

CURRICULUM VITAE

Personal Data

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Date of Birth	September 6, 1983
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Professional career

since 10/2019	Tenure-Track Assistant Professor in Statistical Machine Learning Department of Statistics and OR, University of Vienna
04 - 09/2019	Professor (W3 - temporary) Department of Mathematics, Technical University of Munich, Temporary replacement for the chair in Mathematical Statistics.
2017 - 2019	Research Associate / PostDoc Department of Mathematical Stochastics, University of Freiburg, DFG Project (RO 3766/401) “Mathematical theory on statistical inference sub- ject to randomization constraints,” with Prof. Angelika Rohde.
2015 - 2017	Research Associate / PostDoc Department of Statistics and OR, University of Vienna, Austrian Science Fund (FWF P 28233) “Model selection and inference with sparse models when the true model need not be sparse,” with Prof. Hannes Leeb.
2011 - 2015	Research Assistant / PhD student Department of Statistics and OR, University of Vienna, with Prof. Hannes Leeb.

Third-party funded projects

- **Classification – Preprocessed and high-dimensional data sets**, Austrian Science Fund (FWF): I 5485-N, as part of DFG Research Unit 5381: ‘Mathematical Statistics in the Information Age’, 2021–2025, total funding: € 167,076.- <https://for5381.uni-freiburg.de/>

Other occupational activities

2020 - present	Associate Editor for ‘Statistical Papers’
2020 - present	Member of the European Regional Committee of the Bernoulli Society
2020 - present	Head of the Admissions Committee for the Master in Data Science
Referee for:	Annals of Statistics, Bernoulli, Electronic Journal of Statistics, Journal of Multivariate Analysis, Journal of Statistical Planning and Inference, Stat, Statistical Papers, Statistical Science, Statistica Sinica, Statistics.

Education (graduation dates)

September 23, 2015	PhD in Statistics (with distinction), University of Vienna, Thesis: “Statistical inference in high-dimensional linear regression based on simple working models”, Advisor: Prof. Hannes Leeb
May 30, 2011	Master in Statistics (with distinction), University of Vienna
January - June 2011	Exchange Student at the University of Chicago, Department of Statistics.
September 9, 2009	Bachelor in Statistics (with distinction), University of Vienna.
July 22, 2008	Bachelor of Arts in Social and Cultural Anthropology, University of Vienna.
June 20, 2002	High-School graduation (with distinction)

Publications

- [1] Butucea, C. and Rohde, A. and Steinberger, L. (2022): Interactive versus non-interactive locally differentially private estimation: Two elbows for the quadratic functional. *Forthcoming in Annals of Statistics*, arXiv:2003.04773.
- [2] Steinberger, L. and Leeb, H. (2022): Conditional predictive inference for stable algorithms. *Forthcoming in Annals of Statistics*, arXiv:1809.01412.
- [3] Leeb, H. and Steinberger, L. (2021): Statistical inference with F-statistics when fitting simple models to high-dimensional data. *Econometric Theory*, arXiv:1902.04304.
- [4] Rohde, A. and Steinberger, L. (2020): Geometrizing rates of convergence under local differential privacy constraints. *Annals of Statistics*, 48(5), pp. 2646–2670, doi:10.1214/19-AOS1901.
- [5] Bachoc, F. and Preinerstorfer, D. and Steinberger, L. (2020): Uniformly valid confidence intervals post-model-selection. *Annals of Statistics*, 48(1), pp. 440–463. doi:10.1214/19-AOS1815.
- [6] Steinberger, L. and Leeb, H. (2019): Prediction when fitting simple models to high-dimensional data. *Annals of Statistics*, 47(3), pp. 1408–1442. doi:10.1214/18-AOS1719.
- [7] Steinberger, L. and Leeb, H. (2018): On conditional moments of high-dimensional random vectors given lower-dimensional projections. *Bernoulli*, 24(1), pp. 565–591. doi:10.3150/16-BEJ888.
- [8] Steinberger, L. (2016): The relative effects of dimensionality and multiplicity of hypotheses on the F-test in linear regression. *Electron. J. Stat.*, 10(2), pp. 2584–2640. doi:10.1214/16-EJS1186.

