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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 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 Bergsma<sup>1</sup> and Irini Moustaki<sup>2</sup>

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

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 Firth<sup>4</sup>

*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)**<sup>5</sup>, 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 Scholarship**<sup>6</sup>, Ministry of Defence, Brunei

## Employment

- 2024 — 2027 **Visiting Fellow**  
Department of Statistics, London School of Economics and Political Science<sup>7</sup>  
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*<sup>8</sup>  
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 Year<sup>9</sup> advisor (2019-2021).
- 2014 — 2018 **Graduate Teaching Assistant**  
Department of Statistics, London School of Economics and Political Science<sup>10</sup>  
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, Brunei<sup>11</sup>  
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 helicopters<sup>12</sup> (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 Group<sup>13</sup>
- 2020 — present **Ad-hoc Reviewer**  
Annals of Applied Statistics<sup>14</sup>; Journal of the Royal Statistical Society: Series C<sup>15</sup>
- 2020 — present **Review Editor**  
Frontiers in Applied Mathematics and Statistics<sup>16</sup>
- 2020 **Guest Lecturer**  
Universiti Teknologi Brunei<sup>17</sup>
- 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)<sup>18</sup>

## 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 Consortium<sup>19</sup>

## Research output

### Articles (peer-reviewed)

- 2025     A16     **A spatio-temporal analysis of house prices in Brunei Darussalam**  
*H. Jamil*  
Quality & Quantity. In press.
- A15     **From archives to AI: Residential property data across three decades in Brunei  
Darussalam**  
*H. Jamil, A. Barizah Noorosmawie, H. Waezz Rabu, L. Abdul Razak*  
Data in Brief, 60, 111505. <https://doi.org/10.1016/j.dib.2025.111505>
- 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.
- 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.

*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      W9

**An Exploratory Investigation on Foreign Language Anxiety among English for Islamic Studies Learners in Brunei Darussalam**

N. Noorashid, *H. Jamil*

Electronic Journal of Foreign Language Teaching, 21(2) 211-234. DOI: 10.56040/nnhj2123

2023      W8

**Additive interaction modelling using I-priors**

W. Bergsma, *H. Jamil*

arXiv:2007.15766 [math.ST]

W7

**Patterns of metabolic thermal independence in marine gastropods: A meta-analytical assessment**

M. Akram Ullah, D. Marshall, *H. Jamil*

Manuscript in preparation

2021      W6

**I think I understand: Investigating misconceptions regarding hypothesis test concepts among university students**

A. Zaini, *H. Jamil*, E. Leong

EdArXiv. DOI: 10.35542/osf.io/dj6x9

	W4	<b>Investigating the effect of load carriage on soldiers' performances using Bayesian structural equation models</b> <i>H. Jamil, A. Salleh, L. Thieng Chan</i>
2019	W3	<b>iprior: An R Package for Regression Modelling using I-priors</b> <i>H. Jamil, W. Bergsma</i> arXiv:1912.01376 [stat].
2017	W2	<b>Discussion contribution</b> <i>W. Bergsma, H. Jamil</i> TI Cannings, RJ Samworth (2017). Random-projection ensemble classification. JRSSB, 79.4, pp. 959-1035.
2010	W1	<b>Analysis of paired comparison data using Bradley-Terry models with applications to football data</b> <i>H. Jamil</i> Masters Thesis. University of Warwick.

## Software

2025	S9	<b>R/plFA: Stochastic Pairwise Likelihood Estimation of Factor Analysis Models</b> <i>G. Alfonzetti, H. Jamil</i> release no releases or repo not found
2024	S6	<b>R/bruneimap: Maps and Spatial Data of Brunei</b> <i>H. Jamil</i> release v0.3.1
	S7	<b>R/birt: Bias-Reduced IRT Models</b> <i>I. Kosmidis, H. Jamil</i> release no releases or repo not found
	S8	<b>R/brlavaan: Bias-Reduced Latent Variable Analysis</b> <i>H. Jamil, Y. Rossel, O. Kemp, I. Kosmidis</i> release no releases or repo not found
2023	S5	<b>R/lavaan.bingof: Binary Goodness-of-Fit Tests for Factor Analysis Models</b> <i>H. Jamil</i> release no releases or repo not found
2021	S4	<b>R/iprior: Regression Modelling using I-priors</b> <i>H. Jamil</i> CRAN 0.7.4 downloads 40K
2020	S3	<b>stat-tables: Open-source statistical tables for use in examinations, tests, and assignments</b> <i>H. Jamil</i> release v0.2 downloads 1k
2018	S2	<b>R/ipriorBVS: Bayesian Variable Selection using I-priors</b> <i>H. Jamil</i> release v0.1.1
	S1	<b>R/iprobit: Binary and Multinomial Probit Regression with I-priors</b> <i>H. Jamil</i>

