

Rowland Seymour

Associate Professor of Statistics
UKRI Future Leaders Fellow

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Profile

With £2 million in funding and a team of six researchers, I develop Bayesian methods for applications in social and health sciences. My current interests include developing statistical prevalence estimation methods for different crime types and applications of Bayesian nonparametric methods. I have given evidence at select committee inquiries and am a member of the Home Office Science Advisory Council. My work has led to new legislation in the Philippines and the USA, and changes in guidance at the United Nations.

Academic History

University of Birmingham

<i>Associate Professor of Statistics</i>	2025 – Present
<i>Assistant Professor of Statistics</i>	2022 – 2025

University of Nottingham

<i>Senior Research Fellow in Modern Slavery Statistics</i>	2021 – 2022
<i>EPSRC Doctoral Prize Fellow</i>	2020 – 2022
<i>PhD Mathematics</i>	2016 – 2020

Heriot Watt University

MSc Applied Mathematics 2015 – 2016

University of Southampton

BSc Mathematics with German 2011 – 2015

Selected Publications

Under Review

JS Marsh, NA Judd, L Chan, and **RG Seymour**. Neural Methods for Multiple Systems Estimation Models.

NA Judd, AV Tansell, B Costello, L Leonard, J Woodhams, and **RG Seymour**. Statistical Crime Linkage: Evaluating approaches within the Covenant for Using AI in Policing.

C Smith, F Hernandez, B Perrat, AD Garcia, and **RG Seymour**. Comparative Judgement Interface: A Data Collection Interface for Comparative Judgement Studies.

Published (Most Recent First)

J Jiang, JS Marsh, and **RG Seymour**. In press. *A Reduced Basis Decomposition Approach to Efficient Data Collection in Pairwise Comparison Studies*. Computational Statistics.

A Nyarko-Agyei, S Moser, **RG Seymour**, B Brewster, S Li, E Weir, T Landman, E Wyman, CB Torres, I Fell, and D Boyd. 2025. *A Partially Pooled NSUM Model: Detailed estimation of CSEM trafficking prevalence in Philippine municipalities*. Journal of the Royal Statistical Society: Series C.

RG Seymour, A Nyarko-Agyei, HR McCabe, K Severn, D Sirl, T Kypraios, and A Taylor. 2025. *Comparative Judgement Modeling to Map Forced Marriage at Local Levels*. Annals of Applied Statistics, 19 (1).

AM Abubakar, **RG Seymour**, A Gardner, I Lambert, R Fyson, and N Wright. 2024. *Cognitive impairment and exploitation: connecting fragments of a bigger picture through data*. Journal of Public Health. 46 (4).

RG Seymour and F Hernandez. 2024. *Scalable Bayesian Inference for Bradley-Terry Models with Ties: An Application to Honour Based Abuse*. Journal of Applied Statistics.

RG Seymour and BW Silverman. 2023. *How Can We Estimate Modern Slavery Globally?* Chance. 36 (4).

RG Seymour, T Kypraios, and PD O'Neill. 2022. *Bayesian Nonparametric Inference for Heterogeneously-Mixing Infectious Disease Models*. Proceedings of the National Academy of Sciences. 119 (10).

RG Seymour, D Sirl, S Preston, IL Dryden, B Perrat, MJA Ellis, and J Goulding. 2022. *The Bayesian Spatial Bradley-Terry model: Urban deprivation modelling in Tanzania*. Journal of the Royal Statistical Society: C. 71 (2).

RG Seymour, T Kypraios, PD O'Neill, and T Hagenars. 2021. *A Bayesian Nonparametric Analysis of the 2003 Outbreak of Avian Influenza in the Netherlands*. Journal of the Royal Statistical Society: C. 70 (5).

Selected Funding

Improving Statistical Models and Stimulating Cross-disciplinary Research for Comparative Judgement Methods

EPSRC Discipline Hopping Small Grant, Col, £72,065, 2025-2026

Cultivating and Coordinating Positive Research Culture for LGBTQ+ STEM Researchers

FLF Development Network, PI, £24,981, 2025-2026

Computational Statistics to Tackle Modern Slavery

UKRI Future Leaders Fellowship, PI, £1,155,747, 2024-2028

Improving Prevalence Estimates of Female Genital Mutilation/Cutting and Forced Marriage

Home Office, PI, £99,817, 2023-2024

Special Interest Group in Comparative Judgement

National Centre for Research Methods, Col, £4,900, 2023-2024

Recognising And Addressing Links Between Cognitive Impairment And Exploitation In England

Nuffield Foundation, Col, £395,746, 2022-2025

Training front line local authority workers to prevent forced marriage

EPSRC IAA, PI, £17,058, 2023

Estimating the Prevalence of Trafficking to Create Child Sexual Exploitation Material

IJM Philippines, Col, 2021-2024

Developing a Method to Measure Prevalence of Cross-Border Trafficking from Eastern Europe

IJM Europe, PI, 2021-2022

Bayesian Nonparametric Methods for Comparative Judgement Models and Vulnerability Estimation in Developing Countries

EPSRC Doctoral Prize, PI, £58,000, 2020-2022

Teaching

University of Birmingham

2022 – present

- Module developer and convener for Bayesian Inference and Computation
- Personal tutor for first year and MSc students
- MSc/MSci project supervision

Scottish Graduate School in Social Sciences

2025

- Module developer and convenor for Bayesian Statistics for Social Scientists

University of Washington

2020 – 2022

- Teaching assistant for the Summer Institute for the Modeling of Infectious Diseases, MCMC II for infectious diseases.

University of Nottingham

2016 – 2021

- Academic tutor
- MSc project supervision
- Demonstrating on various modules

Leadership & Service

Home Office Science Advisory Council

2025 – present

Home Office

REF Impact Lead

2024 – present

UoA10, University of Birmingham

EDI Committee

2024 – present

Royal Statistical Society

Supervision

James Dodsworth, *PhD Statistics*, 2025 - 2029

Charlotte Norridge, *PhD Statistics*, 2024 - 2028

Feargus Ball, *PhD Statistics*, 2024 - 2028

Bethany Mullarkey, *PhD Behavioural Science*, 2024 - 2028

Dr Joseph Marsh, *Research Fellow in Statistics*, 2025 - 2028

Dr Catherine Smith, *Research Software Engineer*, 2024 - 2028