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haziqj.ml/cv

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 for data analysis in order 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

Hedonic pricing models

Gaussian processes

Composite likelihood methods

Spatio-temporal models

Bayesian estimation

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

2023

Teaching Excellence Award in the Sciences, *Universiti Brunei Darussalam*

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

Employment

- 2024 — 2027 **Visiting Fellow**
Department of Statistics, London School of Economics and Political Science⁷
The School's Visiting Appointments Scheme is a device to help Departments, Institutes and Centres invite staff who are either practitioners or academics in other institutions to conduct research and other activities.
- 2019 — present **Assistant Professor in Statistics**
Mathematical Sciences, Faculty of Science, *Universiti Brunei Darussalam*⁸
I teach SM-1402 Basic Statistics, SM-2302 Software for Mathematicians, SM-4331 Advanced Statistics, SM-4335 Advanced Probability, and CU-0304 Sciences for University Study. I also supervise mathematics students' final year projects. In addition to my teaching duties, I am the current Postgraduate Coordinator (Mathematics). I previously held the post of Discovery Year⁹ advisor (2019-2021).
- 2014 — 2018 **Graduate Teaching Assistant**
Department of Statistics, London School of Economics and Political Science¹⁰
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 — 2014
2018 — 2019 **Research Officer**
Centre for Science and Technology, Research and Development (CSTRAD), Ministry of Defence, Brunei¹¹
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 helicopters¹² (US\$325M), and also the focal point for the development of tender evaluation criteria using the Analytic Hierarchy Process.

Service

- 2024 — present **Chair**
Brunei R User Group¹³
- 2020 — present **Ad-hoc Reviewer**
Annals of Applied Statistics¹⁴; Journal of the Royal Statistical Society: Series C¹⁵
- 2020 — present **Review Editor**
Frontiers in Applied Mathematics and Statistics¹⁶
- 2020 **Guest Lecturer**
Universiti Teknologi Brunei¹⁷
- 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)¹⁸

Consultancy

- 2017 — 2018 **Data Analyst**
Universiti Brunei Darussalam
Project: The unmet needs of cancer carers in Brunei Darussalam.
- 2021 — 2022 **Statistical Modelling**
Ministry of Defence, Brunei
Project: Human performance optimisation

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*
- 2023 — 2024 **Predictive potential of graphical descriptors for QSPR/QSAR model learning
of compounds** (~BND 15,700), Faculty of Science Research Grant, *Universiti
Brunei Darussalam*.
Role: *Co-Principal Investigator*
- 2024 **R User Groups (RUGS) Program Grants** (USD 500), R Consortium¹⁹

Research output

Articles (peer-reviewed)





- 2024 A14 **Pairwise likelihood estimation and limited-information goodness-of-fit test
statistics for binary factor analysis models under complex survey sampling**
H. Jamil, I. Moustaki, C. Skinner
British Journal of Mathematical and Statistical Psychology, in press.
arXiv:2311.02543 [stat.ME]
- A13 **Leveraging sparse Gaussian processes for property price modelling and
sustainable urban planning**
H. Jamil, F. Usop, H. M. Ramli
In: S. A. Abdul Karim & A. Baharum (Eds.), Intelligent Systems of Computing and
Informatics in Sustainable Urban Development. Taylor and Francis/CRC Press, in
press.
- A12 **An Optimization Problem for Computing Predictive Potential of General
Sum/Product-Connectivity Topological Indices of Physicochemical Properties
of Benzenoid Hydrocarbons**
S. Hayat, A. Arfan, A. Khan, H. Jamil, M. J. F. Alenazi.
Axioms 13(6). DOI: 10.3390/axioms13060342

- 2023 A11 **Importance of Baseline Assessments: Monitoring of Sungai Brunei River's Water Quality**
O. Onifade, N. Shamsuddin, *H. Jamil*, D. T. C. Lai, S. Gödeke
H2Open Journal, 6(4) 518–534. DOI: 10.2166/h2oj.2023.168
- A10 **Extremal hyper-Zagreb index of trees of given segments with applications to regression modeling in QSPR studies**
S. Hayat, M. Adil Khan, A. Khan, *H. Jamil*, M. Yasir Hayat Malik
Alexandria Engineering Journal, 80(1) pp.259–268
- A09 **Statistical significance of valency-based topological descriptors for correlating thermodynamic properties of benzenoid hydrocarbons with applications**
S. Hayat, N. Suhaili, *H. Jamil*
Computational and Theoretical Chemistry, 114259. DOI: 10.1016/j.comptc.2023.114259
- A08 **The domination number of the king's graph**
M. Arshad, S. Hayat, *H. Jamil*
Computational and Applied Mathematics, 42(251). DOI: 10.1007/s40314-023-02386-8
- 2022 A07 **Factors Affecting Readmission to a Drug Rehabilitation Centre**
F. Jali, E. Leong, *H. Jamil*
Journal of Population and Social Studies, 30, 591-601.
- A06 **Iron and Manganese Mobilisation due to Dam Height Increase for a Tropical Reservoir in South East Asia**
S. Gödeke, *H. Jamil*, M. Schirmer, A. Bretzler, N. Shamsuddin, N. H. Mansor
Environmental Monitoring and Assessment, 194(5), 358.
- A05 **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, 75(2) 23-45.
 **Wiley Top Downloaded Article 2021**
- 2021 A04 **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.
- A03 **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 A02 **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 A01 **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)