- [9] Reschenhofer, E. and Preinerstorfer, D. and Steinberger, L. (2013): Non-monotonic penalizing for the number of structural breaks. *Comput. Statist.*, doi:10.1007/s00180-013-0419-4. 28(6), pp. 2585–2598.

Preprints

- [1] Steinberger, L. and Leeb, H. (2016): Leave-one-out prediction intervals in linear regression models with many variables. arXiv:1602.05801.

Teaching (lectures)

- **University of Vienna:** Linear Models; Probability Theory I; Classification, Clustering and Discrimination; Statistics for Data Science;
- **University of Freiburg:** Statistical Estimation under Differential Privacy;
- **Technical University of Munich:** Statistics for Business Administration; Introduction to Statistics (for mathematicians);
- **ENSAE/CREST:** Statistics of Differential Privacy, Guest Lecture in November 2022;

Seminars and conference talks (invitations)

1. **ENSAE/CREST Lunch Seminar, Palaiseau Cedex**, November 8, 2022.
2. **JSM, Session ‘Challenges and Recent Advances in Private Data Analysis’, Seattle (online)**, August 9, 2021.
3. **10th Bernoulli-IMS World Congress, Session ‘Privacy’, Seoul (online)**, July 19, 2021.
4. **CMStat, Session ‘Statistical problems under privacy constraints’, London (online)**, December 20, 2020.
5. **CMStat, Session ‘Recent developments in privacy-preserving data analysis’, London**, December 14, 2019.
6. **Statistics Seminar, DPMMS, University of Cambridge**, June 7, 2019.
7. **Seminar “Statistics and Risk Management”, Technical University of Munich**, June 5, 2019.
8. **KASTEL, Karlsruhe Institute of Technology**, March 1, 2019.
9. **Workshop on ‘Mathematical Foundations of Statistical Uncertainty Quantification’, Freiburg**, February 18, 2019.
10. **Three part guest-lecture on ‘Statistical estimation under differential privacy’, Ruhr-University Bochum**, January 14–16, 2019.
11. **Meeting in Mathematical Statistics, Fréjus**, December 18, 2018.
12. **FDM Seminar, University of Freiburg**, November 9, 2018.
13. **MSRaI Workshop, Vienna**, <http://www.univie.ac.at/seam/inference2018/>, July 14, 2018.
14. **MFO, Oberwolfach, Workshop on ‘Matrix estimation meets statistical network analysis’, June 18, 2018**, Oberwolfach Report No. 29/2018, pp. 30–32.
15. **CFE-CMStat, Session ‘Model Selection and Inference’, London**, December 17, 2017.
16. **Statistics Colloquium, TU Wien, Vienna**, December 6, 2017.
17. **IMT, Université Paul Sabatier, Toulouse**, October 18, 2016.
18. **Workshop on Model Selection, KU Leuven**, September 8, 2016.

Other research visits

- **Minimax-optimal non-linear functional estimation under local differential privacy constraints**, Research in Pairs with A. Rohde and C. Butucea, MFO Oberwolfach, Germany, February 20–26, 2022.
- **First meeting of the DFG Research Unit 5381**, Rostock, Germany, September 22–24, 2022.

Student supervision

- Thomas Stark - Implicit versus explicit regularization for high-dimensional classification (PhD, Vienna, ongoing)
- Nicolai Amann - Conditional predictive inference for linear sub-models of high-dimensional data (PhD, Vienna, ongoing)
- Vincent Grunert - Comparing preprocessing techniques for sentiment analysis for German unlabeled social media data (Master, Vienna, ongoing)
- Nathalie Schmerlaib - An R-based pipeline for routine analysis of mass spectrometry data (Master, Vienna, ongoing)
- Maximilian Pfeiffer - Modelle zur Prognose der Leistung von Photovoltaikanlagen mittels Wettervorhersagen (Master, Vienna, finished)
- Ulysses Hücke - Local differential privacy and estimation in the binomial model (Master, Freiburg, finished)
- Saskia Glaffig - Classification under privacy constraints (Master, Freiburg, finished)