of Population and Global Health, University of Melbourne, Australia	Victorian Centre for Biostatistics (ViCBiostat) Summer School 2016: Longitudinal and Correlated Data	Demonstrator
2015-2016	School of Public Health and Preventive Medicine, Monash University, Australia	'Introduction to Stata' short course	Demonstrator
2013-2014	School of Social and Community Medicine,	'Introduction to Stata', 'Advanced Stata', 'Rates and Survival Analysis' and 'Linear and	Demonstrator

	University of Bristol, UK	Logistic Regression Models' short courses	
2012	School of Computing, Engineering and Mathematics, University of Brighton, UK	Various undergraduate statistics courses	Tutor
2011	School of Social and Community Medicine, University of Bristol, UK	'Rates and Survival Analysis' short course	Demonstrator
2009	School of Population Health, University of Queensland, Australia	Various postgraduate courses in biostatistics	Relief tutor
2007	Department of Mathematics and Statistics, University of Melbourne, Australia	Various undergraduate statistics courses	Tutor
2007	Halls of Residence at the University of Melbourne (University College, St Marys/Newman College, International House)	Various undergraduate statistics courses	Tutor
2007	Department of Mathematics and Statistics, Monash University, Australia	Various undergraduate statistics courses	Tutor
2006	Department of Mathematics and Statistics, University of Otago, NZ	Undergraduate statistics courses	Demonstrator

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Teaching (lecturer)

Year	Location	Course(s)	Role

Professional memberships

Year	Organisation	Membership type
2015 - current	Statistical Society of Australia	Student member
2015 - current	Royal Statistical Society	Graduate Statistician

2014	Royal Statistical Society	Student member

Publications (journal articles)

Moreno-Betancur M, Carlin J, **Brilleman SL**, Tanamas S, Peeters A, Wolfe R. Survival analysis with time-dependent covariates subject to missing data or measurement error: Multiple Imputation for Joint Modeling (MIJM). *Biostatistics.* 2017 (Epub ahead of print)

Karim Md N, Reid CM, Huq M, **Brilleman SL**, Cochrane A, Tran L, Billah B. Predicting long-term survival after coronary artery bypass graft surgery. *Interactive CardioVascular and Thoracic Surgery*. 2017 (Epub ahead of print)

Brilleman SL, Howe LD, Wolfe R, Tilling K. Bayesian piecewise linear mixed models with a random change point: an application to BMI rebound in childhood. *Epidemiology*. 2017;28(6):827-833.

Chimeddamba O, Gearon E, **Brilleman SL**, Tumenjargal E, Peeters A. Increases in waist circumference independent of weight in Mongolia over the last decade: the Mongolian STEPS surveys. *BMC Obesity*. 2017;4:19.

Brilleman SL, Wolfe R, Moreno-Betancur M, Sales AE, Langa KM, Li Y, Daugherty Biddison EL, Rubinson L, Iwashyna TJ. Associations between community-level disaster exposure and individual-level changes in disability and risk of death for older Americans. *Social Science & Medicine*. 2017;173:118-125.

Brilleman SL, Crowther MJ, May M, Gompels M, Abrams K. Joint longitudinal hurdle and time-to-event models: an application related to viral load and duration of the first treatment regimen in HIV patients initiating therapy. *Statistics in Medicine*. 2016;35(20):3583-3594.

Brilleman SL, Metcalfe C, Peters TJ, Hollingworth W. The reporting of treatment non-adherence and its associated impact on economic evaluations conducted alongside randomised trials: a systematic review. *Value in Health*. 2016;19(1):99-108.

McClean S, **Brilleman S**, Wye L. What is the perceived impact of Alexander technique lessons on health status, costs and pain management in the real life setting of an English hospital? The results of a mixed methods evaluation of an Alexander technique service for those with chronic back pain. *BMC Health Services Research*. 2015;15:293.

Brilleman SL, Gravelle H, Hollinghurst S, Purdy S, Salisbury C, Windmeijer F. Keep it simple? Predicting primary health care costs with measures of morbidity and multimorbidity. *Journal of Health Economics*. 2014;35:109-122.

Brilleman SL, Purdy S, Salisbury C, Windmeijer F, Gravelle H, Hollinghurst S. Implications of comorbidity for UK primary care costs: a retrospective observational study. *The British Journal of General Practice.* 2013;63:274-282.

Brilleman SL, Salisbury C. Comparing measures of multimorbidity to predict outcomes in primary care: a cross sectional study. *Family Practice.* 2013;30(2):172-178.

Brilleman SL, Pachana NA, Dobson, AJ. The impact of attrition on the representativeness of cohort studies of older people. *BMC Medical Research Methodology*. 2010;10:71-79.

Pachana NA, **Brilleman SL**, Dobson AJ. Reporting of life events over time: Methodological issues in a longitudinal sample of women. *Psychological Assessment*. 2010;23(1):277-281.

Publications (other)

Conference presentations (oral)

Brilleman SL, Crowther MJ, Moreno-Betancur M, Buros Novik J & Wolfe R. Joint longitudinal and time-to-event models via Stan. *StanCon 2018.* 10-12 Jan 2018. Pacific Grove, CA, USA.

