MIKKEL BENNEDSEN (CV)

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ACADEMIC EXPERIENCE

Associate Professor, Economics June 2021 - Present
Aarhus University, Department of Economics and Business Economics *Aarhus, DK*

- Current position (with tenure).

Assistant Professor, Economics August 2018 - May 2021
Aarhus University, Department of Economics and Business Economics *Aarhus, DK*

- Three year non-tenured position.

Research Assistant, Economics May 2018 - July 2018
Aarhus University, Department of Economics and Business Economics *Aarhus, DK*

- Intermediate position before start of assistant professorship.

ACADEMIC SERVICES

Journal reviewer

- Canadian Journal of Statistics, Computational Economics, Decisions in Economics and Finance, Energy Economics, International Journal of Electrical Power and Energy Systems, Journal of Econometrics, Quantitative Finance, SIAM Journal of Mathematical Finance, Statistics and Computing, Journal of Computational and Applied Mathematics.

Seminar organizer 2020 - present
Aarhus University *Aarhus, DK*

- Organizer of the Econometrics and Business Analytics seminar series.

Jury Member, Econometric Game April 2019
University of Amsterdam *Amsterdam, NL*

- One of four jury members (judges) in the Econometric Game 2019.

EDUCATION

PhD, Economics September 2012 - September 2016
Aarhus University, Department of Economics and Business Economics *Aarhus, DK*

- Thesis: Rough continuous-time models: theory and applications.
- Supervisors: Professor Asger Lunde and Professor Ole Barndorff-Nielsen.

PhD, Economics (Visiting) August 2014 - December 2014
Harvard University, Department of Economics *Cambridge, MA, US*

- Sponsor: Professor Neil Shephard.

MSc, Economics September 2012 - June 2014
Aarhus University, Department of Economics and Business *Aarhus, DK*

· Part of $4+4$ PhD programme.

MSc, Mathematical Finance October 2010 - October 2011
Imperial College London, Department of Mathematics *London, UK*

· Degree awarded with distinction.

BSc, Mathematics-Economics August 2005 - June 2008
Aarhus University, Department of Mathematics *Aarhus, DK*

· Grade Average (Danish 7-step-scale): 9.20.

RESEARCH

Interests Climate Econometrics. Climate Economics. Financial econometrics. Big Data. High-frequency data. Simulation and learning. Energy and commodity markets. Mathematical finance. Stochastic calculus. Mathematical economics. Existential Risk.

Research papers in peer-reviewed journals

1. *Designing a statistical monitoring procedure for verifying global carbon dioxide emissions* by M. Bennedsen. Forthcoming in *Climatic Change*, 2021.

2. *Modeling, Forecasting, and Nowcasting U.S. CO2 Emissions Using Many Macroeconomic Predictors* by M. Bennedsen, E. Hillebrand, and S. J. Koopman. *Energy Economics*, 2021, Volume 96, p. 105-118.

3. *Decoupling the short- and long-term behavior of stochastic volatility* by M. Bennedsen, A. Lunde, and M. S. Pakkanen. Forthcoming in *Journal of Financial Econometrics*, 2021.

4. *Semiparametric inference on the fractal index of Gaussian and conditionally Gaussian time series data* by M. Bennedsen. *Econometric Reviews*, 2020, Volume 39, Issue 9, p. 875-903.

5. *Trend analysis of the airborne fraction and sink rate of anthropogenically released CO2* by M. Bennedsen, E. Hillebrand, and S. J. Koopman. *Biogeosciences*, 2019, Volume 16, p. 3651-3663.

6. *The local fractional bootstrap* by M. Bennedsen, U. Hounyo, A. Lunde, and M. S. Pakkanen. *Scandinavian Journal of Statistics*, 2018, Volume 46, Issue 1, p. 329-359.

