Verena Bellscheidt

| *Inspire HEP* | *Personal website*

EDUCATION

Massachusetts Institute of Technology 2025 - present
Ph. D. Physics
Graduate student at the MIT Center for Theoretical Physics - a Leinweber Institute

Technical University of Munich 2021 - 2025
B. Sc. Physics (passed with distinction)
Thesis: *Neural Network Parametrisation of Generalised Wilson Loops in Lattice QCD*
Advisor: Nora Brambilla

INTERNSHIPS

Nicolaus Copernicus Astronomical Center 06/2023 - 10/2023
Undergraduate research internship
Project title: *Chemical abundances in a planet-host star of the Praesepe open cluster*
Advisor: Rodolfo Smiljanic

Max Planck Institute for Astrophysics 06/2022 - 10/2022
Undergraduate research internship
Project title: *Galaxy-IGM correlations in the Thesan simulations*
Advisor: Enrico Garaldi

PUBLICATIONS

Peer-reviewed articles

[1] E. Garaldi, **V. Bellscheidt**, A. Smith, R. Kannan. "The galaxy-IGM connection in THESAN: the physics connecting the IGM Lyman-α opacity and galaxy density in the reionization epoch". In: *The Open Journal of Astrophysics* (2025).

[2] E. Garaldi, **V. Bellscheidt**, A. Smith, R. Kannan. "The galaxy-IGM connection in THESAN: observability and information content of the galaxy-Lyman-α cross-correlation at $z \geq 6$". In: *The Open Journal of Astrophysics* (2025).

Submitted for publication

[3] **V. Bellscheidt**, N. Brambilla, A. S. Kronfeld, J. Mayer-Steudte. *Wilson loops with neural networks*. 2026. arXiv: 2602.02436 [hep-lat].

HONORS AND AWARDS

MIT physics first-year fellowship Full funding for the first year of my PhD 2025

Female physicist of the week of the German Physical Society [link] 2025

DAAD RISE worldwide scholarship Full funding for a research internship abroad (€1984) 2023

Deutschlandstipendium Germany's national scholarship (€3600) 2021

TEACHING

MIT Teaching+Learning Lab 2025 - present

Grad Teaching Development Tracks

I am voluntarily completing the Grad Teaching Development Tracks of MIT's Teaching+Learning Lab in order to refine my teaching skills. Each track consists of 2-3 workshops in addition to pre- and post-workshop assignments. I have so far completed the track on inclusive teaching.

Technical University of Munich 2023 - 2025

Teaching Assistant

Tasks: Lead weekly 90 min. tutorial sessions for 10-20 undergraduate students, graded homework and exams

Courses: Winter 2024/25: Introduction to Scientific Programming (IN8008) *∅1.5 tutorials per week*
Summer 2024: Theoretical Physics 1: Classical Mechanics (PH0005)
Winter 2023/24: Theoretical Physics 2: Electrodynamics (PH0006)

SUMMER SCHOOLS

Dark Matter and the Cosmos Summer school by TU Munich, FAU, and the University of Stuttgart 2022

SKILLS

Programming: Python, C++, Bash, Mathematica

Languages: English (C2), German (native speaker)