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I am an **Assistant Professor in Statistics** at *Universiti Brunei Darussalam* (UBD). My expertise lie in statistical methodology and computation, with applications towards the natural and social sciences.

I am passionate about bringing data and technology to the forefront of our daily interaction with the world. Using the R programming language, I build statistical models to analyse data to gain insights, make predictions, and aid decision-making. I am frequently engaged in cross-disciplinary research collaborations and statistical consultations.

Research Interests

Latent variable models

Binary and multinomial probit models

Bayesian estimation

Variational inference

Structural equation models

Truncated normal distribution

EM algorithms

Education

2014 — 2018

PhD in Statistics, London School of Economics and Political Science

Supervisors: Wicher Bergsma¹ and Irini Moustaki²

*Thesis: Regression modelling using priors depending on Fisher information covariance kernels (I-priors)*³

2013 — 2014

MSc in Statistics (distinction), London School of Economics and Political Science

2006 — 2010

BSc & Master in Mathematics, Operational Research, Statistics and Economics (first class honours), University of Warwick

Supervisor: David Firth⁴

Dissertation: The analysis of paired comparison data using Bradley-Terry models with applications to football data

Awards & honours

2020

Arnold Zellner Thesis Award in Econometrics and Statistics (honourable mention)⁵, American Statistical Association (Business and Economic Statistics Section)

2013 — 2018

In-Service Training Scheme Scholarship, Public Service Commission, Prime Minister's Office, Brunei

2006 — 2010

Supreme Commander of The Royal Brunei Armed Forces Scholarship⁶, Ministry of Defence, Brunei

2006

Anugerah Penuntut Terbaik Tahun 2005 (Best Student Award 2005), Persatuan Guru-Guru Melayu Brunei (PGGMB)

Employment

2019 — present

Assistant Professor in Statistics

Mathematical Sciences, Faculty of Science, *Universiti Brunei Darussalam*⁷

My teaching duties include SM-1402 Basic Statistics, CU-0304 Sciences for University Study, SM-4331 Advanced Statistics, SM-2401 Geometry, and SR-5101 Advanced Research Skills. I also have final-year mathematics project students whom I supervise. In addition to my teaching duties, I am one of the Discovery Year⁸ advisors (2019-21).

2014 — 2018

Graduate Teaching Assistant

Department of Statistics, London School of Economics and Political Science⁹

I held various teaching roles ranging from secondary teaching to marking for masters (ST416 Multilevel Modelling, ST421 Development in Statistical Methods) and undergraduate level courses (ST312 Applied Statistics Project) at the LSE. In addition, I also held assistant invigilator and examiner roles for both the LSE and the University of London International Examinations respectively.

2010 — 2019

Research Officer

Centre for Science and Technology, Research and Development (CSTRAD), Ministry of Defence, Brunei¹⁰

I provided analytical insight into matters arising from strategic procurement activities of the Royal Brunei Armed Forces (RBAF). This entailed market research, cost-benefit analyses, and writing technical reports. I was a core team member for the procurement and delivery of 12 Sikorsky S-70i helicopters¹¹ (US\$325M), and also the focal point for the development of tender evaluation criteria using the Analytic Hierarchy Process.

Service

2020 — present

Ad-hoc Reviewer

Annals of Applied Statistics¹²; Journal of the Royal Statistical Society: Series C¹³

2020 — present

Review Editor

Frontiers in Applied Mathematics and Statistics¹⁴

2020

Guest Lecturer

Universiti Teknologi Brunei¹⁵

2014 — 2015

MSc Programme Facebook Administrator

Department of Statistics, London School of Economics and Political Science
Acted as student liaison for incoming cohort of MSc Statistics 2015/16.

2013 — 2015

Auditor

Brunei Down's Syndrome Association (ABLE)¹⁶

Consultancy

2017 — 2018

Data Analyst and Consultant

Universiti Brunei Darussalam

Project: The unmet needs of cancer carers in Brunei Darussalam.

