

# Jan-Ole Koslik

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## EDUCATION

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<b>PhD in Statistics</b> Bielefeld University, Germany	2023 – today
<b>MSc Statistical Science</b> Bielefeld University, Germany <i>Grade: 1.0; graduated first of my class</i>	2021 – 2023
<b>BSc Economics</b> (intermediate studies) Bielefeld University, Germany	2020 – 2021
<b>Study Abroad</b> Budapest Business School, Hungary	2019
<b>BA Business Administration</b> Bielefeld University of Applied Sciences, Germany <i>Grade: 1.4</i>	2017 – 2020

## EMPLOYMENT

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<b>Research Associate</b> Statistics and Data Analysis Group Bielefeld University, Germany	2023 – today
<b>Research Assistant</b> Statistics and Data Analysis Group Bielefeld University, Germany	2022 – 2023
<b>Working Student</b> Pricing Intelligence CLAAS KGaA mbH, Germany	2021 – 2022
<b>Intern</b> Market Intelligence CLAAS KGaA mbH, Germany	2020

## PUBLICATIONS

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1. Michels, R., **Koslik, J.-O.** (2024). On the combination of data smoothing and Markov-switching models. *Journal of the Royal Statistical Society – Series C: Applied Statistics*, qlad110.

## PREPRINTS

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Bachons, R., **Koslik, J.-O.**, Michels, R., Ötting, M. (2024). PEP: a tackle value measuring the prevention of expected points. Preprint, arXiv:2407.08508.

Mews, S., **Koslik, J.-O.**, Langrock, R. (2024). How to build your latent Markov model — the role of time and space. Preprint, arXiv:2406.19157.

**Koslik, J.-O.** (2024). Hidden semi-Markov models with inhomogeneous state dwell-time distributions. Preprint, arXiv:2405.13553.

**Koslik, J.-O.**, Feldmann, C.C., Mews, S., Michels, R., Langrock, R. (2023). Inference on the state process of periodically inhomogeneous hidden Markov models for animal behaviour. Preprint, arXiv:2312.14583.

Dyck, J., **Koslik, J.-O.**, Sauzet, O. (2023). EgoCor: an R package to fit exponential semi-variograms to model the local spatial correlation structure of health outcomes. Preprint, arXiv:2309.12979.

## SOFTWARE

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I have developed and participated in developing software packages for the R programming language:

- **LaMa**: Fast and convenient likelihood evaluation for latent Markov models like HMMs, HSMMs, SSMs and point processes. <https://cran.r-project.org/web/packages/LaMa>
- **EgoCor**: Simple Presentation of Estimated Exponential Semi-Variograms. <https://cran.r-project.org/web/packages/EgoCor>

## TEACHING

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### Workshops

*Using hidden Markov models to uncover ecological state dynamics from biologging data*  
One-day workshop in Tokyo, Japan.

March 2024

### Tutorials

Bielefeld University

2023 – today

- Mathematics (Bachelor level)
- Hidden Markov Models (Master level)
- Statistical Consulting (Master level)
- Generalised Linear Models (Master level)

Bielefeld University of Applied Sciences

2018 – 2020

- Statistics for Economists (Bachelor level)
- Mathematics for Economists (Bachelor level)

## GRANTS AND AWARDS

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**German public-private scholarship** (Deutschlandstipendium)

2019 – 2020 and 2022 – 2023

**Mobility grant of the Bielefeld Graduate School in Theoretical Sciences (BGTS)**

## PRESENTATIONS

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*Inference on the state process of periodically inhomogeneous hidden Markov models for animal behaviour*  
Talk at the International Statistical Ecology Conference (ISEC), Swansea, Wales, July 2024

*Mitigating consequences of the Markov assumption*

Poster at the 18. doctoral workshop of the Bielefeld Graduate School of Economics and Management (BiGSEM), Bielefeld University, Germany, December 2023

*Mitigating consequences of the Markov assumption*

Talk at the Center for Statistics, Bielefeld University, Germany, October 2023

## COMMUNITY INVOLVEMENT

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### Reviewer

- Journal of Computational and Graphical Statistics
- Journal of the Royal Statistical Society Series C

## SKILLS

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- **Programming:** R (including Rcpp), C++, Python
- **Tools:** LaTeX, git, SQL
- **Languages:** German, English

## VOLUNTEERING

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**Member of the student council** (Data Science & Statistical Science)

2021-2023

Bielefeld University, Germany

**Representing the interests of student assistants** (SHK-Rat)

2022

Bielefeld University, Germany

**Voluntary service**

2016-2017

AWO nursery school Werther, Germany