

Curriculum Vitæ

Personal Data

Name Alexander Ritz
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Education

- since 04/2023 **Applied Mathematics**, *Doctoral Candidate*, Clausthal University of Technology.
- 10/2018 – 09/2021 **Applied Statistics**, *Master of Science (M.Sc.)*, GPA: 1.3, Georg-August-University Göttingen.
Thesis: The Modeling of Heavy Tails with Deep Transformation Models
Application area: Computer Science
- 10/2013 – 02/2018 **Business Administration**, *Bachelor of Science (B.Sc.)*, GPA: 2.0, Saarland University.
Specialisation: Statistics und Econometrics

Work Experience

- since 11/2022 **Research Fellow**, Clausthal University of Technology, Clausthal-Zellerfeld.
Institute of Mathematics: Working group Applied Statistics and Data Science.
Methodological research und teaching in mathematics, statistics and machine learning.
- Teaching: Mathematics for Business Administration and Chemistry I and II (undergraduate)
(Engineering) Statistics I and II (undergraduate)
Probabilistic Deep Learning (postgraduate)
Statistical Methods of Machine Learning (postgraduate)
Data Analysis and Statistical Learning (postgraduate)
- 10/2021 – 10/2022 **Biostatistician**, Ruprecht-Karls-University, Heidelberg.
Institute of Medical Biometry: Working group Clinical Studies.
Methodological research and teaching in Biostatistics.
Statistical support of clinical studies and medical research projects.
- 10/2019 – 10/2021 **Research Assistant**, Georg-August-University, Göttingen.
(interruption: Chair of Statistics held by Prof. Dr. Thomas Kneib.
- 04/2021 – 06/2021) Support of research and teaching in SFA and multivariate panel data.
Statistical programming in order to expand the R package *mgcv*.

- 04/2019 – 10/2019 **Research Assistant**, Georg-August-University, Göttingen.
Chair of Econometrics of Prof. Dr. Helmut Herwartz.
Statistical programming of multivariate time series analysis (R package: *svars*).
- 03/2019 – 10/2019 **Research Assistant**, University Medical Center, Göttingen.
Scientific Core Facility Medical Biometry and Statistical Bioinformatics
Consultation of doctoral students on the topics of biometry und bioinformatics.
- 09/2017 – 09/2018 **Student Assistant**, Saarland University, Saarbrücken.
Instructor at the Education Staff Mathematics led by Dr. Klaus Schindler.
Teaching: Remedial mathematics course of the economics faculty
Mathematics for Economics and Law (undergraduate)
Mathematics C: Dynamic Optimisation (postgraduate)
Mathematics D: Valuation of Financial Derivatives (postgraduate)
- since 09/2012 **Tutoring of university and high school students.**
Self employed as well as charity for students in need.
Offered subjects: Mathematics, Statistics, Econometrics, Economics, Business Administration, Physics, English
- 10/2011 – 09/2012 **Voluntary Civil Service**, Ruth-Schaumann School for the Deaf and Hard of Hearing, Lebach.

Languages

German Native language
English C2

UNICERT III-examination passed (Business English)

IT Competencies

Deep familiarity with the programming language R
High familiarity with the programming language Python
High familiarity with the document preparation system $\text{\LaTeX}$
Advanced knowledge of common operating systems and applications
Basic Knowledge of Fortran, SQL, Excel, SAS, SPSS, Statistica and Stata

My Software

Github <https://github.com/alexanderritz>
R package for the construction of copulas: *CopR*
R package for the analysis of „matched pairs data“: *pairedpowR*
Contributions to an R package for multivariate time series analysis: *svars*

Awards

11/2020 Lower Saxony scholarship

Publications

Scholar <https://scholar.google.com/citations?hl=en&user=iU9hjGgAAAAJ>

- 05/2025 **Utility-based optimization of Fujikawa's basket trial design—Pre-specified protocol of a comparison study** In *PLoS One*.
- 10/2023 **Severe chronic obstructive pulmonary disease is associated with reduced oral health conditions** In *Oral diseases*.
- 09/2023 **Outcome after partial pulpotomy: long-term results of the prospective clinical MMP-9 study** In *Oral Health & Preventive Dentistry*.
- 01/2023 **Prophylactic effect of retromuscular mesh placement during loop ileostomy closure on incisional hernia incidence—a multicentre randomised patient- and observer-blind trial (P.E.L.I.O.N trial)** In *Trials*.

Conferences and Workshops

- 08/2026 **Scoring-based model choice for conditional transformation models**
In *EcoSta2026*. Ryukoku University, Kyoto
- 12/2025 **Quantifying Model Complexity in Normalising Flows**
In *CFE-CMStatistics 2025*. Birkbeck, University of London
- 09/2025 **Prediction Error for Quantile Regression** (Poster)
In *International Workshop: Mathematics in the Age of Data*. TU Clausthal
- 03/2025 **Prediction Error for Quantile Regression**
In *DAGStat2025: Statistics in Times of AI*. HU Berlin
- 12/2024 **Deriving a Model Selection Criterion for Quantile Regression**
In *Heidelberg Colloquium of Medical Biometry*. Universitätsklinikum Heidelberg