## Talks

*Further information regarding the following events are available at [haziqj.ml/talk](https://haziqj.ml/talk)*

2024	T26	<b>KAUST STAT Workshop 2024</b> , KAUST, Kingdom of Saudi Arabia Leveraging INLA for estimating Bayesian latent variable models
	T25	<b>Department of Statistics and Data Science Seminar</b> , NUS, Singapore Weighted pairwise likelihood goodness-of-fit tests for binary factor models
	T24	<b>Mathematical Science Departmental Seminar</b> , UBD, Brunei Item Response Theory (IRT) models: Reducing bias in small samples
	T23	<b>International Meeting of the Psychometric Society (IMPS)</b> , Prague University of Economics and Business, Czech Republic Empirical bias-reducing adjustments for Item Response Theory (IRT) models
	T22	<b>Adolphe Quetelet Seminar Series</b> , Ghent University, Belgium Weighted pairwise likelihood and limited information goodness-of-fit tests for binary factor models
	T21	<b>Brunei R User Group Meetup</b> , UBD Startup Centre Analysing spatial data using R
	T20	<b>Social Statistics Seminar</b> , LSE, London, UK Spatio-temporal modelling of property prices in Brunei Darussalam
2023	T19	<b>Mathematical Science Departmental Seminar</b> , UBD, Brunei Pairwise likelihood goodness of fit tests for binary factor models
	T18	<b>International Meeting of the Psychometric Society (IMPS)</b> , University of Maryland, USA Pairwise likelihood goodness of fit tests for binary factor models
	T17	<b>Teaching and Learning Centre Workshop</b> , UBD, Brunei Quality Typography in Teaching Material: An interactive introduction to LaTeX
2022	T16	<b>Department of Statistics and Data Science Seminar</b> , NUS, Singapore Regression modelling using I-priors
	T15	<b>International Meeting of the Psychometric Society (IMPS)</b> , University of Bologna, Italy Selecting interaction effects in additive models using I-priors
	T14	<b>MINDEF Scholars Sharing Session</b> , Online Life After MINDEF
2020	T13	<b>IADA Seminar</b> , UBD, Brunei A latent variable model for maximal performance testing with dropouts for military applications
	T12	<b>Social Statistics Group Meetings</b> , LSE, London, UK Investigating the effect of load carriage on soldiers' performances using structural equation models
2019	T11	<b>UBDSBE Seminar Invitation</b> , UBD, Brunei Bayesian Variable Selection for Linear Models

2018	T09	<b>FOS Research Seminar</b> , UBD, Brunei A Brief Guide to Variational Inference
	T08	<b>Inaugural Workshop on Data Science Theory and Practice</b> , LSE, London, UK Binary and Multinomial Regression using Fisher Information Covariance Kernels (I-priors)
	T07	<b>Social Statistics Group Meetings</b> , LSE, London, UK A Beginner's Guide to Variational Inference
2017	T06	<b>Turing Data Study Group</b> , The Alan Turing Institute, London, UK Can data science help identify potential drivers of extremism?
	T05	<b>International Meeting of the Psychometric Society (IMPS)</b> , University of Zürich, Switzerland Regression Modelling with I-Priors
	T04	<b>Department of Statistics PhD Presentation Event</b> , LSE, London, UK Binary probit regression with I-priors
2016	T03	<b>Social Statistics Group Meetings</b> , LSE, London, UK I-priors in Bayesian Variable Selection: From Reproducing Kernel Hilbert Spaces to Hamiltonian Monte Carlo
2015	T02	<b>Postgraduate Research Seminar</b> , LSE, London, UK Two-stage Bayesian variable selection for linear models using I-priors
	T01	<b>Department of Statistics PhD Presentation Event</b> , 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](https://github.com/haziqj/cv).  
Document last rendered on 2025-04-29 12:43:38.790107 [UTC].

## 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>