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Research Interests

Network analysis, time series, econometrics, statistics, forecasting, machine learning

Academic Positions and Affiliations

Associate Professor 2022–

Department of Economics and Business Economics, Aarhus University

Assistant Professor 2018–2022

Department of Economics and Business Economics, Aarhus University

Education

Ph.D. in Economics (*cum laude*) 2014–2018

Thesis Title: Essays in Network Modelling

Supervisors: Christian Brownlees and Gabor Lugosi

Department of Economics and Business, Universitat Pompeu Fabra

M.Sc. in Macroeconomic Policy and Financial Markets 2012–2013

Barcelona Graduate School of Economics

M.Sc. in Economics 2010–2011

London School of Economics

B.Sc. in Economics 2007–2010

University of Iceland

Publications

1. **Guðmundsson, G. S.** (2025). Detecting Giver and Receiver Spillover Groups in Large Vector Autoregressions *Journal of Business and Economics Statistics*, forthcoming.
2. Brownlees, C. & **Guðmundsson, G. S.** (2025). Performance of Empirical Risk Minimization for Linear Regression with Dependent Data. *Econometric Theory*, 41:2, 391–420. DOI: [10.1017/S0266466623000348](https://doi.org/10.1017/S0266466623000348)
3. Brownlees, C., **Guðmundsson, G. S.** & Lugosi, G. (2022). Community Detection in Partial Correlation Network Models. *Journal of Business and Economics Statistics*, 40:1, 216–226. DOI: [10.1080/07350015.2020.1798241](https://doi.org/10.1080/07350015.2020.1798241)
4. **Guðmundsson, G. S.** & Brownlees, C. (2021). Detecting Groups in Large Vector Autoregressions. *Journal of Econometrics*, 225:1, 2–26. DOI: [10.1016/j.jeconom.2021.03.012](https://doi.org/10.1016/j.jeconom.2021.03.012)
5. **Guðmundsson, G. S.** & Zoega, G. (2016). A Double-Edged Sword: High Interest Rates in Capital Control Regimes. *Economics*, 10, 1–38.
6. **Guðmundsson, G. S.** & Zoega, G. (2014). Age Structure and the Current Account. *Economics Letters*, 123, 183–186.

Working Papers

- Performance of Empirical Risk Minimization for Principal Component Regression
with Christian Brownlees and Yaping Wang
- Community Detection in High-Dimensional Non-Stationary Time Series
with Majid M. Al-Sadoon
- Concentration of the Adjacency and Laplacian Matrices in Random Graphs with Dependent Edges
with Christian Brownlees
- Asymptotic Properties of k -Means
with Vanessa Berenguer-Rico and Bent Nielsen

Seminar and Conference Presentations

- Seminar at the Toulouse School of Economics, 26th November, 2024.
- Presentation at the 14th Workshop in Time Series Econometrics, University of Zaragoza, 11-12th April, 2024.
- Presentation at the 17th International Conference on Computational and Financial Econometrics, HTW Berlin, University of Applied Sciences, 16-18th December, 2023.
- Presentation at the 2nd Academic Workshop for Icelandic Economists Abroad, University of Iceland, 5th May, 2023.
- Seminar at the Department of Data Science and Analytics at BI Norwegian Business School, 18th April, 2023.
- Presentation at the 3rd High Voltage Econometrics conference, 7-8th October, 2022.
- Invited talk at the Statistical Methods on Networks Workshop, University of Leipzig, 26–28th September, 2022.
- Presentation at the 12th Workshop in Time Series Econometrics, University of Zaragoza, 31st March–1st April, 2022.

Seminar at the Department of Economics at Lund University, (27th September, 2019); Poster at the 2019 NBER-NSF Time Series Conference, Chinese University of Hong Kong (14–15th August, 2019); Presentation at the 12th Annual Meeting of the Society for Financial Econometrics (SoFiE), Fudan University (12–14th June, 2019); Presentation at the Academic Workshop for Icelandic Economists Abroad, University of Iceland, (27th May, 2019); Presentation at the 9th Workshop in Time Series Econometrics, University of Zaragoza (4–5th April, 2019); Presentation at the 12th International Conference on Computational and Financial Econometrics, University of Pisa (14–16th December, 2018); Presentation at the 8th Workshop in Time Series Econometrics, University of Zaragoza (12–13th April, 2018); Presentation at the 11th International Conference on Computational and Financial Econometrics, University of London (16–18th December, 2017); Presentation at the 3rd Vienna Workshop on High-Dimensional Time Series in Macroeconomics and Finance, Institute for Advanced Studies Vienna (8–9th June, 2017).

Conference and Workshop Organisation

Organisation

- 1st Workshop of the Icelandic Econometrics Society, Reykjavík, June 20th, 2025.
- 4th Aarhus Workshop in Econometrics (AWE), Aarhus, October 11th, 2024.

Refereeing

Biometrika, International Journal of Forecasting, Journal of Econometric Methods, Journal of Econometrics, Statistical Papers.

Teaching

Graduate

4616: Time Series Econometrics	Aarhus University	2023–
4645: Machine Learning Methods in Empirical Economics	Aarhus University	2022–
Applied Data Science (Network Analysis)	Aarhus University	2020–2022
4616: Time Series Econometrics	Aarhus University	2018–2019

Undergraduate

3620: Econometrics I	Aarhus University	2025
Introduction to Machine Learning	Aarhus University	2020–
3620: Econometrics I	Aarhus University	2018–2021

Awards and Scholarships

- Nominated for Den Gyldne Pegepind (teacher of the year) at the Department of Economics, Aarhus University, 2020.
- Nominated for Den Gyldne Pegepind (teacher of the year) at the Department of Economics, Aarhus University, 2019.
- Marcelo Reyes Prize for best paper by junior researcher at the 8th Workshop in Time Series Econometrics, the University of Zaragoza, April 2018.
- FPU Scholarship, the Spanish Ministry of Education, Culture and Sports, 2015-2018.

Other

- Bachelor's, Master's and Ph.D. Supervision Programme, Aarhus University, 2024.
- University Pedagogical Programme, Aarhus University, 2021.
- Reviewer for Spring Meeting of Young Economists, 2018.
- Initial Training in University Teaching, Universitat Pompeu Fabra, 2017.