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LIST OF PUBLICATIONS

A trajectorial interpretation of Moser's proof of the Harnack inequality   05/2023
with Rico Zacher, to appear in Annali della Scuola Normale Superiore di Pisa - Classe di Scienze, link to the preprint.

On a kinetic Poincaré inequality and beyond   12/2022
with Rico Zacher, ArXiv, link to the preprint.

Kinetic maximal L^p-regularity with temporal weights and application to quasilinear kinetic diffusion equations   01/2022
with Rico Zacher, Journal of Differential Equations, 307, p. 29–82, link to the article.

Kinetic maximal $L_\mu^p(L^p)$-regularity for the fractional Kolmogorov equation with variable density   01/2022
Nonlinear Analysis, 214, link to the article.

Kinetic maximal L^2-regularity for the (fractional) Kolmogorov equation   04/2021
with Rico Zacher, Journal of Evolution Equations, 21, p. 3585–3612, link to the article.

EDUCATION

PhD Mathematics   04/2019 — 03/2023
Ulm University

- Analytic aspects of kinetic partial differential equations.
- Advisor: Prof. Dr Rico Zacher.
- Grade: Summa cum laude.

M.Sc. Mathematics   03/2018 — 03/2019
Ulm University

- Thesis: Kolmogorov equations - Well-posedness, regularity, asymptotics and Harnack inequalities.
- Grade: 1.0 with distinction, awarded for the best graduation.
- During my master's studies, I focused on Analysis by taking courses on the calculus of variations, evolution equations, functional calculus, partial differential equations and optimal transport. This was supported by courses in applied mathematics, such as numerical finance, as well as a series of lectures on econophysics.

B.Sc. Mathematics   10/2014 — 02/2018
Ulm University

- Thesis: Long-time behaviour of Markov chains by discrete functional inequalities and entropic Ricci curvature.
- Grade: 1.1 with distinction, awarded for the best graduation.

Abitur, *Joachim-Hahn-Gymnasium Blaubeuren*   06/2014
Junior studies in mathematics, *Fernuniversität Hagen and PfH Göttingen*   04/2013 — 09/2014

WORKING AND TEACHING EXPERIENCE

Postdoctoral fellow   Since 04/2023
WWU Münster

- In the group of Prof. Dr Christian Seis.

Predoctoral fellow   10/2022 — 03/2023
Ulm University

Teaching assistant   03/2020 — 10/2022
University of Applied Sciences Neu-Ulm

Pre-doctoral fellow   04/2019 — 10/2019
Ulm University

Scientific assistant   10/2017 — 03/2019
Ulm University

Working student   03/2015 — 03/2019
Daimler AG Research & Development

- Statistical analysis with Matlab and Excel.
- Supervising the operation of a quasi-static tension-compression testing machine.

Student assistant   10/2015 — 09/2017
Ulm University

Awards and Scholarships

Travel grant by the ProTrainU Mobility-Programme, Ulm University (1000 €)	06/2022
Master graduation award "Absolventenpreis M.Sc. Mathematik Uni Ulm 2020" for the best graduation (500 €)	04/2022
Graduate scholarship granted by the State of Baden-Wuerttemberg, Germany (52.200 €)	since 11/2019
Bachelor graduation award "Absolventenpreis B.Sc. Mathematik Uni Ulm 2018" for the best graduation (500 €)	05/2018
Ferry Porsche award and graduation award of the "Deutsche Physikalische Gesellschaft"	06/2014

Volunteer Work

Elected member of the council of PhD students at Ulm University	02/2021 — 09/2022

 • *Representing the interests of doctoral students in university committees, e.g. for the change of
   the PhD regulations. Chair of the council of PhD students (12/2021 — 09/2022).*

Elected member of the faculty council for Mathematics and Economic Sciences at Ulm University	02/2021 — 09/2022
Member of the Academic Student Council Mathematics	07/2017 — 03/2019

 • *Member of the appointment committee for a professorship in "Stochastics".*

Other Scientific Activities

Referee for Discrete and Continuous Dynamical Systems	05/2023
Research stay at Nicola De Nitti, FAU Erlangen, one week	03/2023
Research stay at Christian Seis, WWU Münster, half a week	02/2023
Research stay at Prof. Dr. Cyril Imbert, École normale supérieure Paris, half a week	02/2023
Supporting the organisation of the summer school "Horizons in non-linear PDEs" at Ulm University	09/2022
Referee for Journal of Evolution Equations	10/2022
Co-organisation of the seminar "Mathematisches Kolloquium" at Ulm University	since 03/2020

 • *A series of talks at which researchers are invited to give a talk accessible to a broad audience.*

Organisation of a workshop for PhD students in mathematics at Ulm University	06/2022

 • *One weekend, 15 participants, funding (2500 €) acquired by the StuVe Ulm University.*

Supervision of a project for the workshop of the 25th Internetseminar	03/2022 — 06/2022