Brilleman SL, Crowther MJ, Moreno-Betancur M, Lo S & Wolfe R. Bayesian joint models for multiple longitudinal biomarkers and a time-to-event outcome: software development and a melanoma case study. *38th Annual Conference of the International Society for Clinical Biostatistics*. 9-13 July 2017. Vigo, Spain.

Brilleman SL, Crowther MJ, Moreno-Betancur M & Wolfe R. Bayesian joint models for multiple longitudinal biomarkers and time-to-event data: methods and software development. *Australian Statistical Conference 2016*. 5-9 Dec 2017. Canberra, Australia.

Brilleman SL, Iwashyna TJ, Moreno-Betancur M & Wolfe R. Joint longitudinal and survival models for investigating the association between natural disasters and disability whilst accounting for non-random dropout due to death. *Conference of the International Biometric Society: Australasian Region.* 29 Nov – 3 Dec 2015. Hobart, Australia.

Brilleman SL, Hollinghurst S, Windmeijer F, Purdy S, Salisbury C & Gravelle H. Multimorbidity indices improve the prediction of consultation costs in primary care in the UK. *Proceedings of the 40th Society for Academic Primary Care Annual Scientific Meeting.* 6-8 July 2011. Bristol, UK. Abstract A52.

Brilleman SL, Hollinghurst S, Windmeijer F, Purdy S, Salisbury C & Gravelle H. Multimorbidity and general practice costs. *Health Economists' Study Group Summer Conference.* 29 June-1 July 2011. Bangor, Wales.

Conference presentations (posters)

Brilleman SL, Moreno-Betancur M & Wolfe R. stanJM: An R package for the Bayesian estimation of joint longitudinal and time-to-event models using Stan. *Joint Modeling and Beyond.* 14-15 April 2016. Hasselt, Belgium.

Software (maintainer)

Brilleman SL. (2018) simjm: Simulate joint longitudinal and survival data. R package version 0.0.0. https://github.com/sambrilleman/simjm

Brilleman SL. (2017) simsurv: Simulate survival data. R package version 0.1.0. https://CRAN.R-project.org/package=simsurv

Brilleman SL. (2011) DEVR2: Stata module to compute Cameron and Windmeijer's deviance based R-squared measure. https://ideas.repec.org/c/boc/bocode/s457340.html

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Software (contributor)

Stan Development Team. (2018) RStanArm: Bayesian applied regression modeling via Stan. R package version 2.17.2. http://mc-stan.org

(S*ee also*: **Brilleman SL**, Crowther MJ, Moreno-Betancur M, Buros Novik J & Wolfe R. Joint longitudinal and time-to-event models via Stan. In: *Proceedings of StanCon 2018*. 10-12 Jan 2018. Pacific Grove, CA, USA. https://github.com/stan-dev/stancon_talks)

Reviewer

I have reviewed articles for the following journals: Statistics in Medicine, Biometrical Journal

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Supervision

Year	Location	Student	Details	Supervisory role
2013	School of Social and Community Medicine, University of Bristol, UK	Rebecca Molyneux	2-week National Institute for Health Research (NIHR) funded internship	Co-supervisor

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Course attendance (academic)

Year	Location	Course(s)	Duration
2017	School of Population and Global Health, University of Melbourne,	Victorian Centre for Biostatistics (ViCBiostat) Workshop: Propensity	1 day

	Australia	score methods (Professor Liz Stuart)	
2016	School of Mathematics and Statistics, University of Sydney, Australia (in conjunction with the Statistical Society of Australia)	Variational Approximations in Statistics (Professor Matt Wand)	1 day
2016	School of Population and Global Health, University of Melbourne, Australia	Victorian Centre for Biostatistics (ViCBiostat) Summer School 2016: Multiple Imputation for missing data	1 day
2016	School of Population and Global Health, University of Melbourne, Australia	Victorian Centre for Biostatistics (ViCBiostat) Summer School 2016: Survival Analysis: competing risks and time-dependent covariates	1 day
2016	School of Public Health, University of Adelaide, Australia	Victorian Centre for Biostatistics (ViCBiostat) Summer School 2016: Causal Inference: concepts and methods	2 days
2015	School of Public Health and Preventive Medicine, Monash University, Australia	Causal Inference and Mediation Analysis (Dr Richard Emsley)	1 day
2015	School of Public Health and Preventive Medicine, Monash University, Australia	Ethics and Good Research Practice	Half-day
2014	School of Social and Community Medicine, University of Bristol, UK	Introduction to Statistical Methods for Lifecourse Epidemiology	1 day
2010	School of Social and Community Medicine, University of Bristol, UK	Advanced Stata	3 days
2010	Centre for Health Economics, University of York, UK	Methods for the analysis of panel data in health and health care	3 days
2010	School of Social and Community Medicine, University of Bristol, UK	Introduction to Stata	2 days

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Course attendance (professional development)

Year	Location	Course(s)	Duration

Other achievements or awards

Year	Details
2016	Peer-reviewed article "The reporting of treatment non-adherence and its associated impact on economic evaluations conducted alongside randomised trials: a systematic review" selected as an issue highlight in the January/February 2016 issue of *Value in Health* as well as a write-up in ISPOR's *Value & Outcomes Spotlight* publication.

Referees

Available on request.