# Lennart Oelschläger

Research Associate and PhD Student Bielefeld University, Germany Born on 16.11.1994.

«Identify the essential. Can you eliminate the rest?»

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# **Employment**

Research Associate, Bielefeld University

2019 - current

#### Education

Ph.D. Student in Econometrics, Bielefeld University

2019 - current

M.Sc. in Mathematical Economics, Bielefeld University

2017 - 2019

B.Sc. in Mathematics, Bielefeld University

2013 - 2017

### **Publications**

Journal Articles

Detecting bearish and bullish markets in financial time series using hierarchical hidden Markov models, Oelschläger and Adam (2021), Statistical Modelling

#### Conference Papers

Bayes Estimation of Latent Class Mixed Multinomial Probit Models, Oelschläger and Bauer (2021), TRB Annual Meeting

#### Software

fHMM: Fitting (hierarchical) hidden Markov models to financial data.

RprobitB: Bayesian estimation of probit models.

ao: Alternating optimization of (high-dimensional) functions.

vntrs: Variable neighborhood trust region search.

ino: Initialization of numerical optimization.

## **Talks**

Bayes estimation of probit choice models with {RprobitB}, 10th Young Researcher Workshop at Bielefeld University, 10.03.2022

Klassifizierung von PrC\$ferenzen: Eine Anwendung mit dem R Paket RprobitB, 27. AKA-Workshop at Kloster Irsee, 18.11.2021

On the initialization of multinomial probit models,  $9th\ Young\ Researcher\ Workshop\ at\ Bielefeld\ University, 16.07.2021$ 

Bayes estimation of latent class mixed multinomial probit models, Poster Session at the 100th Transportation Research Board Annual Meeting, 28.01.2021

Approximating mixing distributions in probit models via a Bayesian approach, Centre for Statistics at Bielefeld University, 24.11.2020

Detecting bearish and bullish markets in financial time series using hierarchical hidden Markov models, Doctoral Day at Bielefeld University, 02.10.2020

# **Teaching**

R course, Bielefeld University	WT $21/22$
Reading course for statistical science, Bielefeld Univer	sity WT 21/22
Preparatory course for mathematics, Bielefeld Univers	vity WT 21/22
Exercise course for mathematics, $Bielefeld\ University$	WT 19/20, ST 20, WT 20/21, SS 21, WT 21/22
Tutorial for statistics, Bielefeld University	WT 15/16, ST 16, WT 16/17, WT 18/19, ST 19

# Miscellanea

Aviation: I own a private pilot license.

Chess: I play chess since I am 5 years old.

Tennis: Only outside and in good weather.

Languages: English, French, R, LaTeX, Markdown, C++, Matlab, Python, Java.