Florian Noah Grün - Curriculum Vitae

Personal Data

Mail	flo.gruen.fds@gmail.com, gruen.florian.32r@st.kyoto-u.ac.jp
Website	`https://cathelion.github.io`, `https://www.linkedin.com/in/florian-gruen-3a4212194/`
Date of birth	12.08.1998 in Karlsruhe, Germany; German citizenship
Research interests	calculus of variations, elasticity theory, free boundary problems, PDEs, differential geometry
Programming	proficient: Python, Latex; basic: Java, MATLAB, C++, Mathematica, Julia
Languages	German (C2), English (C1), Swedish (C1), French (C1/B2), Japanese (B2 - JLPT N3 Certificate)

Education

Apr 2024 –	PhD in Mathematics (Kyoto University, Japan) ↪ Supervisor: Prof. Tatsuya Miura
Aug 2021 – Feb 2024	MSc in Mathematics with minor in CSE (EPF Lausanne, Switzerland): GPA 5.63 ↪ Thesis: "Regularity of the one-phase problem" (Dr. Xavier Fernández-Real) ↪ Project 2: "On the continuous and discrete gradient conjecture" (Prof. Nicolas Boumal, Quentin Rebjock) ↪ Project 1: "Some regularity results for the obstacle problem" (Prof. Maria Colombo, Dr. Xavier Fernández-Real)
Aug 2018 – Jul 2021	BSc in Mathematics (Lund University, Sweden): Pass with distinction ↪ Thesis: "Optimality gaps and regularity for one-dimensional variational problems" (Prof. Andrey Ghulchak)
Research Projects	- REU at the Einstein Institute/Hebrew University of Jerusalem, Israel (Jul-Sep 2023) ↪ "Gamma-convergence and energy estimates in elasticity" (Prof. Cy Maor) - REU at Bremen/Hamburg University, Germany (Aug-Sep 2022, Feb 2023) ↪ "Pulse waves in partial differential equations" (Prof. Jens Rademacher)

Teaching

Teaching Assistant	Kyoto University (in English): "Calculus A" (Spring 2024), "Calculus B" (Fall 2024) EPFL (in French): "Advanced Analysis I" (Fall 2023)

Scholarships and Awards

April 2024 - March 2027	Honjo International Scholarship for doctoral students
July 2016	Kepler-Gymnasium Freundenstadt Fachpreis Physik (highest grades in physics)

Publications

2. "Continuity up to the boundary for minimizers of the one-phase Bernoulli problem" (with Xavier Fernández-Real) submitted | *arXiv:2408.10019*

1. "Non-sufficiency of smoothness in the gradient conjecture"
Appl. Math. E-Notes, 25(2025), 88-93 (2024) | *arXiv:2408.10582*

Seminars, workshops and conferences attained

Nov 2024	*The 1st MMS Workshop for Young Researchers* at Kyoto University ↪ Poster: "Regularity and structure of non-planar p-elasticae"
Nov 2024	*Geometric Analysis and Phenomena* at Kyoto University ↪ Talk: "Regularity and structure of non-planar p-elasticae"
Oct 2024	*JSAIM Interdisciplinary Research Exchange Meeting* at Tokyo Institute of Technology ↪ Poster: "Regularity and structure of non-planar p-elasticae"
Sep 2024	Workshop *"Calculus of Variations: a New Generation"* at HCM/Bonn University

Sep 2024	*Pisa-Freiburg school in Applied Analysis* at Pisa University ↪ Poster: "Regularity and Structure of non-planar p-elasticae"
Aug 2024	*HPRT 2024 Summer School*, Workshop: *The Mathematics of Shapes* at Hokkaido University ↪ Talk: "Continuity up to the boundary for minimizers of the one-phase Bernoulli problem"
Feb 2023	*Applied Analysis Seminar* at Hamburg University ↪ Talk: "Sufficient conditions for spikes in the FitzHugh-Nagumo system"
Sep 2023	*Weizmann PDEs Day* at Weizmann Institute of Science, Rehovot, Israel
Sep 2022	*Horizons in non-linear PDEs* at Ulm University, Germany
Aug 2022	*Gene Golub SIAM Summer School 2022* at Gran Sasso Science Institute, Italy ↪ Poster: "The obstacle problem and optimal stopping"
Jul 2022	*Free boundary problems and related topics* at ETH Zürich, Switzerland