

EDUCATION

Doctoral Candidate / Ph.D	Jul 2022 - Present
School of Computation, Information and Technology, Technical University of Munich (TUM)	
Research interests: probabilistic generative models, Bayesian inference, and wireless channel modeling	
Master of Science	Oct 2019 - Apr 2022
Electrical Engineering and Information Technology, Technical University of Munich (TUM)	
Grade: 1.0 (best possible in German system; 4.0/4.0 US GPA)	
Bachelor of Science	Oct 2016 - Apr 2020
Physics, Ludwig Maximilian University of Munich (LMU)	
Grade: 2.0 (German system; \approx 3.3/4.0 US GPA)	
<i>Pursued as a separate degree and in parallel with B.Sc. in Electrical Eng. and Inf. Technology at TUM</i>	
Bachelor of Science	Oct 2015 - Apr 2019
Electrical Engineering and Information Technology, Technical University of Munich (TUM)	
Grade: 1.4 (German system; \approx 3.7/4.0 US GPA)	

SELECTED PUBLICATIONS

- **B. Böck**, S. Syed, W. Utschick, “Sparse Bayesian Generative Modeling for Compressive Sensing,” **NeurIPS**, 2024. [\[Link\]](#), [\[Code\]](#)
- **B. Böck**, A. Oeldemann, T. Mayer, F. Rossetto, W. Utschick, “Physics-Informed Generative Modeling of Wireless Channels,” **ICML**, 2025. [\[Link\]](#), [\[Code\]](#)
- **B. Böck**, D. Semmler, B. Fesl, M. Baur, W. Utschick, “Gohberg-Semencul Toeplitz Covariance Estimation via Autoregressive Parameters,” **IEEE Transactions on Signal Processing (TSP)**, 2025. [\[Link\]](#), [\[Code\]](#)
- **B. Böck**, M. Baur, N. Turan, D. Semmler, W. Utschick, “A Statistical Characterization of Wireless Channels Conditioned on Side Information,” **IEEE Wireless Communications Letters (WCL)**, 2024. [\[Link\]](#)

Further publications in IEEE journals, IEEE conferences, and ML conferences; full list on [Google Scholar](#).

INDUSTRIAL EXPERIENCE / RESEARCH PROJECTS

Research Collaboration with Rohde & Schwarz	May 2023 - May 2025
• Conducted research in collaboration with Rohde & Schwarz, with two years of dedicated funding support.	
• Developed a probabilistic and physics-informed generative model for wireless channels, resulting in a pending patent and publications at <i>NeurIPS</i> , <i>ICML</i> , and <i>IEEE WCL</i> .	
Research Project with Infineon Technologies	Sept 2018 - Feb 2019
• Reduced substrate noise in mixed-signal integrated circuits by developing clock skew optimization methods.	
Engineering Intern at fos4x GmbH	Sep 2017 - Nov 2017
• Characterized and designed fiber-optical Fabry-Pérot acceleration sensors.	

SKILLS

- *Languages*: English (Fluent), German (Native)
- *Programming*: Python, Matlab, C++, C, Git, Linux, L^AT_EX
- *ML Frameworks*: PyTorch, scikit-learn, NumPy, SciPy, Pandas, Matplotlib

TEACHING

2022–Present	Co-Instructor for the Master’s course <i>Convex Optimization</i> (TUM, yearly Winter term)
2020–2021	Teaching Assistant for courses on <i>Machine Learning</i> and <i>Quantum Networks</i> (TUM)
2017–2018	Student Assistant for courses on <i>Electricity, Data Structures</i> , and <i>Computer Technology</i> (TUM)

AWARDS

- Co-recipient of the Best Paper Award for “Wireless Channel Prediction via Gaussian Mixture Models”, International ITG/IEEE Workshop on Smart Antennas (WSA), 2024