

Alexander West

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Education

- 05/2024 - **PhD studies: Mathematics at the University of Bonn** under the supervision of
current date Prof. Dr. Stefan Müller and Dr. Christian Scharrer
- Understanding surfaces, which are stationary points of the Willmore energy under constraints on area, volume and normalized curvature
- 10/2021 - **Master of Science: Mathematics at the University of Bonn**
- 03/2024
- Graduated with distinction (1.00)
 - Master thesis: On the minimization of the Willmore energy under a constraint on total mean curvature and area
- 10/2018 - **Bachelor of Science: Mathematics at the University of Bremen**
- 09/2021
- Graduated with distinction (1.00)
 - Bachelor thesis: Parabolic partial differential equations on manifolds

Work Experience

- 04/2022 - **Tutor** at the Mathematical Institute of the University of Bonn in the courses
current date
- Functional analysis
 - Analysis 2
 - Fundamentals of Mathematics 1 and 2 (Grundzüge der Mathematik 1 und 2)
- 10/2020 - **Student assistant** at the Centre for Technomathematics (ZeTeM) in Bremen
- 06/2021
- Research regarding the behavior of a coupled system of partial differential equations modeling magnetic nanoparticles and the improvement of two related constants
 - Numerical implementation of the solutions

Languages

- **English:** Fluent
- **German:** Native speaker

Awards

- 02/2025 - **Scholar** of the German National Academic Foundation
current date
- 10/2024 **Prize** for great talk at the DMV students conference 2024 in Ilmenau

2018 **High school graduate prize** of the DMV in mathematics and of the DPG in physics
2015 & 2016 **Bronze medallist** in the national round of the Math Olympiad

Talks

- 10/2024 **DMV students conference** in Ilmenau: “Minimizing the Willmore energy under a total mean curvature constraint”
6/2024 **Hausdorff Colloquium** in Bonn: “Minimizing the Willmore energy under a total mean curvature constraint”

Publications

- Christian Scharrer and Alexander West. “On the Minimization of the Willmore Energy Under a Constraint on Total Mean Curvature and Area”. In: *Arch. Ration. Mech. Anal.* 249.2 (2025), Paper No. 17