Eoghan O'Neill

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Employment

University College Dublin | *Ad Astra Fellow, Assistant Professor of AI and Data Science in Economics* 2025 – Present

Erasmus University Rotterdam | *Assistant Professor of Data Science and Machine Learning* 2020 – 2025

Education

University of Cambridge | *PhD Economics* 2016 – 2020

University of Cambridge | *MPhil Economic Research* 2015 – 2016

Trinity College Dublin | *BA (Hons) Mathematics and Economics, Double First Class Honours* 2011 – 2015

Publications

How does stochasticity affect the efficiency of solar power plants? **Energy Economics**, forthcoming (2026) (with Xian-Peng Chen, Bai-Chen Xie, and Hui Wang). https://doi.org/10.1016/j.eneco.2026.109388

Static and Dynamic BART for Rank-Order Data. **Journal of Business & Economic Statistics**, forthcoming (2026) (with Matteo Iacopini and Luca Rossini). https://doi.org/10.1080/07350015.2025.2604128
https://github.com/EoghanONeill/ROBART2

"Type I Tobit Bayesian Additive Regression Trees for Censored Outcome Regression". **Statistics and Computing**, 34.4 (2024): 1-19. https://doi.org/10.1007/s11222-024-10434-4

"The Benefits of Forecasting Inflation with Machine Learning: New Evidence". **Journal of Applied Econometrics**, 39(7), 1321-1331 (2024) (with Andrea Naghi and Martina Zaharieva). https://doi.org/10.1002/jae.3088

"When Will First-Price Work Well? The Impact of Anti-Corruption Rules on Photovoltaic Power Generation Procurement Auctions". **Sustainability**, 15(4), 3441 (2023) (with Peng Hao, Jun-Peng Guo, and Yong-Heng Shi).

"Modelling future trends of annual embodied energy of urban residential building stock in China". **Energy Policy**, 165, 112932 (2022) (with Zhou, W., Moncaster, A., Reiner, D. M., Wang, X., and Guthrie, P.).

"Modelling Chinese Urban Residential Stock Turnover Uncertainties Using System Dynamics and Bayesian Statistical Inference". In Urban Infrastructuring (pp. 221-240). Springer, Singapore (2022) (with Zhou, W., Moncaster, A., Reiner, D. M., and Guthrie, P.).

"Study on the scale effect of China's power grid sector from the perspective of dynamic performance". **Utilities Policy**, 69, 101187 (2021) (with Kang-Kang Ni, Bai-Chen Xie, and Hong-Zhou Li).

"Forecasting Urban Residential Stock Turnover Dynamics using System Dynamics and Bayesian Model Averaging". **Applied Energy**, 275, 115388 (2020) (with Wei Zhou, Alice Moncaster, David Reiner, and Peter Guthrie).

"The effectiveness of the unbundling reform in China's power system from a dynamic efficiency perspective". **Applied Energy**, 264, 114717 (2020) (with Zhen-Yu She, Gang Meng, and Bai-Chen Xie).

Working Papers

Type II Tobit Bayesian Additive Regression Trees. https://doi.org/10.48550/arXiv.2502.03600
https://github.com/EoghanONeill/TobitBART

Spatial Effects on the Performance of Solar Plants: Evidence from a Meta-Frontier Analysis of Qinghai, China (with Bai-Chen Xie, Xian-Peng Chen, and Wenhao Hu).

Causal Forest Estimation of Heterogeneous Household Response to Time-Of-Use Electricity Pricing Schemes (with Melvyn Weeks). https://doi.org/10.48550/arXiv.1810.09179

State-of-the-BART: Simple Bayesian Tree Algorithms for Prediction and Causal Inference.
Chapter 2 of PhD thesis: https://doi.org/10.17863/CAM.62828

Generalizations of BART-BMA and BART-IS.
Chapter 3 of PhD thesis https://doi.org/10.17863/CAM.62828

Work in Progress

General Autoregressive Bayesian Additive Regression Tree Models for Limited Dependent Variables (with Matteo Iacopini and Luca Rossini). https://github.com/EoghanONeill/ARBART

Smooth Bayesian Additive Regression Trees with Model Trees (with Abdelmounaim el Yaakoubi). https://github.com/EoghanONeill/SMOTRbart

Time Varying Parameter Bayesian Additive Regression Trees (with Danielle Lam).

