

Martje Rave

DATA SCIENTIST · PHD · STATISTICIAN

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Education

Ludwig-Maximilians-Universität

München

PHD STATISTICS

2020 - November 2025

- Advisor: Prof. Dr. Göran Kauermann
- **PhD thesis:** Modelling ICU Occupancy and Patient Flow Dynamics during the COVID-19 Pandemic
- Graduated Magna cum Laude

Univeristy of Glasgow

Glasgow

MSCI STATISTICS (INTEGRATED MASTERS DEGREE)

2015 - 2020

- Advisor: Prof. Dr. Duncan Lee
- Trained in Frequentist and Bayesian Statistics with application in R, SAS and SQL using foundations in calculus, algebra and graph theory
- **Project:** Is “Border Sharing” the best spatial correlation structure for modelling areal unit health data?
- Graduated First Class

Univeristy of Southern Denmark

Sonderborg

BSc ECONOMICS AND BUSINESS ADMINISTRATION

2012 - 2015

- **Project:** Structural flaws in the Maastricht Treaty and how it led to the economical divergence in the European Monetary Union.
- Grade: 8.1 (Danish 7-grade-scale)

Industry

- 2025-2026 **Data Scientist**, Dansk Gigthospital, Soenderborg
- 2018-2020 **Data Analyst**, Royal Bank of Scotland
- 2017-2020 **Teaching Assistant**, Statistics, University of Glasgow
- 2017 **Research Assistant**, University of Glasgow

Publications

PUBLISHED

- Fritz, C;** De Nicola, G; Rave, M; Weigert, M; Khazaei, Y; Berger, U; Küchenhoff, H and Kauermann, G. 2022. Statistical modelling of COVID-19 data: Putting generalized additive models to work. *Statistical Modelling*, Volume 0: Ahead of Print. <https://doi.org/10.1177/1471082X221124628>
Contribution: Responsible for the analysis of the ICU occupancy, as well as the reporting thereof in the article.
- Rave, M;** Kauermann G. The Skellam distribution revisited: Estimating the unobserved incoming and outgoing ICU COVID-19 patients on a regional level in Germany. *Statistical Modelling*. 2024. doi:10.1177/1471082X241235024
Contribution: First author in close collaboration with Prof. Dr. Göran Kauermann.
- Rave, M;** Kauermann, G: Deriving Duration Time from Occupancy Data – A case study in the length of stay in Intensive Care Units for COVID-19 patients. *Biometrical Journal*. 2025. doi:10.1002/bimj.70113
Contribution: First author in close collaboration with Prof. Dr. Göran Kauermann.

Awards, Fellowships, & Grants

- 2025 **Best Poster Award**, Deutsche Arbeitsgesellschaft fuer Statistik (DagStat)
- 2023-2025 **LMU Mentoring**, LMU

Presentations

CONTRIBUTED PRESENTATIONS

2024. 70th Biometric Colloquium. Lübeck, DE.

Teaching

Generalisierte Regressionsmodelle, Work shop instructor.....	<i>Autumn 2020</i> <i>Autumn 2021</i> <i>Autumn 2022</i> <i>Autumn 2024</i>
Lineare Regressionsmodelle, Work shop instructor.....	<i>Spring 2021</i> <i>Spring 2022</i> <i>Spring 2023</i> <i>Spring 2024</i>
Statistical Modelling, Work shop instructor.....	<i>2021</i> <i>2022</i> <i>2023</i>
Spatial Statistics, Work shop instructor.....	<i>Autumn 2023</i> <i>Autumn 2024</i>
Advanced Bayesian Modelling, Work shop instructor.....	<i>Autumn 2024</i>
Einführung in die Bayesianische Modellierung, Work shop instructor, Instructor	<i>Spring 2024</i> <i>Spring 2025</i>
Wahrscheinlichkeitstheoretische Grundlagen, Work shop instructor.....	<i>Spring 2024</i>
Spatial Inference, Work shop instructor.....	<i>Autumn 2021</i>
Statistik I für Studierende der Soziologie, des Nebenfachs Statistik, Work shop instructor..	<i>Autumn 2020</i>
Seminar: Open Science in Statistics and Machine Learning, Instructor.....	<i>Autumn 2022</i>
Seminar: Introduction to statistical analysis of areal data, Instructor.....	<i>Spring 2023</i>
Seminar: Statistical analysis of areal data, spatial point processes, Instructor.....	<i>Autumn 2023</i>
Statistics 1, Tutor.....	<i>2018</i> <i>2020</i>

Research Experience

SERVICE AND OUTREACH

2021 **Institute Tea-talks**, Organisation

*LMU
Statistical
Institute
LMU*

2022-2023 **Open Science in Statistics**, Committee Member

*Statistical
Institute*

DEVELOPMENT AND CONFERENCES

Lehrkompetenzen GraduateCenter, This was part of an internal LMU educational programme opportunity, which taught me pedagogical approaches to teaching at a university level, such that the learning experience of the students is maximized.

5th Oxford | Berlin Summer School on Open and Responsible Research in the Life Sciences 2022, I acquired an insight into open science in life sciences, specifically medical research, and was given the opportunity to discuss common statistical pitfalls and shortcomings of research in these fields.

70th Biometric Colloquium- Lübeck, March 2024, I was able to present my work on the Skellam distribution through a presentation.

International Workshop on Statistical Modelling - Durham, July 2024, I was able to present my work in progress on the length of stay in form of a poster.

7th Joint Statistical Meeting of the Deutsche Arbeitsgemeinschaft Statistik- Berlin, March 2025, I was able to present my work on the length of stay in form of a poster.

PROFESSIONAL MEMBERSHIPS

Royal Statistical Society

Institute of Mathematical Statistics