Dr. Manuel Stapper

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Personal Profile

Research fellow in the field of statistics and data science with interest in disease spread, count data modelling and robust statistics. 7+ years of experience in teaching undergraduate and graduate students. Software package development enthusiast with 11+ years of experience in R and 4+ years in Julia.

Education

University of Münster *Münster, Germany*
PhD Econometrics and Economic Statistics *Nov 2017 - Nov 2023*

- Thesis: "Advances in Computational Statistics"

TU Dortmund University *Dortmund, Germany*
M.Sc. Statistics *Oct 2015 - Oct 2017*

- Minor: Economics/Operations Research
- Thesis: "Robust Fitting of INARCH Processes"

TU Dortmund University *Dortmund, Germany*
B.Sc. Statistics *Oct 2011 - Jun 2015*

- Minor: Economics/Operations Research
- Thesis: "Spielstärkebewertung bei Doppelkopf und Skat"

Employment

London School of Hygiene and Tropical Medicine *London, UK*
Research Fellow *Jan 2024 - Present*

- Modelling and forecasting of disease spread

University of Münster *Münster, Germany*
Research Assistant *Nov 2017 - Jan 2024*

- Count data time series modelling
- Robust statistics
- Long memory in count data

Publications

Articles

- Stapper (2021), **Count Data Time Series Modelling in Julia - The CountTimeSeries.jl Package and Applications**, Entropy 23(6)
- Segnon, Stapper (2019), **Long Memory Conditional Heteroscedasticity in Count Data**, CQE Working Papers, 82/2019

Software

- Stapper (2022), **MFit.jl - M-Estimation of Parametes in IID Samples**
- Stapper (2022), **RandomVariables.jl - Random Variables, Transformations and Probabilities**
- Stapper (2020), **CountTimeSeries.jl - Count Data Time Series Modelling**

Teaching

MCMC
Graduate *Summer 23*

Advanced Statistics
Undergraduate *Winter 22/23, Winter 20/21*

Introduction to Julia
Conference Workshop *Sep 2022*

Advanced Time Series Analysis
Graduate *Summer 22, Summer 21, Winter 19/20*

Econometrics
Undergraduate *Winter 21/22, Summer 18, Winter 17/18*

Empirical Economics
Undergraduate *Summer 20*

Empirical Economics
Undergraduate *Summer 20*

Introduction to R
Graduate *Summer 19*

Econometrics
Graduate *Winter 18/19*

Thesis Supervision

Master

- The Effect of Wind Turbines on House Prices in Germany - Evidence from a Machine Learning based Estimation Approach
- Bayesian Latent Cluster Detection in the International Arms Trade Network
- Carbon Price Acceptance: An Empirical Application of Machine Learning Methods for Estimating Heterogeneous Treatment Effects

Bachelor

- Prediction of Disruption Ticket Volumes based on a Time Series Analysis using the eTTs Reporting System of Deutsche Telekom AG as an Example
- Non-Parametric Machine Learning Regression under Misspecification
- Robust Fitting of INGARCH Processes - A Generalized Method of Moments Approach
- INARMA Models - Parameter Estimation by Indirect Inference

Conference Presentations

Commuting and the Spread of Infectious Diseases – Influenza in Germany *London*
Compstat Conference *Aug 2023*

Commuting and the Spread of Infectious Diseases – Influenza in Germany *Toronto*
ASA Joint Statistical Meeting *Aug 2023*

RandomVariables.jl - A Julia Package for Random Variables and Probabilities *London*
CFE/CMStatistics *Dec 2022*

CountTimeSeries.jl - A Julia Package for Integer-Valued Time Series *Münster*
Statistische Woche *Sep 2022*

Accounting for Asymmetry in M-Estimation *Münster*
Statistische Woche *Sep 2022*

Accounting for Asymmetry in M-Estimation *Bologna*
COMPSTAT Conference *Aug 2022*

Sources of Global Trading Activities *London*
CFE/CMStatistics *Dec 2019*

Long Memory Conditional Heteroscedasticity in Count Data *Munich*
DAGStat Conference *Mar 2019*

The INFIGARCH Model and its Application in Trading Activity *Dresden*
Stochastic Models, Statistics and their Application *Mar 2019*

Long Memory Conditional Heteroscedasticity in Count Data *Pisa*
CFE/CMStatistics *Dec 2018*