

I am a third-year PhD student at Ulm University under the supervision of Prof. Rico Zacher. My research concerns the regularity theory of kinetic partial differential equations, including the fractional Kolmogorov equation. I am interested in studying the L^p -regularity theory of solutions and understanding a priori estimates for weak solutions. The goal is to apply these results to quasilinear kinetic partial differential equations. Preprints of all publications are available on [arXiv](#).

EDUCATION

PhD student <i>Ulm University</i>	2019 — 2022
<ul style="list-style-type: none">Working title: Analytic aspects of kinetic partial differential equationsAdvisor: Prof. Dr. Rico Zacher	
Master of Science in Mathematics <i>Ulm University</i>	2018 — 2019
<ul style="list-style-type: none">Thesis: Kolmogorov equations - Well-Posedness, regularity, asymptotics and Harnack inequalitiesGrade: 1.0 with distinction, honors for best graduation	
Bachelor of Science in Mathematics <i>Ulm University</i>	2014 — 2018
<ul style="list-style-type: none">Thesis: Long-time behavior of Markov chains by discrete functional inequalities and entropic Ricci curvatureGrade: 1.1 with distinction, honors for best graduation	
Abitur , <i>Joachim-Hahn-Gymnasium Blaubeuren</i>	2014
Junior studies in mathematics , <i>Fernuniversität Hagen and PflG Göttingen</i>	2013 — 2014

PUBLICATIONS

Kinetic maximal L^p-regularity with temporal weights and application to quasilinear kinetic diffusion equations <i>Journal of Differential Equations</i> , link to the article .	2022
Kinetic maximal $L^p_\mu(L^p)$-regularity for the fractional Kolmogorov equation with variable density <i>Nonlinear Analysis</i> , link to the article .	2022
Kinetic maximal L^2-regularity for the (fractional) Kolmogorov equation <i>Journal of Evolution Equations</i> , link to the article .	2021

AWARDS AND SCHOLARSHIPS

Master Graduation Award "Absolventenpreis M.Sc. Mathematik Uni Ulm 2020"	2022
Graduate scholarship granted by the State of Baden-Wuerttemberg, Germany (Grant Number 1902 LGFG-E)	2019 — 2022
Bachelor Graduation Award "Absolventenpreis B.Sc. Mathematik Uni Ulm 2018"	2018
Ferry Porsche Award	2014

WORKING EXPERIENCE

Working student <i>Daimler AG Research & Development</i>	2015 — 2019 <i>Ulm, Germany</i>
Scientific assistant <i>Ulm University</i>	2017 — 2019 <i>Ulm, Germany</i>
<ul style="list-style-type: none">Teaching (see separate section).Organization of the Trainingscamp. A yearly event for first-year students to refresh their mathematical skills.	
Student assistant <i>Ulm University</i>	2015 — 2017 <i>Ulm, Germany</i>
<ul style="list-style-type: none">Teaching (see separate section).	

VOLUNTEER WORK

Elected member in the council of PhD students at Ulm University	2020 — 2022
Elected member of the faculty council for Mathematics and Economic Sciences of Ulm University	2020 — 2022
Academic Student Council Mathematics	2017 — 2019

TEACHING EXPERIENCE

Teaching assistant , <i>University for applied sciences Neu-Ulm</i> , Introduction to R and Statistics	2020 — 2022
Teaching assistant , <i>University Ulm</i> Analysis 1 and 2, Dynamical Systems, Elements of Functional analysis	2017 — 2019
Tutor , <i>University Ulm</i> , Analysis 1 and 2	2015 — 2017

OTHER SCIENTIFIC ACTIVITIES

Co-organization of the seminar "Mathematisches Kolloquium" at Ulm University	2020 — 2022
Organization of a mini-workshop for PhD students in mathematics at Ulm University	2022
Organization of a project for the Workshop of the 25th ISem on "Spectral theory for Operators and Semigroups"	2022
Visiting researcher, École normale supérieure Paris, one week	2021
Facilitator at the autumn school "COLLAB – Collaboratory for Global Sustainability 2021"	2021

TALKS AND POSTERS

Poster — Frontiers in analysis of kinetic equations, Isaac Newton Insitute Cambridge	2022
Talk — Nonlinear Evolution Equations and Approximations, Essen	2021
Talk — Oberseminar Analysis, Ulm	2021
Poster — Winterschool on Analysis and Applied Mathematics, Münster	2021

ATTENDED CONFERENCES

Oxbridge PDE Conference, Oxford (virtual)	2022
Frontiers in the Interplay Between Probability and Kinetic Theory, Edinburgh	2022
Kinetic Theory: old and new tutorial, INI Cambridge (virtual)	2022
Frontiers in analysis of kinetic equations, INI Cambridge (virtual)	2022
Deep Learning and partial differential equations, INI Cambridge (virtual)	2021
Recent advances in Gradient Flows, Kinetic Theory, and Reaction-Diffusion Equations, Wien (virtual)	2021
Kinetic Equations: from Modeling Computation to Analysis, CIRM Marseille (virtual)	2021
Winterschool on Analysis and Applied Mathematics, Münster (virtual)	2021
PDE/Probability Interactions: Particle Systems, Hyperbolic Conservation Laws, CIRM Marseille	2019
Parabolic Evolution Equations, Harmonic Analysis And Spectral Theory, Bad Herrenalb	2019
Non Standard Diffusions in Fluids, Kinetic Equations and Probability, CIRM Marseille	2018
Evolution Equations in Ulm, Ulm	2018

SKILLS

IT Skills	C++, Excel (VBA), Java, \LaTeX , Mathematica, Matlab, R Advanced understanding of software and hardware
Communication	German (native speaker), English (C1), French (B1)