

EMMA THOMAS

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EDUCATION

Doctorate of Philosophy (Biostatistics) <i>Harvard T.H Chan School of Public Health, Boston MA</i>	Graduated May 2020
Master of Arts (Biostatistics) <i>Harvard T.H Chan School of Public Health, Boston MA</i>	Graduated May 2017
Master of Science (Mathematics & Statistics) <i>University of Melbourne, Melbourne, Australia</i>	Graduated Nov 2014
Graduate Diploma (Public Health) <i>University of Melbourne, Melbourne, Australia</i>	Graduated Nov 2012
Bachelor of Science (Mathematics) <i>Australian National University, Canberra, Australia</i>	Graduated Nov 2011

RESEARCH POSITIONS

Associate Statistician <i>Rand Corporation</i>	Aug 2017 — Current
Research Assistant <i>Department of Biostatistics, Harvard T.H. Chan School of Public Health</i> Mentor: Dr. Francesca Dominici	Aug 2017 — May 2020
Research Assistant <i>Justice Health Group, Melbourne School of Population and Global Health, University of Melbourne</i> Mentor: Dr. Stuart Kinner	Jun 2013 — Jun 2015
Research assistant <i>Modelling and Simulation Unit, Melbourne School of Population and Global Health, University of Melbourne</i> Mentors: Dr. Jodie McVernon and Dr. James McCaw	Jun 2012 — Jul 2014
Research Assistant <i>Clinical Epidemiology and Biostatistics Unit, Murdoch Childrens Research Institute, Melbourne</i> Mentor: Dr. John Carlin	Jul 2014 — Jun 2015
Research Assistant <i>National Centre for Epidemiology and Population Health, Australian National University</i> Mentor: Dr. Geoffry Mercer	Feb 2012 — Jun 2012

TEACHING EXPERIENCE

Teaching Assistant, Introduction to Programming	Fall 2018
<i>Department of Biostatistics, Harvard T.H. Chan School of Public Health</i>	
Teaching Assistant, BIOSTAT232: Methods II	Spring 2018
<i>Department of Biostatistics, Harvard T.H. Chan School of Public Health</i>	
Teaching Assistant, Introduction to Biological & Social Networks	Fall 2017 & Fall 2018
<i>Department of Biostatistics, Harvard T.H. Chan School of Public Health</i>	
Teaching Assistant, Applied Regression Analysis	Spring 2017
<i>Department of Biostatistics, Harvard T.H. Chan School of Public Health</i>	
Teaching Assistant, Mathematics for Biomedicine	Jul 2014 — Oct 2014
<i>Department of Mathematics and Statistics, University of Melbourne</i>	
Teaching Assistant, Research Philosophies and Statistics	Mar 2014 — Jun 2014
<i>Department of Mathematics and Statistics, University of Melbourne</i>	

SCHOLARSHIPS & AWARDS

Barry R. and Irene Tilenius Bloom Fellowship for 2019-2020	2019 — 2020
<i>Harvard T.H. Chan School of Public Health</i>	
Certificate of Distinction in Teaching	2017 — 2018
<i>Department of Biostatistics, Harvard T.H. Chan School of Public Health</i>	
Harvard Scholarship in Biostatistics	2015 — 2017
<i>Graduate School of Arts and Sciences, Harvard University</i>	
Harvard GSAS Professional Development Fund	2017, 2018
<i>Graduate School of Arts and Sciences (GSAS), Harvard University</i>	
Maurice Belz Scholarship in Statistics	2014
<i>Department of Mathematics and Statistics, University of Melbourne</i>	
National Undergraduate Scholarship	2008 — 2011
<i>Australian National University</i>	

PEER-REVIEWED PUBLICATIONS

1. **Thomas EG**, Trippa L, Parmigiani G, Dominici F. Estimating the Effects of Fine Particulate Matter on 432 Cardiovascular Diseases Using Multi-Outcome Regression with Tree-Structured Shrinkage. *Journal of the American Statistical Association*. 2020.
2. **Thomas EG**, Jayabalasingham B, Collins T, Geertzen J, Bui C, Dominici F. Gender disparities in invited commentary authorship in 2,459 medical journals. *JAMA Network Open*. 2019.

