

ALEXANDER GIESSING

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<https://agiessing.github.io>

EDUCATION

University of Michigan, Ann Arbor

2012 – 2018

Ph.D. in Statistics

Ann Arbor, Michigan, US

- Advisor: Professor Xuming He
- Thesis: “On High-Dimensional Misspecified Quantile Regression”

London School of Economics and Political Science

2011 – 2012

M.Sc. in Econometrics and Mathematical Economics (Distinction)

London, GB

- Full tuition fee scholarship for academic excellence awarded by the German National Academic Foundation

University of Bonn

2007 – 2011

B.Sc. in Economics (Distinction)

Bonn, DE

- Exchange student at the University of British Columbia during the academic year 2009/10

EMPLOYMENT

Department of Statistics, University of Washington

2021 – Present

Acting Assistant Professor

Seattle, Washington, US

Department of ORFE, Princeton University

2018 – 2021

Postdoctoral Research Associate

Princeton, New Jersey, US

- Advisor: Professor Jianqing Fan

GRANTS

NSF DMS-2310578 “Semiparametric Efficient & Robust Inference on High-Dim. Data”

2023 – 2026

Principal Investigator

\$175,000

RESEARCH PAPERS

Working Papers

- [1] Wenjie Guan and Alexander Giessing. *Machine learning assisted inference on high-dimensional binary choice models*. 2024.
- [2] Yikun Zhang, Yen-Chi Chen, and Alexander Giessing. *Nonparametric inference on dose-response curves in the presence of spatial confounding*. 2024.
- [3] Alexander Giessing. *Upper bounds on suprema of empirical processes via generic chaining*. 2023.

Preprints

- [1] Alexander Giessing. *Anti-concentration of suprema of Gaussian processes and Gaussian order statistics*. Submitted. 2023. arXiv: 2310.12119.

- [2] Alexander Giessing. *Gaussian and bootstrap approximations for suprema of empirical processes*. Submitted. 2023. arXiv: 2309.01307.
- [3] Alexander Giessing and Jianqing Fan. *A bootstrap hypothesis test for high-dimensional mean vectors*. Submitted. 2023. arXiv: 2309.01254.
- [4] Yikun Zhang, Alexander Giessing, and Yen-Chi Chen. *Efficient inference on high-dimensional linear models with missing outcomes*. Submitted. 2023. arXiv: 2309.06429.
- [5] Alexander Giessing and Jianqing Fan. *Bootstrapping ℓ_p -statistics in high dimensions*. Submitted. 2020. arXiv: 2006.13099.

Journal Publications and Conference Proceedings

- [1] Alexander Giessing and Jingshen Wang. “Debiased inference on heterogeneous quantile treatment effects with regression rank-scores”. In: *Journal of the Royal Statistical Society, Series B (Statistical Methodology)* (2023).
- [2] Alexander Giessing and Xuming He. “On the predictive risk in misspecified quantile regression”. In: *Journal of Econometrics* 213.1 (2019), pp. 235–260.
- [3] Bara Alsalaheen, Kayla Stockdale, Dana Pechumer, Alexander Giessing, Xuming He, and Steven P. Broglio. “Cumulative Effects of Concussion History on Baseline Computerized Neurocognitive Test Scores: Systematic Review and Meta-analysis”. In: *Sports Health* 9.4 (2017), pp. 324–332.
- [4] Kristjan Greenewald, Seyoung Park, Shuheng Zhou, and Alexander Giessing. “Time-dependent spatially varying graphical models, with application to brain fMRI data analysis”. In: *Advances in Neural Information Processing Systems*. Ed. by I. Guyon, U. Von Luxburg, S. Bengio, H. Wallach, R. Fergus, S. Vishwanathan, and R. Garnett. Vol. 30. Curran Associates, Inc., 2017.
- [5] Edward L. Ionides, Alexander Giessing, Ya’acov Ritov, and Scott E. Page. “Response to the ASA’s Statement on p-Values: Context, Process, and Purpose”. In: *The American Statistician* 71.1 (2017), pp. 88–89.

