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Jonas W. Peteranderl

Education

- 10/2023–present **PhD Studies in Mathematics**, *LMU Munich*.
Supervisor: Prof. Dr. Rupert L. Frank
- 10/2020–09/2023 **MSc in Theoretical and Mathematical Physics (TMP)**, *LMU and TU Munich*.
Thesis: Degenerate Stability of the Caffarelli–Kohn–Nirenberg Inequality along the Felli–Schneider Curve
Supervisor: Prof. Dr. Rupert L. Frank
Final grade: 1.0
- 10/2021–09/2022 **MASt in Pure Mathematics (Part III)**, *University of Cambridge*.
Essay: Vanishing Viscosity Limit in Domains with Wall-boundaries: The Kato Criterion
Essay setter: Professor Edriss S. Titi
Final grade: Distinction
- 10/2017–09/2020 **BSc in Mathematics and Theoretical Physics**, *LMU Munich*.
Thesis: Equilibrium Properties of KMS States
Supervisor: Prof. Dr. Peter Müller
Final grade: 1.0
- 10/2009–06/2017 **Abitur**, *Gisela Gymnasium Munich*.
Final grade: 1.0

Professional Experience

- 10/2022–present **Teaching Assistant**, *LMU Munich*.
Hiring student assistants, holding weekly exercise classes, and designing weekly exercise sheets, exams, and their solutions for the courses:
- Numerical analysis
 - Topology and differential calculus in several variables
 - Complex analysis
 - Measure theory and integration in several variables
- 10/2021–04/2022 **Proof-reader**.
For the book 'Schrödinger operators: Eigenvalues and Lieb–Thirring inequalities' by R. L. Frank, A. Laptev, and T. Weidl

- 09/2019–09/2021 **Student Assistant, LMU Munich.**
Supervised students solving exercises and marked weekly exercise sheets for the courses:
- Functional analysis
 - Mathematical quantum mechanics
 - Topology and differential calculus in several variables
 - Measure theory and integration in several variables
 - Trial studies in mathematics
- 09/2018–10/2018 **Working Student, Department for Operation Research and Decision Support, Siemens, Munich.**
Provided programming assistance for an e-ticketing project

Awards and Scholarships

- 10/2017–09/2023 **Scholarship of the Max Weber-Programme (MWP).**
Affiliate programme of the German Academic Scholarship Foundation (SdV)
- 07/2022 **Fitzwilliam College Prize and 1912 Senior Scholarship.**
For a distinguished performance in Part III examinations
- 10/2021–06/2022 **Scholarship of the German Academic Exchange Service (DAAD).**
Funding for master's studies abroad

Publications and Preprints

- 12/2024 **The sharp σ_2 -curvature inequality on the sphere in quantitative form, with Rupert L. Frank, arXiv:2412.12819.**
- 01/2024 **Degenerate Stability of the Caffarelli–Kohn–Nirenberg Inequality along the Felli–Schneider Curve, with Rupert L. Frank, Calc. Var. Partial Differential Equations, Vol. 63, No. 44 (2024).**

Invited Talks

- 01/2025 **TRR 352 Junior Meeting, Stuttgart, Germany.**
- 05/2024 **Oberseminar on analysis, spectral theory, and mathematical physics, Munich, Germany.**
- 01/2024 **PhD Discussion Group, Heidelberg, Germany.**

Academic and Scientific Services

- 11/2023–present **Initiator of the Seminar ‘Modern Analytical Methods’.**
Organizing a reading seminar among PhD students and postdocs
- 10/2023–present **Referee for peer-reviewed journals.**
Proof-reading articles for Invent. Math. and Calc. Var. Partial Differential Equations
- 08/2023–present **Course Instructor at the ‘Deutsche Schülerakademie’ (DSA).**
Preparing and giving courses on ‘Stability of the Hydrogen Atom’ for promising high school students (2023, 2025)

- 05/2018–present **Organizer of ‘LMU UniAbende’ and ‘LMU Schnupperstunden’ for Mathematics (Organizing Alumnus since 2023).**
Providing introductory events for prospective students
- 05/2023–04/2024 **Member of the Junior Committee of the Collaborative Research Centre (CRC) TRR 352.**
Represented the junior members and organized the yearly retreat
- 10/2023 **Organizer of the Joint Workshop between Bordeaux and LMU ‘Young Researchers in Analysis and Mathematical Physics’.**
Acquired funding from the LMU-Bordeaux Research Cooperation Program and Bayfrance (≈ 15.000 €)
- 11/2017–09/2023 **MWP-Mentee of Daniel Matthes (and previously Peter Gritzmann).**
Organized the Mathematical Symposia in 2019 and 2023
- 08/2019–01/2022 **Commitment at the LMU Student Council for Mathematics.**
Participated in various appeal and tenure-track boards

Summer School and Conference Attendences

- 12/2024 **Conference on Mathematical Physics and PDEs, Herrsching, Germany.**
- 11/2024 **Workshop on ‘Eigenvalue Estimates for Laplace and Schrödinger Operators’, Stuttgart, Germany.**
- 07/2024 **Hausdorff School on ‘Uniformity and Stability of Oscillatory Integrals’, Bonn, Germany.**
- 06/2024 **3rd IST Summer School in Analysis and Mathematical Physics, Klosterneuburg, Austria.**
- 03/2024 **Winter school on Mathematical Physics, Kochel am See, Germany.**
- 10/2023 **Kick-off Meeting of the CRC TRR 352, Farchant, Germany.**
- 07/2023 **ICMAT-UAM-Workshop on Non-linear Elliptic PDE, Madrid, Spain.**
- 07/2023 **Summer School on Geometric Analysis and PDEs, Chęciny, Poland.**
- 03/2023 **KIT-Workshop on Analysis of PDEs, Karlsruhe, Germany.**
- 11/2022 **TUM-Conference on Discrete Systems and Calculus of Variations, Munich, Germany.**
- 08/2022–09/2022 **Surfaces Summer School, Frauenchiemsee, Germany.**
- 07/2022 **2nd IST Summer School in Analysis and PDEs, Klosterneuburg, Austria.**
- 06/2022–07/2022 **CIME Summer School on Geometric and Analytic Aspects of Functional Variational Principles, Cetraro, Italy.**
- 09/2019–09/2021 **SdV Scientific College on ‘Determinism, Chaos, and Randomness’, Cologne / online / Paderborn University.**
- 08/2019 **Summer School on Geometry, Utrecht University.**