

CURRICULUM VITAE

Sven Klaaßen

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PERSONAL DETAILS

Birth Date and Place: 17/04/1992 in Hildesheim (Germany)

PROFESSIONAL EXPERIENCE

- Since 04/2023 Postdoc & Guest Researcher, University of Hamburg, Faculty of Business Administration, Institute of Statistics
- Research in Machine Learning and Econometrics
- Since 04/2023 Researcher, Economic AI
- Research and Implementation of new Methods
 - Focus on Double Machine Learning
- 02/2022 – 08/2022 Visiting Scholar, Massachusetts Institute of Technology, Department of Economics, Host: Prof. Victor Chernozhukov
- Research in Machine Learning and Econometrics
- 01/2021 – 03/2023 Post-Doctoral Research Associate at Hamburg Business School, Faculty of Business Administration, Institute of Statistics
- Research and Teaching in Machine Learning and Econometrics

EDUCATION

- 01/2017 – 12/2020 Ph.D. in Statistics, University of Hamburg, Faculty of Business Administration, Institute of Statistics
- Adviser: Prof. Dr. Martin Spindler
 - Dissertation: *Essays on Valid Inference in High-Dimensions*
 - Overall grade: With distinction (summa cum laude)
- 10/2014 – 12/2016 M. Sc. Business Mathematics, University of Hamburg
- Final Grade: Very good (1.28/1.0)
- Major Interests: Empirical Processes
 - Master Thesis:
Maximum Likelihood Estimator for transformed AR(p) time series,
Supervisor: Prof. Dr. Natalie Neumeyer,
Grade: Very Good (1.3/1.0)
- 10/2011 – 10/2014 B. Sc. Business Mathematics, University of Hamburg
- Final Grade: Good (1.59/1.0)
- Specialized in Stochastics and Statistics

PUBLICATIONS

Bach, P., Chernozhukov, V., Klaassen, S., Kurz, M., Spindler, M. (2024): *DoubleML – An Object-Oriented Implementation of Double Machine Learning in R* (<https://doi.org/10.18637/jss.v108.i03>). *Journal of Statistical Software*, 108 (3), 1-56.

Schacht, O., Klaassen, S., Schwarz, S., Spindler, M., Grünbaum, D., Imhof, S., (2023): *Causally learning an optimal rework policy* (<https://proceedings.mlr.press/v218/schacht23a.html>). *Proceedings of Machine Learning Research* 218, 3-24.

Klaassen, S., Kueck, J., Spindler, M., Chernozhukov, V. (2023): *Uniform Inference in High-Dimensional Gaussian Graphical Models* (<https://doi.org/10.1093/biomet/asac030>). *Biometrika* 110 (1), 51-68.

Klaassen, S., Kueck, J., Spindler, M. (2022): *Transformation Models in High-Dimensions* (<https://www.tandfonline.com/doi/full/10.1080/07350015.2021.1906259>). *Journal of Business & Economic Statistics* 40 (3), 1168-1178.

Farbmacher, H., Guber, R., Klaassen, S. (2022) *Instrument Validity Tests with Causal Forests* (<https://www.tandfonline.com/doi/full/10.1080/07350015.2020.1847122>). *Journal of Business & Economic Statistics* 40 (2), 605-614.

WORKING PAPERS

Bach, P., Klaassen, S., Kueck, J., Spindler, M. (2023): *Uniform Inference in High-Dimensional Additive Models* (<https://doi.org/10.48550/arXiv.2004.01623>).
Reject and Resubmit at *Journal of Econometrics*.

Klaassen, S. (2021): *A Note on High-Dimensional Confidence Regions* (<https://doi.org/10.48550/arXiv.2105.09028>).

Klaassen, S., Teichert-Kluge, J., Bach, P., Chernozhukov, V., Spindler, M., Vijaykumar, S. (2024): *DoubleMLDeep: Estimation of Causal Effects with Multimodal Data* (<https://doi.org/10.48550/arXiv.2402.01785>).
Submitted to International Conference of Machine Learning.

Bach, P., Schacht, O., Chernozhukov, V., Klaassen, S., Spindler, M. (2024): *Hyperparameter Tuning for Causal Inference with Double Machine Learning: A Simulation Study* (<https://doi.org/10.48550/arXiv.2402.04674>).
Accepted at Causal Learning and Reasoning, forthcoming in Proceedings of Machine Learning Research.