TALKS & PRESENTATIONS

Bernoulli-IMS 11th World Congress in Probability and Statistics	August 2024
<i>Invited Paper Session “Bootstrap in High Dimensions” Bochum, DE</i>	<i>Session speaker (invited)</i>
EcoSta 2024	July 2024
<i>Beijing, CN</i>	<i>Session speaker (invited)</i>
2023 Joint Statistical Meetings	August 2023
<i>Toronto, CA</i>	<i>Session speaker (invited)</i>
2023 ICSA Applied Statistics Symposium	June 2023
<i>Ann Arbor, Michigan, US</i>	<i>Session speaker (invited)</i>
University College London	November 2022
<i>Department of Statistics</i>	<i>Seminar speaker (invited)</i>
COMPSTAT 2022	August 2022
<i>Bologna, IT</i>	<i>Session speaker (contributed)</i>
2022 Joint Statistical Meetings	August 2022
<i>Washington, D.C., US</i>	<i>Session speaker (invited)</i>

22nd Meeting of New Researchers in Statistics and Probability*Fairfax, Virginia, US*

August 2022

*Session speaker (contributed)***2022 ICSA Applied Statistics Symposium***Gainesville, Florida, US*

June 2022

*Session speaker (invited)***University of Washington***Department of Biostatistics*

January 2022

*Seminar speaker (invited)***CMStatistics 2019***London, GB*

December 2019

*Session speaker (invited)***2018 International Conference on Data Science***Shanghai, CN*

December 2018

*Session speaker (invited)***TEACHING**

STAT 591: Gaussian & Empirical Process Theory for High-Dim. Data*Special Topics Graduate Course, Spring 2023*

University of Washington

*Department of Statistics***STAT 516: Stochastic Modeling of Scientific Data I***Graduate Course, Fall 2023*

University of Washington

*Department of Statistics***STAT/ MATH 394: Probability I***Undergraduate Course, Spring 2022*

University of Washington

*Department of Statistics***STAT 390: Statistical Methods in Engineering and Science***Undergraduate Course, Fall '21, '22, '23; Winter '22, '23; Spring '22, '23*

University of Washington

*Department of Statistics***ORF 245: Fundamentals of Statistics***Undergraduate Course, Spring 2019*

Princeton University

*Department of ORFE***Lectures on Empirical Process Theory***Four-Day Lecture Series, December 2018*

Nankai University

*School of Statistics and Data Science***MENTORING**

Doctoral Students

- Yikun Zhang (co-advised with Yen-Chi Chen), Dept. of Statistics, University of Washington, 2022 – Present

Master Students

- Wenjie Guan, Dept. of Statistics, University of Washington, 2023 – Present

Undergraduate Students

- Hongyi Jian, Dept. of Mathematics, University of Washington, 2022 – Present
- Juncheng Yi, Dept. of Mathematics, University of Washington, 2022 – Present
- Kaiwen Zhou, Dept. of Mathematics, University of Washington, 2022

SERVICE

Department of Statistics, University of Washington

- Graduate Admissions Committee for Master's Program, 2021/22, 2022/23, 2023/24
- PhD Prelim Exam Mentor, 2021/22, 2022/23, 2023/24
- Diversity, Equity & Inclusion Committee, 2022/23, 2023/24
- Statistics/ Biostatistics Teaching Working Group, 2023/24
- Popular Science Lecture at UW Math Day for High School Students, March 2023

Department of Statistics, University of Michigan, Ann Arbor

- Mentor for the Undergraduate Research Opportunity Program, Summer 2016
- Organizer of the Graduate Student Seminar Series, 2014/15

Professional

- Treasurer of the ASA Nonparametric Section, 2022/23
- Secretary-elect of the ASA Nonparametric Section, 2023/24

Ad-hoc Reviewer

- Annals of Statistics
- Journal of the Royal Statistical Society: Series B (Statistical Methodology)
- Journal of the American Statistical Association
- Journal of Machine Learning Research
- Bernoulli
- Journal of Econometrics
- Statistica Sinica
- Biometrika
- Electronic Journal of Statistics
- Statistics & Probability Letters
- Journal of Nonparametric Statistics
- Journal of Computational and Graphical Statistics
- Computational Statistics and Data Analysis
- Statistical Methods in Medical Research
- Conference on Neural Information Processing Systems (NeurIPS) 2020, 2021, 2023
- International Conference on Learning Representations (ICLR) 2022, 2024
- International Conference on Artificial Intelligence and Statistics (AISTATS) 2024

ACADEMIC AWARDS & SCHOLARSHIPS

Scholar of the German National Academic Foundation

2007 – 2013

Studienstiftung des deutschen Volkes

- Statutory Mission: *“To support the university education of young people who, on account of their exceptional academic or artistic talents and their personalities, can be expected to make an outstanding contribution to society as a whole.”*

Zempelin Scholarship

2012

Studienstiftung des deutschen Volkes

€10,000

- Awarded to support post graduate studies in a PhD program in the US

Graduate Scholarship

2011

Studienstiftung des deutschen Volkes

ca. €40,000

- Full tuition fee scholarship and cost of living stipend for pursuing post graduate studies in GB

Hölderlin Scholarship

2009

Studienstiftung des deutschen Volkes

€7,500

- Awarded for the purpose of pursuing undergraduate studies in North America

January 20, 2024