

# Lennart Oelschläger

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

«Identify the essential. 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 (latent class mixed) multinomial probit models.

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

[vntrs](#): Variable neighborhood trust region search.

[ino](#): Initialization of numerical optimization.

## Talks

Klassifizierung von Präferenzen: 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

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

Reading course for statistical science, Bielefeld University WT 21/22

Preparatory course for mathematics, Bielefeld University 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, C++, Matlab, Java.