3. **Thomas EG**, Peskoe SB, Spiegelman D. Prevalence estimation when disease status is verified only among test positives: applications in HIV screening programs. *Statistics in Medicine*. 2018.
4. Borschmann R, **Thomas EG**, et al. Self-harm following release from prison: a prospective data linkage study. *Australian and New Zealand Journal of Psychiatry*. 2017.
5. **Thomas EG**, Spittal MJ, et al. Trajectories of psychological distress after prison release: implications for mental health service need among ex-prisoners. *Psychological Medicine*. 2015.
6. **Thomas EG**, Spittal MJ, Taxman FS, Kinner, SA. Health-related factors predict return to custody in a cohort of ex-prisoners: new approaches to predicting re-incarceration. *Health & Justice*. 2015.
7. Nguyen HT, Khu TKD, Le TTH, **Thomas EG**, et al. Foot length, chest circumference, and mid upper arm circumference are good predictors of low birth weight and prematurity in ethnic minority newborns in Vietnam: a hospital-based observational study. *PLoS ONE*. 2015.
8. **Thomas EG**, McCaw JM, et al. Quantifying differences in the epidemic curves from three influenza surveillance systems: a nonlinear regression analysis. *Epidemiology & Infection*. 2014.
9. **Thomas EG**, Degenhardt L, Alati R, Kinner S. Predictive validity of the AUDIT for hazardous alcohol consumption in recently released prisoners. *Drug & Alcohol Dependence*. 2014.
10. **Thomas EG**, Barrington HE, et al. Modelling the spread of tuberculosis, including drug resistance and HIV: a case study in Papua New Guinea's Western Province. *ANZIAM Journal*. 2011.

WORKING PAPERS

1. **Thomas EG**, Braun D, Kioumourtzoglou MA, Tippa L, Wasfy J, Dominci F. A Bayesian multi-outcome analysis of fine particulate matter and cardiorespiratory hospitalizations. [in preparation]
2. Masoero L, **Thomas EG**, Parmigiani G, Tyekucheva S, Trippa L. Cross study reproducibility in cluster analysis. [in preparation]
3. **Thomas EG**, Maier P, Weber M. Review of the statistical aspects of trials claiming to show equivalence of simplified treatment regimens. [in preparation]

CONFERENCE PRESENTATIONS

1. Gender in the Global Research Landscape Symposium 2020. [Invited panelist]
2. Women in Statistics and Data Science 2019. Gender bias in invited commentaries in medical journals. [Talk]
3. Joint Statistical Meetings 2019. Gender bias in invited commentaries in medical journals. [Poster]
4. Joint Statistical Meetings 2018. Bayesian high-dimensional multi-outcome regression with tree-structured shrinkage. [Speed Presentation & Poster]
5. Eastern North American Region of the International Biometric Society 2018. Multi-outcome regression with tree-structured shrinkage. [Talk]
6. International AIDS Conference 2016. Estimating HIV prevalence from data on false positives in screening programs. [Poster]
7. Reproducibility in Personalized Medicine Research Workshop 2016. Measuring cross-study reproducibility of unsupervised clustering algorithms. [Poster]

8. National Indigenous Drug and Alcohol Committee (NIDAC) conference 2014. Substance use and health-related factors predict return to custody in a large cohort of Queensland ex-prisoners. [Talk]
9. International Congress on Modelling and Simulation 2013. Estimating influenza incidence across space, time and population age from routinely collected surveillance data. [Talk]
10. The Australian Professional Society on Alcohol and Other Drugs Conference 2013. Predictive validity of the AUDIT for hazardous alcohol consumption in recently released prisoners. [Poster]

PROFESSIONAL SERVICE

Peer Reviewer

The Lancet Psychiatry, BMJ, Science, BMC Infectious Diseases

Statistical Society Member

American Statistical Association

Eastern North American Region of the International Biometric Society

Mental Health Working Group — Co-chair

Nov 2018 — May 2020

Department of Biostatistics, Harvard T.H. Chan School of Public Health

Harvard Biostatistics Student Consulting Center — Board Member & Consultant

Feb 2016 — Dec 2018

Department of Biostatistics, Harvard T.H. Chan School of Public Health

Statistics & Mathematics Postgraduate (STAMP) Student Group

Feb 2014 — Nov 2014

Department of Mathematics and Statistics, University of Melbourne

Student-Staff Liaison Committee

Aug 2014 — Nov 2014

Department of Mathematics and Statistics, University of Melbourne

Bachelor of Philosophy Student Research Conference Organizing Committee

Aug 2009 — Nov 2009

Australian National University

TECHNICAL SKILLS

Statistical Software

Proficient: R, Stata, RShiny

Experience: Python, SAS, Stan, Matlab

Other Software

Git/Github, LaTeX, Linux, Condor