2021 **Data Analytics Consultant**
Ministry of Defence, Brunei
Project: Human performance optimisation research

Grants and funding

- 2021 — 2024 **Extension of I-prior methodology to nominal response models** (~BND 7,000), Faculty of Science Research Grant, *Universiti Brunei Darussalam*.
Role: *Principal Investigator*
- 2021 — 2023 **Examining spillover effects in regional trading blocs** (~BND 17,000), School of Business and Economics Research Grant, *Universiti Brunei Darussalam*.
Role: *Member*
- 2021 — 2024 **Mathematical Modeling of Genetic Assimilation** (~BND 8,000), Faculty of Science Research Grant, *Universiti Brunei Darussalam*.
Role: *Co-Principal Investigator*

Research output

Articles (peer-reviewed)

- 2021 A5 **Advocating Blended Learning for University Undergraduate Level Mathematical Instruction Beyond Covid-19**
H. Jamil, H. M. Ramli, E. Leong
In: Engineering and Sciences Teaching and Learning Activities: New Systems Throughout COVID-19 Pandemics, pp. 33-45. Ed. by Samsul Ariffin Abdul Karim and Saiful Azmi Hussain. Studies in Systems, Decision and Control, vol 381. Cham: Springer. ISBN: 978-3-030-79613-6.
- A4 **Pairwise likelihood estimation for confirmatory factor analysis models with categorical variables and data that are missing at random**
M. Katsikatsou, I. Moustaki, H. Jamil
British Journal of Mathematical and Statistical Psychology. DOI: 10.1111/bmsp.12243.
- A3 **Latent Class Analysis: Insights about design and analysis of schistosomiasis diagnostic studies**
A. Koukounari, H. Jamil, E. Erosheva, C. Shiff, I. Moustaki
PLOS Neglected Tropical Diseases. 15(2):e0009042.
- 2020 A2 **Bayesian Variable Selection for Linear Models Using I-Priors**
H. Jamil, W. Bergsma
In: Theoretical, Modelling and Numerical Simulations Toward Industry 4.0, pp. 107–132. Ed. by Samsul Ariffin Abdul Karim. Studies in Systems, Decision and Control, vol 319. Singapore: Springer. ISBN: 978-981-15-8986-7.
- 2018 A1 **Regression modelling using priors depending on Fisher information covariance kernels (I-priors)**
H. Jamil
PhD Thesis. London School of Economics and Political Science.
 **Arnold Zellner award, honourable mention (top 3)**

Working papers (preprints and unpublished reports)

2021	W8	I think I understand: Investigating misconceptions regarding hypothesis test concepts among university students A. Zaini, <i>H. Jamil</i> , E. Leong EdArXiv. DOI: 10.35542/osf.io/dj6x9
2020	W7	Iron and manganese mobilisation due to dam height increase for a tropical reservoir in South East Asia S. Gödeke, <i>H. Jamil</i> , M. Schirmer, A. Bretzler, N. Shamsuddin, N. H. Mansor
	W5	Factors Affecting Readmission to the Drug Rehabilitation Centre in Brunei Darussalam F. Jali, E. Leong, <i>H. Jamil</i>
	W6	Regression modelling with I-priors: With applications to functional, multilevel and longitudinal data W. Bergsma, <i>H. Jamil</i> arXiv:2007.15766 [math, stat].
	W4	Investigating the effect of load carriage on soldiers' performances using Bayesian structural equation models <i>H. Jamil</i> , A. Salleh, L. Thieng Chan
2019	W3	iprior: An R Package for Regression Modelling using I-priors <i>H. Jamil</i> , W. Bergsma arXiv:1912.01376 [stat].
2017	W2	Discussion contribution W. Bergsma, <i>H. Jamil</i> TI Cannings, RJ Samworth (2017). Random-projection ensemble classification. JRSSB, 79.4, pp. 959-1035.
2010	W1	Analysis of paired comparison data using Bradley-Terry models with applications to football data <i>H. Jamil</i> Masters Thesis. University of Warwick.

