

Philipp Trunschke

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EDUCATION

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|--|---------------------------------|
| Berlin Institute of Technology Ph.D. in Mathematics, Advisor: Reinhold Schneider | Berlin, Germany 2018–present |
| Humboldt University of Berlin M.Sc. in Mathematics, GPA: 1.10/4.00 – Thesis: “Image Classification with Hierarchical Tensor Networks” (grade: 1.0) | Berlin, Germany 2016–2018 |
| Humboldt University of Berlin B.Sc. in Mathematics, GPA: 2.30/4.00 – Thesis: “Hierarchical optimistic optimization of X-armed bandits” (grade: 1.0) | Berlin, Germany 2013–2016 |

EXPERIENCE

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| Oberwolfach Seminar on Mathematics of Deep Learning | Oberwolfach, Germany October 2018 |
| École polytechnique Internship – PDE constraint optimization in Python | Paris, France Spring 2018 |
| CoSIP Intense Course on Deep Learning | Berlin, Germany November 2017 |
| Workshop on Mathematics of Deep Learning | Berlin, Germany September 2017 |
| Oberwolfach Seminar on Discontinuous Petrov-Galerkin Methods | Oberwolfach, Germany June 2017 |
| Zuse Institute Berlin Student assistant – Implementation of gas network simulations | Berlin, Germany 2016–2018 |

PUBLICATIONS

A. Trunschke, G. Bellini, M. Boniface, *et al.*, “Towards experimental handbooks in catalysis”, *Topics in Catalysis*, vol. 63, no. 19-20, pp. 1683–1699, Oct. 2020.

M. Eigel, R. Schneider, **P. Trunschke**, and S. Wolf, “Variational monte carlo—bridging concepts of machine learning and high-dimensional partial differential equations”, *Advances in Computational Mathematics*, vol. 45, no. 5-6, pp. 2503–2532, Oct. 2019.

T. Streubel, C. Strohm, **P. Trunschke**, and C. Tischendorf, “Generic construction and efficient evaluation of flow network DAEs and their derivatives in the context of gas networks”, in *Operations Research Proceedings*, Springer International Publishing, 2018, pp. 627–632.

PREPRINTS

M. Eigel, R. Schneider, and **P. Trunschke**, *Convergence bounds for empirical nonlinear least-squares*, 2020. arXiv: 2001.00639 [math.NA].

TEACHING

- **Teaching Assistant** at Humboldt University of Berlin 2013–2018
Einführung in Wissenschaftliches Rechnen

EXTRACURRICULAR ACTIVITIES

- **Deputy student representative** at BIMoS 2019–present

SKILLS

- **Python:** over 20 years of experience
 - numerical simulations
 - optimization algorithms
 - data processing and presentation
- **C and C++:** over 5 years of experience
 - numerical simulations
 - optimization algorithms

LANGUAGES

- **German:** native
- **English:** fluent
- **French:** basic

SCHOLARSHIPS AND AWARDS

- BIMoS scholarship 2018–2021
- ”Buchpreis” of the German Physical Society 2012
- ”Schülerpreis” of the German Physical Society 2011