

## RESEARCH INTERESTS

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**Partial Differential Equations**—parabolic and elliptic equations, homogenization theory, free boundary problems

## EDUCATION

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### University of Utah

PhD of Pure Mathematics

– Expected July, 2026

Salt Lake City, U.S.

2021–Current

### Southern University of Science and Technology

Master of Pure Mathematics

– Thesis: “Topics on reaction-diffusion equations with large diffusion rate within thin components”

Shenzhen, China

2019–2021

### Southern University of Science and Technology

Bachelor of Mathematics and Applied Mathematics

– Thesis: “Review of the model about fast diffusion on a road in a large field using effective boundary conditions”

Shenzhen, China

2015–2019

## PREPRINTS

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1. **Regularity theory of a gradient degenerate Neumann problem**, joint with William Feldman, arXiv preprint arXiv: 2406.06614 (2024)
1. **Is Mean Curvature Flow a Gradient Flow?** arXiv preprint arXiv: 2212.03701 (2022). (to appear on: *Proc. of AMS*)

## PUBLICATIONS

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1. **Homogenization of Enhancing Thin Layers**, Journal of Differential Equations, Volume 282, 2021, Pages 330-369, ISSN 0022-0396, <https://doi.org/10.1016/j.jde.2021.02.024>.

## SEMINARS AND SHORT COURSES

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- **Optimal Transport and Dynamics** at CMO, Oaxaca, August 11-16 2024  
My Talk: Regularity theory of a gradient degenerate Neumann problem  
Website: <https://www.birs.ca/events/2024/5-day-workshops/24w5198>
- **Geometry of Measures and Free Boundaries** at UW Seattle, July 20-26 2024  
Website: <https://sites.google.com/view/gmfbseattle2024/>
- **Summer School on PDEs and Randomness** at Max Planck Institute, Leipzig, 2023  
Website: <https://www.mis.mpg.de/calendar/conferences/2023/randompde.html>
- **Summer Program in Partial Differential Equations** at UT Austin, 2022  
Website: <https://analysispde.ma.utexas.edu/summer-program-in-partial-differential-equations-2022/>
- **PIMS-IFDS-NSF Summer School on Optimal Transport** at UW Seattle, 2022  
Website: <https://kantorovich.org/event/2022-optimal-transport-summer-school/>

- **Large Deviation Principle and Optimal Transport** at U, 2022  
Reference materials:
- **17-th Summer School on PDEs** at Jilin University, 2019
- Short Courses: fractional Laplacians, General Relativity, Special Lagrangian Equations

## TEACHING EXPERIENCE

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- **Instructor** at University of Utah Spring 2025  
*Math 1050-006 College Algebra*
- **Instructor** at University of Utah Spring 2024  
*Math 1050-005 College Algebra*