Software

2021	S4	R/iprior: Regression Modelling using I-priors <i>H. Jamil</i> CRAN 0.7.3 downloads 30K
2020	S3	stat-tables: Open-source statistical tables for use in examinations, tests, and assignments <i>H. Jamil</i> release v0.2 downloads 142
2018	S2	R/ipriorBVS: Bayesian Variable Selection using I-priors <i>H. Jamil</i> release v0.1.1
	S1	R/probit: Binary and Multinomial Probit Regression with I-priors <i>H. Jamil</i> release v0.1

Talks

Further information regarding the following events are available at haziqj.ml/talk

2020	T13	IADA Seminar , UBD, Brunei A latent variable model for maximal performance testing with dropouts for military applications
	T12	Social Statistics Group Meetings , LSE, London, UK Investigating the effect of load carriage on soldiers' performances using structural equation models
2019	T11	UBDSBE Seminar Invitation , UBD, Brunei Bayesian Variable Selection for Linear Models
	T10	CSTRAD Sharing Session , Ministry of Defence, Brunei Misconceptions in Demography
2018	T09	FOS Research Seminar , UBD, Brunei A Brief Guide to Variational Inference
	T08	Inaugural Workshop on Data Science Theory and Practice , LSE, London, UK Binary and Multinomial Regression using Fisher Information Covariance Kernels (I-priors)
	T07	Social Statistics Group Meetings , LSE, London, UK A Beginner's Guide to Variational Inference
2017	T06	Turing Data Study Group , The Alan Turing Institute, London, UK Can data science help identify potential drivers of extremism?
	T05	International Meeting of the Psychometric Society (IMPS) , University of Zürich, Switzerland Regression Modelling with I-Priors
	T04	Department of Statistics PhD Presentation Event , LSE, London, UK Binary probit regression with I-priors
2016	T03	Social Statistics Group Meetings , LSE, London, UK I-priors in Bayesian Variable Selection: From Reproducing Kernel Hilbert Spaces to Hamiltonian Monte Carlo
2015	T02	Postgraduate Research Seminar , LSE, London, UK Two-stage Bayesian variable selection for linear models using I-priors
	T01	Department of Statistics PhD Presentation Event , LSE, London, UK Regression Modelling using I-priors

Skills

🔗 **Programming, data analysis and visualisation** using R, BUGS/JAGS, Stan, Stata, Mplus, and Mathematica

🏠 **Reproducible research** using R Markdown, LaTeX, Git and AWS EC2

📄 **Web development** using HTML, Hugo, Jekyll, GitHub Pages and Netlify

Links

1. <http://stats.lse.ac.uk/bergsma/>↵
2. <http://stats.lse.ac.uk/moustaki/>↵
3. <https://phd.haziqj.ml/>↵
4. <http://www2.warwick.ac.uk/fac/sci/statistics/staff/academic-research/firth/>↵
5. <https://community.amstat.org/businessandeconomicstatisticssection/new-item/new-item2>↵
6. <https://scholarship.mindef.gov.bn/Theme/Home.aspx>↵
7. <http://fos.ubd.edu.bn/>↵
8. <https://ubd.edu.bn/admission/discovery-year.html>↵
9. <http://lse.ac.uk/Statistics/>↵
10. <https://www2.mindef.gov.bn/cstrad/>↵
11. <https://news.lockheedmartin.com/2011-12-13-Sikorsky-Signs-with-Brunei-Ministry-of-Defence-for-Sale-of-S-70iTM-BLACK-HAWK-Helicopters>↵
12. <https://imstat.org/journals-and-publications/annals-of-applied-statistics/>↵
13. <https://rss.onlinelibrary.wiley.com/journal/14679876>↵
14. <https://www.frontiersin.org/journals/applied-mathematics-and-statistics/>↵
15. <http://www.utb.edu.bn/>↵
16. <https://www.instagram.com/ablebrunei/>↵