 • *Title: Kolmogorov equation in $L^p(\mathbb{R}^{2n})$ – Semigroup, spectrum, maximal regularity?*

Research stay at Prof. Dr. Cyril Imbert, École normale supérieure Paris, one week	11/2021
Facilitator at the autumn school "COLLAB – Collaboratory for Global Sustainability 2021", Toronto/Ulm	10/2021
Supporting the organisation of the winter school "Grad. Flows and Var. Methods in PDEs" at Ulm University	11/2019

Talks and Posters

Talk — "Real Analysis and Geometry", *CIRM Marseille*	06/2023
Talk — Willhelm Killing Colloquium, *WWU Münster*	04/2023
Talk — Chair Dynamics Control and Numerics, *FAU Erlangen*	03/2023
Talk — TULKKA, *KIT Karlsruhe*	02/2023
Poster — "Kinetic Theory", *CIRM Marseille*	11/2022
Talk & Poster — "Horizons in non-linear PDEs", *Ulm University*	09/2022
Poster — When Kinetic Theory meets Fluid Mechanics, *ETH Zürich*	07/2022
Poster — 11th Summer school on "Methods and Models of Kinetic Theory", *Pesaro*	06/2022
Poster — Frontiers in analysis of kinetic equations, *INI Cambridge*	01/2022
Talk — Nonlinear Evolution Equations and Approximations, *University of Duisburg-Essen*	07/2021
Talk — Oberseminar Analysis, *Ulm University*	03/2021
Poster — Winterschool on Analysis and Applied Mathematics, *University of Münster*	02/2021

Attended Conferences

Kinetic Theory, *CIRM Marseille*	11/2022
Horizons in non-linear PDEs, *Ulm University*	09/2022
2nd IST Austria Summer School in Analysis and PDEs, *IST Austria*	07/2022
When Kinetic Theory meets Fluid Mechanics, *ETH Zürich*	07/2022
25th Internetseminar "Spectral Theory for Operators and Semigroups", *Agropoli*	06/2022
11th Summer school on "Methods and Models of Kinetic Theory", *Pesaro*	06/2022
Oxbridge PDE Conference, *University of Oxford*	05/2022
Frontiers in the Interplay Between Probability and Kinetic Theory, *ICMS Edinburgh*	04/2022
Kinetic Theory: old and new tutorial, *INI Cambridge*	01/2022
Frontiers in analysis of kinetic equations, *INI Cambridge*	01/2022
Deep Learning and partial differential equations, *INI Cambridge*	07/2021
Recent advances in Gradient Flows, Kinetic Theory, and Reaction-Diffusion Equations, *University of Vienna*	03/2021
Kinetic Equations: from Modeling Computation to Analysis, *CIRM Marseille*	03/2021
Winterschool on Analysis and Applied Mathematics, *University of Münster*	02/2021
Gradient flows and variational methods in PDEs, *Ulm University*	11/2019
PDE/Probability Interactions: Particle Systems, Hyperbolic Conservation Laws, *CIRM Marseille*	10/2019
Parabolic Evolution Equations, Harmonic Analysis And Spectral Theory, *Bad Herrenalb*	05/2019
Non Standard Diffusions in Fluids, Kinetic Equations and Probability, *CIRM Marseille*	12/2018
Evolutionsgleichungen in Ulm, *Ulm University*	04/2018

Teaching Experience

Teaching assistant, *Ulm University* — Winter 2022
Analysis 1, Local coordinator of the 26th ISEM

Teaching assistant, *University of Applied Sciences Neu-Ulm* — Summer 2022
Business Mathematics and Statistics 1

Teaching assistant, *University of Applied Sciences Neu-Ulm* — Winter 2021
Business Mathematics and Statistics 2 - Regression Models/Statistical Testing

Teaching assistant, *University of Applied Sciences Neu-Ulm* — Summer 2021
Business Mathematics and Statistics 1

Teaching assistant, *Ulm University* — Winter 2020
Dynamical systems

Teaching assistant, *University of Applied Sciences Neu-Ulm* — Winter 2020
Business Mathematics and Statistics 2 - Regression Models/Statistical Testing

Teaching assistant, *University of Applied Sciences Neu-Ulm* — Summer 2020
Business Mathematics and Statistics 1

Teaching assistant, *Ulm University* — Winter 2019
Organisation of the Trainingscamp, a yearly event for first-year students to refresh their mathematical skills.

Teaching assistant, *Ulm University* — Summer 2019
Analysis 1

Teaching assistant, *Ulm University* — Winter 2018
Dynamical systems

Teaching assistant, *Ulm University* — Summer 2018
Elements of functional analysis

Teaching assistant, *Ulm University* — Winter 2017
Analysis 2

Tutor, *Ulm University* — Winter 2015 — Summer 2017
Mathlabs for Analysis 1 & Analysis 2

I can provide all teaching materials (exercise sheets, solutions, ...) upon request.