Curriculum Vitae

Dr. Dennis Ulbrich

E-Mail · Website · Address: on request

About me: I am a mathematician with experience in research and teaching. Currently, I am looking for a new job in mathematical teaching or research, preferably at a university. Below you will find an overview of my previous professional activities, my educational background and further key data.

Employment

- **Tutoring activities, project work**
  "Bridging the gap while being on job search" — *5.2025 — today*
  - Tutor in Mathematics
  - Continued work (unpaid) on DFG project 456849348, see below

- **Research assistant** — Bremen
  Hochschule Bremen, School of Electrical Engineering and Computer Science — *2.2025 — 5.2025*
  - Project work: AI-based transmission, analysis, verification of handwritten documents

- **Lecturer in Mathematics** — Bremen
  Hochschule Bremen, School of Nature and Engineering — *10.2024 — 3.2025*
  - Mathematik 1

- **Postdoctoral researcher** — Münster
  Universität Münster, Fachbereich Mathematik, Institut f. Analysis u. Numerik — *6.2023 — 6.2024*
  - Research on discrete hypocoercivity within DFG project 456849348
  - Supervision: Prof. Dr. Marlies Pirner
  - Keywords:
    * Hypocoercivity
    * Kinetic equations
    * BGK-type approximations
    * Chemical reactions
    * Entropy methods

- **Non-academic professional activities** — Bremen
  Professional internship at a consulting company — *9.2022 — 2.2023*

- **Lecturer in Mathematics** — Bremen
  Jacobs University Bremen — *1.2022 — 6.2022*

- *Finite Mathematics* (lecture) and *Dynamical Systems* (seminar)

- **Research assistant (PhD student)** Bremen
  University of Bremen, Department of Mathematics *4.2017 — 9.2021*
  - Research within DFG project RA 27288/1-1
  - Research groups: Nonlinear Analysis and Applied Analysis, Stochastics and Dynamical Systems
  - PhD thesis: *Ergodic theory of nonlinear waves in discrete and continuous excitable media*
    * *Advisors:* Prof. Dr. Jens Rademacher (University of Hamburg), Prof. Dr. Marc Keßeböhmer (University of Bremen)
    * *Referees:* Prof. Dr. Jens Rademacher, Prof. Dr. Ian Melbourne (Warwick University)
  - Keywords:
    * Nonlinear analysis
    * Ergodic Theory
    * PDE
    * Excitable media
    * Cellular automata
    * Dynamical Systems

Education

- **Dr. rer. nat., *Mathematics*** Bremen
  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. Dr. Jens Rademacher (University of Hamburg), Prof. Dr. Marc Keßeböhmer (University of Bremen)
  - Referees: Prof. Dr. Jens Rademacher, Prof. Dr. Ian Melbourne (Warwick University)
  - cf. MGP

- **Brückenstipendium** 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., *Mathematics*** Bremen
  University of Bremen *until 4.2016*
  - M.Sc. thesis:
    Dynamics of the three-state 1D Greenberg-Hastings cellular automaton
    * Referees: Prof. Dr. Jens Rademacher, Dr. Tony Samuel (University of Exeter)
  - B.Sc. thesis:
    Unerwartete Fehler bei bedingten Erwartungswerten und Wahrscheinlichkeiten
    * Referees: Prof. Dr. Werner Brannath (University of Bremen), Dr. Kurt Falk (University of Kiel)

Publications

Refereed journal articles:

- A. Pauthier, J.D.M. Rademacher, D. Ulbrich.
  Weak and strong interaction of excitation kinks in scalar parabolic equations.
  J Dyn Diff Equat. Published: 30 July 2021; Volume 35, pages 2199-2235, (2023), [DOI] [arXiv]
- M. Keßeböhmer, J.D.M. Rademacher, D. Ulbrich.
  Dynamics and topological entropy of 1D Greenberg-Hastings cellular automata.
  Ergodic Theory and Dynamical Systems. 2021;41(5):1397-1430, [DOI] [arXiv]

In preparation:

- L. Liu, M. Pirner, D. Ulbrich.
  Discrete hypocoercivity for a nonlinear kinetic reaction model without initial close-to-equilibrium assumption.

Theses:

- D. Ulbrich.
  Ergodic theory of nonlinear waves in discrete and continuous excitable media.
  Diss., 2021, [DOI]

Other

Grants:

- Brückenstipendium, University of Bremen, Department of Mathematics, 4.2016 – 4.2017

Supervision:

- Student research project, University of Bremen, Department of Mathematics, 2021 – 2022

Organisation:

- Supporting several summer and winter schools, University of Bremen, 2016 – 2021
- Maintaining the Mathematical Collection of the University of Bremen and creating its website

IT skills:

- LaTeX: advanced
- Matlab, Mathematica, Java, C++, Oracle PL/SQL: basic

Languages:

- German: native
- English: C1 level

References: on request

updated: Jan 19, 2026