2024	W10	A spatio-temporal analysis of house prices in Brunei Darussalam <i>H. Jamil</i> Manuscript in submission
2023	W09	Additive interaction modelling using I-priors W. Bergsma, <i>H. Jamil</i> arXiv:2007.15766 [math.ST]
	W07	An Exploratory Investigation on Foreign Language Anxiety among English for Islamic Studies Learners in Brunei Darussalam N. Noorashid, <i>H. Jamil</i> Manuscript in submission
	W08	Patterns of metabolic thermal independence in marine gastropods: A meta-analytical assessment M. Akram Ullah, D. Marshall, <i>H. Jamil</i> Manuscript in preparation
2021	W06	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	W05	Regression modelling with I-priors: With applications to functional, multilevel and longitudinal data W. Bergsma, <i>H. Jamil</i> arXiv:2007.15766 [math, stat].
	W04	Investigating the effect of load carriage on soldiers' performances using Bayesian structural equation models <i>H. Jamil</i> , A. Salleh, L. Thieng Chan
2019	W03	iprior: An R Package for Regression Modelling using I-priors <i>H. Jamil</i> , W. Bergsma arXiv:1912.01376 [stat].
2017	W02	Discussion contribution W. Bergsma, <i>H. Jamil</i> TI Cannings, RJ Samworth (2017). Random-projection ensemble classification. JRSSB, 79.4, pp. 959-1035.
2010	W01	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>  0.7.4  38K
2020	S3	stat-tables: Open-source statistical tables for use in examinations, tests, and assignments <i>H. Jamil</i>  v0.2  970

- 2018 S2 **R/IpriorBVS: Bayesian Variable Selection using I-priors**
H. Jamil
release v0.1.1
- S1 **R/iprobit: Binary and Multinomial Probit Regression with I-priors**
H. Jamil
release v0.1

Talks

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


- 2024 T24 **Mathematical Science Departmental Seminar**, UBD, Brunei
Item Response Theory (IRT) models: Reducing bias in small samples
- T23 **International Meeting of the Psychometric Society (IMPS)**, Prague University of Economics and Business, Czech Republic
Empirical bias-reducing adjustments for Item Response Theory (IRT) models
- T22 **Adolphe Quetelet Seminar Series**, Ghent University, Belgium
Weighted pairwise likelihood and limited information goodness-of-fit tests for binary factor models
- T21 **Brunei R User Group Meetup**, UBD Startup Centre
Analysing spatial data using R
- 2023 T20 **Social Statistics Seminar**, LSE, London, UK
Spatio-temporal modelling of property prices in Brunei Darussalam
- T19 **Mathematical Science Departmental Seminar**, UBD, Brunei
Pairwise likelihood goodness of fit tests for binary factor models
- T18 **International Meeting of the Psychometric Society (IMPS)**, University of Maryland, USA
Pairwise likelihood goodness of fit tests for binary factor models
- 2022 T17 **Teaching and Learning Centre Workshop**, UBD, Brunei
Quality Typography in Teaching Material: An interactive introduction to LaTeX
- T16 **Department of Statistics and Data Science Seminar**, NUS, Singapore
Regression modelling using I-priors
- T15 **International Meeting of the Psychometric Society (IMPS)**, University of Bologna, Italy
Selecting interaction effects in additive models using I-priors
- 2021 T14 **MINDEF Scholars Sharing Session**, Online
Life After MINDEF
- 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 Quarto, R Markdown, LaTeX, Git and AWS EC2

 **Web development** using HTML, CSS, Hugo, GitHub Pages and Netlify

Made with the R package pagedown. The source code is available from github.com/haziqj/cv.
Document last rendered on 2024-09-22 13:02:17.941366 [Asia/Brunei].

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://lse.ac.uk/Statistics/>
8. <http://fos.ubd.edu.bn/>
9. <https://ubdmaths.github.io/dy/>
10. <http://lse.ac.uk/Statistics/>
11. <https://www2.mindef.gov.bn/cstrad/>
12. <https://news.lockheedmartin.com/2011-12-13-Sikorsky-Signs-with-Brunei-Ministry-of-Defence-for-Sale-of-S-70iTM-BLACK-HAWK-Helicopters>
13. <https://bruneir.github.io>
14. <https://imstat.org/journals-and-publications/annals-of-applied-statistics/>
15. <https://rss.onlinelibrary.wiley.com/journal/14679876>
16. <https://www.frontiersin.org/journals/applied-mathematics-and-statistics/>
17. <http://www.utb.edu.bn/>
18. <https://www.instagram.com/ablebrunei/>
19. <https://www.r-consortium.org/all-projects/r-user-group-support-program>