7. *Hybrid scheme for Brownian semistationary processes* by M. Bennedsen, A. Lunde, and M. S. Pakkanen. *Finance and Stochastics*, 2017, Volume 21, Issue 4, p. 931-965.

8. *A rough multi-factor model of electricity spot prices* by M. Bennedsen. *Energy Economics*, 2017, Volume 63, p. 301-313.

Working papers

1. *Likelihood-based inference and forecasting for continuous time integer-valued trawl processes* by M. Bennedsen, A. Lunde, N. Shephard, and A. E. D. Veraart, 2021.

2. *A statistical model of the global carbon budget* by M. Bennedsen, E. Hillebrand, and S. J. Koopman, 2021.

PhD students

· Peter Christensen (2021–present).
· Asbjørn Kaufmann (2021–present).
· Jingying Zhou Lykke (2020–present).
· Sebastian Mathias Jensen (2018–2021).

Grants

· Independent Research Fund Denmark (IRFD) research grant, 2021–2024.
Title: *Statistical analysis of climate data and climate models.*
Amount: 2 877 410 DKK

Awards

· Den Gyldne Pegepind (nominated): Best lecturer at Economics and Business Economics in teaching year 2020/2021, Aarhus University, 2021.
· Årets Underviser (won): Best lecturer at Politics and Economics ("Pol-Øk") in teaching year 2020/2021, Aarhus University, 2021.
· Den Gyldne Pegepind (won): Best lecturer at Economics and Business Economics in teaching year 2019/2020, Aarhus University, 2020.
· Årets Underviser (won): Best lecturer at Politics and Economics ("Pol-Øk") in teaching year 2019/2020, Aarhus University, 2020.
· Den Gyldne Pegepind (nominated): Best lecturer at Economics and Business Economics in teaching year 2013/2014, Aarhus University, 2014.
· Nimbs Foundation 50,000 DKK travel scholarship, 2014.

Invited talks

· Computational and Financial Econometrics Conference, London, 2021.
· Singapore Management University Online Seminar Series, Online, 2021.
· MatchPoints Conference, Aarhus, 2021.
· Conference on Ambit Fields and Related Topics, Aarhus, 2016.
· Nordic Conference in Mathematical Statistics, Copenhagen, 2016.
· International Workshop on Spatio-Temporal Statistics, London, 2016.

Contributed talks

· Econometric Models of Climate Change, Milan, 2019.
· EGU General Assembly, Vienna, 2019.
· Bachelier World Congress, New York, 2016.
· 9th Annual SoFiE Conference, Hong Kong, 2016.
· Nordic Econometric Meeting, Helsinki, 2015.
· 8th Annual SoFiE Conference, Aarhus, 2015.
· Bachelier World Congress, Brussels, 2014.
· Danish National Research Foundation, scientific contribution, Aarhus, 2014.

PROFESSIONAL EXPERIENCE

Nordstrøm Invest A/S — September 2016 - April 2018
Trader, Quant — *Aarhus, DK*

· Trading and researching energy derivatives.

Copenhagen Economics — September 2017 - December 2017
External consultant — *Aarhus, DK*

· Consulting on energy-related project.

DONG January 2016

External researcher *Copenhagen, DK*

· Advising and collaborating with industrial PhD-student A. Fenger.

· Project: Modelling and forecasting the regulating power market price.

Royal Bank of Scotland July 2011 - September 2011

Internship *London, UK*

· 10 week internship as Quantitative Analyst at the FX Algorithmic Trading desk.

· Research: Modelling and Forecasting the Price of FX Currency Pairs Using Ultra High-Frequency Data.

Aarhus University 2007-2008

Teaching Assistant *Aarhus, DK*

· TA in Investment Science, Convex Functions, Convex Sets.

TECHNICAL STRENGTHS

Programming MATLAB, Python, C++, R, Ox.

Other LaTeX, Word, Excel.

MISCELLANEOUS

Languages · Danish (mother tongue), English (fluent), German (limited), Spanish (limited).