James Hogg

PhD Student

School of Mathematical Sciences, Queensland University of Technology

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I am a current PhD student in the School of Mathematical Sciences at the Queensland University of Technology (QUT) under the supervision of Distinguished Professor Kerrie Mengersen, Dr Susanna Cramb, Professor Peter Baade and Dr Jessica Cameron. My PhD work is funded by the internationally-awarded Australian Cancer Atlas, where my role is to develop Bayesian methodology to generate small area level cancer risk factor estimates. I am passionate about accessible research, Bayesian inference, and spatial modelling, and am dedicated to making a positive impact in the field of cancer research.

Research interests

R, tidyverse, Stan

Spatio/hierarchical modelling

Bayesian inference

Spatial variation in cancer outcomes

Visualisations/mapping

Education and qualifications

Bachelor of Music with Distinction

QUEENSLAND UNIVERSITY OF TECHNOLOGY (QUT)

Brisbane, Australia

2015-2017

- Minor in statistics (4 units)
- GPA: 6.5
- Dean's Award for Excellence (all 6 semesters)

Master of Biostatistics

UNIVERSITY OF QUEENSLAND (UQ)

Virtual

2018-2020

- Provided by the Biostatistics Colloboration of Australia
- GPA 7.0
- Dean's Commendation for Academic Excellence (2018 & 2019)
- Thesis complete at Cancer Council Queensland

Doctor of Philosophy, Statistics

QUEENSLAND UNIVERSITY OF TECHNOLOGY (QUT)

Brisbane, Australia

2021 (ongoing)

- PhD funded by the internationally-awarded Australian Cancer Atlas

Graduate Statistician (Gstat) Accreditation

STATISTICAL SOCIETY OF AUSTRALIA

2021 (ongoing)

Experience

Marking (casual)

UNIVERSITY OF QUEENSLAND (UQ)

Virtual

July 2021 - October 2022

- Course title: Categorical Data and Generalised Linear Models (STAT7608)
- Course title: Regression Modelling 2 (STAT7619)
- Course title: Applied Regression Analyses (PUBH7631)

Tutor (casual)

QUEENSLAND UNIVERSITY OF TECHNOLOGY (QUT)

Brisbane, Australia

September - November 2021

- Course title: Quantitative Skills for Health Scientists (LQB286)

Research assistant (part-time)

QUEENSLAND UNIVERSITY OF TECHNOLOGY (QUT)

Brisbane, Australia

October 2021 - March 2022

- Project: Modifiable areal unit problem (MAUP) in disease mapping
- Co-investigators: Dr Susanna Cramb, Ass. Prof. Helen Thompson

Organiser and host

STANCONNECT 2022: STAN THROUGH SPACE AND TIME

Virtual

July - November 2022

Internship (full-time)
Virtual

DEPARTMENT OF HEALTH, WESTERN AUSTRALIA (DoHWA)
August - November 2022

- Project: Bayesian modelling
- Supervisors: Dr Susanna Cramb, Dr Alex Xiao
- Recommended spatio-temporal models for a wide range of health data
- Provided lengthy and detailed reports giving the details of spatio-temporal models
- Created detailed and large R code scrips to run a variety of models
- Created training materials for 3-days of intensive Bayesian spatio-temporal course

Co-chair of Bayesian Research and Applications (BRAG) group
Brisbane, Australia

QUEENSLAND UNIVERSITY OF TECHNOLOGY (QUT)
June 2022 (ongoing)

- Organiser of fortnightly internal talks on Bayesian research

Instructor/presentor of Bayesian training
Perth, Australia

DEPARTMENT OF HEALTH, WESTERN AUSTRALIA (DoHWA)
November 2022

- Three days of intensive training on Bayesian spatial temporal analysis

Research assistant (part-time)
Virtual

DEPARTMENT OF HEALTH, WESTERN AUSTRALIA (DoHWA)
November 2022 (ongoing)

- Consulting on bayesian modelling

Selected research presentations

Short talk
Moreton Island, Australia

ACEMS FINAL RETREAT
November 2021

- Title: Modelling cancer risk factors in Australia

Contributed talk
Virtual

SMALL AREA ESTIMATION, SURVEYS AND DATA SCIENCE
May 2022

- Title: Searching for stability: Introducing a method of small area estimation for proportions using severely sparse data

Short talk
QUT, Brisbane, Australia

QANZIAM CONFERENCE
June 2022

- Title: Searching for stability in Bayesian small area estimation of proportions

Poster presentation
Montreal, Canada

THE BAYESIAN YOUNG STATISTICIANS MEETING
June 2022

- Title: Introducing a Bayesian two-stage logistic-normal model for small area estimation of proportions

Poster presentation
Montreal, Canada

INTERNATIONAL SOCIETY OF BAYESIAN ANALYSIS (ISBA) WORLD MEETING
June 2022

- Title: Introducing a Bayesian two-stage logistic-normal model for small area estimation of proportions

Poster presentation
QUT, Brisbane, Australia

CENTRE FOR DATA SCIENCE SHOWCASE
September 2022

- Title: Searching for stability in Bayesian small area estimation of proportions

Short talk
Virtual

SECOND EARLY CAREER RESEARCHER CANCER EPIDEMIOLOGY CONFERENCE
November 2022

- Title: Risk factors and the Australian Cancer Atlas: the trepidation of instability and sparsity in small area estimation

Short talk
Virtual

SPARSE SYMPOSIUM
November 2022

- Title: Risk factors and the Australian Cancer Atlas: the trepidation of instability and sparsity in small area estimation

Invited talk
Virtual

EPIDEMIOLOGY IN GOVERNMENT (EIG) SPECIAL INTEREST GROUP (SIG) MEETING
December 2022

- Title: Mapping Cancer: The Australian Cancer Atlas

Awards

Star Graduate

MASTERS OF BIOSTATISTICS
December 2022

Honourable Mention for Best Student Presentation
QANZIAM Conference   *June 2022*

Best Oral Presentation Award
Second Early Career Researcher Cancer Epidemiology Conference   *November 2022*

Professional memberships

Statistical Society of Australia (SSA)

International Society of Bayesian Analysis (ISBA)

Centre for Data Science (CDS)

Health Equity Research with Outcomes (HERO)

Software

R, Stata, Python

MS Office Suite, Latex, Endnote, Mendeley

Git Bash

Stan, WinBUGS, JAGS

Referees

Doctor Jessica Cameron   *Cancer Council Queensland*

Research Fellow-Spatial Modelling, Descriptive Epidemiology

- Email: JessicaCameron@cancerqld.org.au
- Phone: +61 7 3634 5387

Professor Peter Baade   *Cancer Council Queensland*

Senior Manager, Descriptive Epidemiology

- Email: PeterBaade@cancerqld.org.au
- Phone: +61 7 3634 5317

Doctor Michael Waller   *University of Queensland*

BCA Program Coordinator, Senior Lecturer

- Email: m.waller@uq.edu.au
- Phone: +61 7 3365 5552