Attention Weighted Bayesian Additive Regression Trees (with Jan Heijmans). https://github.com/EoghanONeill/AttBART

Nonlinear Autoregressive Models for Functional Time Series with Bayesian Additive Regression Trees (with Jiahao Cao, Guanyu Hu, Maria Grith, and Anastasija Tetereva).

Let the Trees decide: FABART A Nonparametric Factor Model (with Sofia Velasco).

Teaching and Professional Experience

University College Dublin | *Assistant Professor of AI and Data Science in Economics* — 2025 – Present
Lecturer - Intermediate Microeconomics I, PhD Econometrics 2
Master thesis supervisor, bachelor thesis proposal reviewer

Erasmus University Rotterdam | *Assistant Professor of Data Science and Machine Learning* — 2020 – 2025
Lecturer - Marketing Models (Undergraduate), bachelor and master thesis supervisor
bachelor seminar supervisor and coordinator, bachelor introductory seminar supervisor and coordinator
University Teaching Qualification, PhD student supervision

Faculty of Economics, University of Cambridge | *Teaching Fellow* — 2019 – 2020
Supervisor - Theory and Practice of Econometrics II

Faculty of Economics, University of Cambridge | *Teaching Assistant* — 2018 – 2020
2019-2020 Econometrics II Cross Section and Panel Data (Masters)
2019 Applied Econometrics (Masters), 2018 Applied Microeconomics (Masters)

St. Catharine's College, Cambridge | *College Teaching Associate* — 2017 – 2019
Supervisor - Quantitative Methods in Economics, Supervisor - Theory and Practice of Econometrics I

Newnham, Hughes Hall, Magdalene, Pembroke, St. Catharine's, Cambridge | *College Supervisor* — 2016-2019
Theory and Practice of Econometrics I, Quantitative Methods in Economics

Irish Fiscal Advisory Council, Dublin | *Internship* — 2015
Economic and Social Research Institute, Dublin | *Research Internship* — 2014
Citco Fund Services, Dublin | *Risk and Valuation Internship* — 2013

Presentations

2025: European Causal Inference Meeting (poster), Conference on Applied Statistics in Ireland, IAAE Conference, Econometric Society World Congress, ESOBE, CFE Conference, UCD School of Mathematics & Statistics, UCD Smurfit Business School.
2024: Royal Economic Society Conference, Irish Economic Association Conference, Conference on Applied Statistics in Ireland, RCEA Bayesian Econometrics Workshop, European Association of Young Economists Annual Meeting, International Association for Applied Econometrics Conference, European Sport Economics Association Conference, European Seminar on Bayesian Econometricians Workshop (poster), CM Statistics Conference
2023: Irish Economic Association Conference, Netherlands Econometrics Study Group, Queen Mary University of London
2022: CM Statistics Conference
2020: University of St. Gallen, Erasmus University Rotterdam, University of Liverpool, Queen's University Belfast
2019: Predictive Analytics Workshop (Cambridge), Maynooth University Hamilton Institute, EDGE Jamboree, Cambridge econometrics workshop
2018: BIEE Annual Conference Oxford, Cambridge econometrics workshop, Ofgem, Looop-SMAP Energy

Academic Awards and Funding

Cambridge Economics Faculty Trust Funding	2018 – 2020
Christ's College Studentship	2015 – 2019
Cambridge Trust Scholarship	2015 – 2016
Economics Faculty Bursary	2015 – 2016

Academic Affiliations

Research Affiliate - Central Bank of Ireland	2026 - Present
Tinbergen Institute Candidate Fellow	2021 - 2025
Tinbergen Institute Research Fellow	2025
Associate Researcher - Cambridge Energy Policy Research Group	2020 - Present

Other Information

Journal Refereeing: Journal of Applied Economics, Statistics and Computing, Energy Economics, Journal of Computational and Graphical Statistics, International Journal of Forecasting, Applied Spatial Analysis and Policy
Programming: C++, R, Stata
Languages: English (Native), French (Beginner), Irish (Beginner), Dutch (Beginner)
Nationality: Irish