

# ALEXANDER GIESSING

giessing@nus.edu.sg

<https://agiessing.github.io>

## ACADEMIC POSITIONS

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<b>Department of Statistics and Data Science, National University of Singapore</b> <i>Assistant Professor</i>	2024 – Present <i>Singapore, SG</i>
<b>Department of Statistics, University of Washington</b> <i>Acting Assistant Professor</i>	2021 – 2024 <i>Seattle, Washington, US</i>

## EDUCATION

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<b>Department of ORFE, Princeton University</b> <i>Postdoctoral Research Associate</i>	2018 – 2021 <i>Princeton, New Jersey, US</i>
<b>University of Michigan, Ann Arbor</b> <i>Ph.D. in Statistics</i>	2012 – 2018 <i>Ann Arbor, Michigan, US</i>
<b>London School of Economics and Political Science</b> <i>M.Sc. in Econometrics and Mathematical Economics (Distinction)</i>	2011 – 2012 <i>London, GB</i>
<b>University of Bonn</b> <i>B.Sc. in Economics (Distinction)</i>	2007 – 2011 <i>Bonn, DE</i>

## GRANTS

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<b>NSF DMS-2310578 “Semiparametric Efficient &amp; Robust Inference on High-Dim. Data”</b> <i>Principal Investigator, terminated early (July 2024)</i>	2023 – 2026 <i>\$175,000</i>
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## RESEARCH PAPERS

### Working Papers

- [1] Alexander Giessing. *Upper bounds on suprema of empirical processes via generic chaining*. 2024.
- [2] Wenjie Guan and Alexander Giessing. *Efficient inference on high-dimensional logistic regression*. 2024.

### Preprints

- [1] Yikun Zhang, Yen-Chi Chen, and Alexander Giessing. *Nonparametric inference on dose-response curves without the positivity condition*. Submitted. 2024. arXiv: 2405.09003.
- [2] Alexander Giessing. *Anti-concentration of suprema of Gaussian processes and Gaussian order statistics*. Submitted. 2023. arXiv: 2310.12119.
- [3] Alexander Giessing. *Gaussian and bootstrap approximations for suprema of empirical processes*. Submitted. 2023. arXiv: 2309.01307.
- [4] Alexander Giessing and Jianqing Fan. *A bootstrap hypothesis test for high-dimensional mean vectors*. Submitted. 2023. arXiv: 2309.01254.
- [5] Yikun Zhang, Alexander Giessing, and Yen-Chi Chen. *Efficient inference on high-dimensional linear models with missing outcomes*. Submitted. 2023. arXiv: 2309.06429.

- [6] Alexander Giessing and Jianqing Fan. *Bootstrapping  $\ell_p$ -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

<b>Bernoulli-IMS 11th World Congress in Probability and Statistics</b>	August 2024
<i>Invited Paper Session “Bootstrap in High Dimensions”</i>	<i>Session speaker (invited)</i>
<i>Bochum, DE</i>	
<b>EcoSta 2024</b>	July 2024
<i>Beijing, CN</i>	<i>Session speaker (invited)</i>
<b>2023 Joint Statistical Meetings</b>	August 2023
<i>Toronto, CA</i>	<i>Session speaker (invited)</i>
<b>2023 ICSA Applied Statistics Symposium</b>	June 2023
<i>Ann Arbor, Michigan, US</i>	<i>Session speaker (invited)</i>
<b>University College London</b>	November 2022
<i>Department of Statistics</i>	<i>Seminar speaker (invited)</i>
<b>COMPSTAT 2022</b>	August 2022
<i>Bologna, IT</i>	<i>Session speaker (contributed)</i>
<b>2022 Joint Statistical Meetings</b>	August 2022
<i>Washington, D.C., US</i>	<i>Session speaker (invited)</i>
<b>22nd Meeting of New Researchers in Statistics and Probability</b>	August 2022
<i>Fairfax, Virginia, US</i>	<i>Session speaker (contributed)</i>
<b>2022 ICSA Applied Statistics Symposium</b>	June 2022
<i>Gainesville, Florida, US</i>	<i>Session speaker (invited)</i>
<b>University of Washington</b>	January 2022
<i>Department of Biostatistics</i>	<i>Seminar speaker (invited)</i>
<b>CMStatistics 2019</b>	December 2019
<i>London, GB</i>	<i>Session speaker (invited)</i>

## TEACHING

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<b>STAT 591: Gaussian &amp; Empirical Process Theory for High-Dim. Data</b> <i>Special Topics Graduate Course, Spring 2023</i>	University of Washington Department of Statistics
<b>STAT 516: Stochastic Modeling of Scientific Data I</b> <i>Graduate Course, Fall 2023</i>	University of Washington Department of Statistics
<b>STAT/ MATH 394: Probability I</b> <i>Undergraduate Course, Spring 2022</i>	University of Washington Department of Statistics
<b>STAT 390: Statistical Methods in Engineering and Science</b> <i>Undergraduate Course, Fall '21, '22, '23; Winter '22, '23; Spring '22, '23</i>	University of Washington Department of Statistics
<b>ORF 245: Fundamentals of Statistics</b> <i>Undergraduate Course, Spring 2019</i>	Princeton University Department of ORFE
<b>Lectures on Empirical Process Theory</b> <i>Four-Day Lecture Series, December 2018</i>	Nankai University School of Statistics and Data Science

## MENTORING

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### Doctoral Students

- Yikun Zhang (co-advised with Yen-Chi Chen), Dept. of Statistics, University of Washington, 2022 – 2024

### Master Students

- Wenjie Guan, Dept. of Statistics, University of Washington, 2023 – 2024

### Undergraduate Students

- Hongyi Jian, Dept. of Mathematics, University of Washington, 2022 – 2023
- Juncheng Yi, Dept. of Mathematics, University of Washington, 2022 – 2023
- Kaiwen Zhou, Dept. of Mathematics, University of Washington, 2022

## SERVICE

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### 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

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### Scholar of the German National Academic Foundation

2007 – 2013

*Studienstiftung des deutschen Volkes*

### 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