

Dr. Dennis Ulbrich

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EDUCATION

(1) Dr. rer. nat. in Mathematics

University of Bremen, Department of Mathematics

4.2017 – 9.2021

- PhD thesis: Ergodic theory of nonlinear waves in discrete and continuous excitable media
 - Advisors: [Prof. J. Rademacher](#), [Prof. M. Keßeböhmer](#)
 - Referees: Prof. J. Rademacher (University of Bremen), [Prof. I. Melbourne](#) (Warwick University)
- cf. [MGP](#)

Brückensтипендиум of the University of Bremen

University of Bremen, Department of Mathematics

4.2016 – 4.2017

- Further studies
- Extensions of the results of my Master's thesis
- Successful acquisition of third-party funding (DFG) for my PhD project

M.Sc. and B.Sc. in Mathematics

University of Bremen

until 4.2016

- M.Sc. thesis: Dynamics of the three-state 1D Greenberg-Hastings cellular automaton
 - Referees: Prof. J. Rademacher, [Dr. T. Samuel](#) (University of Exeter)
- B.Sc. thesis: Unerwartete Fehler bei bedingten Erwartungswerten und Wahrscheinlichkeiten
 - Referees: [Prof. W. Brannath](#) (University of Bremen), [Dr. K. Falk](#) (University of Kiel)

EMPLOYMENT

Postdoctoral researcher

Hochschule Bremen, School of Electrical Engineering and Computer Science 2.2025 – 5.2025

- Project work: AI-based transmission, analysis and verification of handwritten documents

Lecturer in Mathematics

Hochschule Bremen, School of Nature and Engineering

10.2024 – 3.2025

- Mathematik 1

Postdoctoral Researcher

University of Münster, Department of Mathematics, Institute for Analysis and Numerics

6.2023 – 6.2024

- Research on discrete hypocoercivity within [DFG project 456849348](#)
- Keywords:
 - Hypocoercivity
 - Kinetic equations
 - BGK-type approximations
 - Chemical reactions
 - Entropy methods
- Supervision: [Prof. M. Pirner](#)

Non-academic professional activities	9.2022 – 2.2023
Lecturer in Mathematics Jacobs University Bremen, Mathematical Sciences	1.2022 – 6.2022
• Finite Mathematics • Introduction to Dynamical Systems	
Research assistant (PhD student) University of Bremen, Department of Mathematics	4.2017 – 9.2021
Research groups: Nonlinear Analysis and Applied Analysis, Stochastics and Dynamical Systems	
• Research within DFG project number 384027439 • PhD thesis: Ergodic theory of nonlinear waves in discrete and continuous excitable media: ◦ Advisors: Prof. J. Rademacher , Prof. M. Keßeböhmer ◦ Referees: Prof. J. Rademacher (University of Bremen), Prof. I. Melbourne (Warwick University) • Keywords: ◦ Nonlinear analysis ◦ Ergodic Theory ◦ PDE ◦ Excitable media ◦ Cellular automata ◦ Dynamical Systems	

OTHER

GRANTS

Brücknstipendium University of Bremen, Department of Mathematics	4.2016 – 4.2017
• More details, see here	

SUPERVISION

Student Research Project University of Bremen, Department of Mathematics*	2021 – 2022
• Wave patterns in cellular automata for excitable media, see here	

ORGANISATION