WORK IN PROGRESS

Estimation of Price Elasticities with Text and Images (with Victor Chernozhukov, Martin Spindler and Suhas Vijaykumar)

Estimation of Treatment Effects with Multimodal Data under unobserved confounding (with Philipp Bach, Victor Chernozhukov and Martin Spindler)

When to calibrate your propensity score (with Philipp Bach and Jannis Kueck)

Sensitivity Analysis for Difference-in-Differences Estimators (with Jannis Kueck)

L1-Boosting: Rate of Convergence (with Ye Luo)

Adaptive Discrete Smoothing for (High-Dimensional and Nonlinear) Panel Data (with Xi Chen, Victor Chernozhukov, Ye Luo and Martin Spindler)

Causal Rework Policy Estimation (with Oliver Schacht)

CONFERENCES, WORKSHOPS AND SUMMER SCHOOLS

- 06/2024 ISMS Marketing Science Conference, (scheduled)
Presentation: *DoubleMLDeep: Estimation of Causal Effects with Multimodal Data*
- 04/2024 Causal Inference and Missing Data Group at Inria, (scheduled)
Presentation: *DoubleMLDeep: Estimation of Causal Effects with Multimodal Data*
- 02/2024 2nd Managerial AI Network, Munich
Presentation: *When to calibrate your propensity score*
- 09/2023 Managerial AI Network, Ladenburg
Presentation: *DoubleMLDeep: Estimation of Causal Effects with Multimodal Data*
- 09/2022 Statistische Woche, Münster
Presentation: *Uniform Inference in High-Dimensional Additive Models*
- 09/2022 Jahrestagung, Verein für Socialpolitik, Basel
Presentation by co-author: *Uniform Inference in High-Dimensional Additive Models*
- 06/2021 Counterfactual Methods for Policy Impact Evaluation 2021,
Presentation: *Instrument Validity Tests with Causal Forests*
- 07/2018 International Conference on Machine Learning (ICML), Workshop on
Machine Learning for Causal Inference, Stockholm
Presentation by co-author: *Uniform Inference in High-Dimensional Gaussian Graphical Models.*
- 06/2018 *Workshop on Machine Learning and Econometrics*, London, Centre for
microdata methods and practice
- 05/2018 *Workshop Machine Learning in Economics and Econometrics*, Munich
Max Planck Society/ University of Hamburg
Presentation: *Uniform Inference in High-Dimensional Gaussian Graphical Models.*

10/2017 European Courses in Advanced Statistics *High-Dimensional Statistics, theory and practice*, Fréjus, Statistical Society of France, Presentation: *Transformation Models in High-Dimensions*.

REVIEWS

AOS – Annals of Statistics

JMLR – Journal of Machine Learning Research

ECTJ – The Econometrics Journal

ASTA – Advances in Statistical Analysis (German Statistical Society)

AWARDS, SCHOLARSHIPS AND THIRD-PARTY FUNDING

2021 Add-on Fellow der Joachim Herz Stiftung (12,000 Euro)

2021 Fulbright Visiting Scholar (2,000 Euro)

2022 Wolfgang-Wetzels-Preis der DStatG (1,000 Euro)

2021-2025 “Causal Reinforcement Learning” jointly with ams-Osram (funded by Bayerisches Wirtschaftsministerium, ca. 350.000 Euro) (Principal Investigator, proposal preparation and funding own position)

TEACHING EXPERIENCE

Fall 2023 Programming (lecture and tutorial)

Fall 2022 Causal Machine Learning (lecture and tutorial)

Spring 2022 Statistics II (tutorial)

Fall 2021 Deep Learning – An Introduction (tutorial)

Spring 2021 Causal Inference (tutorial), Statistical Programming with Python (lecture)

Fall 2020 Deep Learning – An Introduction (tutorial)

Spring 2020 Statistical Programming with Python (lecture)

Fall 2019 Statistics I (tutorial)

Spring 2019 Statistics II (coordination and tutorial)

Fall 2018 Machine Learning (tutorial), Statistics I (tutorial)

Spring 2018 Statistical Programming with Python (lecture), Statistics II (tutorial)

Fall 2017 Decision Behavior (tutorial), Statistics I (tutorial)

Spring 2017 Statistics II (tutorial)
2017 onwards Supervision of term papers, bachelor and master thesis
10/2014 – 03/2016 Measure Theory, Stochastics

AFFILIATIONS

Since 10/2017 Member of Hamburg Center for Health Economics (HCHE)

PROFESSIONAL EXPERIENCE

10/2023 – 12/2023 Lecturer, Kühne Logistics University (self-employed)
- Programming (Introduction to Python)

Since 04/2019 Statistical Consulting (self-employed activity).
- Trainings in Data Science and Machine Learning
- Applied Projects in Financial Forecasting and Planning

10/2014 – 03/2016 Student Assistant at the Department of Mathematics at the University of
Hamburg.

08/2014 – 10/2014 Intern at Talanx AG, Group Risk management – Life – in Hannover,
Germany



Hamburg, 29/02/2024