Cooper Faile

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Education

University of Texas at Austin,	Aug. 2021 – Present
PhD, Mathematics	
Advisor: Alexis Vasseur	
University of North Carolina at Chapel Hill,	Aug. 2016 – May 2020
BS, Mathematics and Computer Science	

Preprints

Infinite BV, large L^∞ solutions of conservation laws are Hölder-stable in L^2 in the class of front tracking limits	Aug. 2025
Geng Chen, Cooper Faile, Sam Krupa	
arXiv:2507.23645	
Necessary and sufficient conditions for a-contraction	Apr. 2025
Cooper Faile	
arXiv:2504.03920	

Honors and Awards

Frank Gerth III Teaching Excellence Award, UT Austin	May 2024
Frank Gerth III Teaching Excellence Award, UT Austin	May 2022
Alfred T. Brauer Award, UNC Chapel Hill	May 2020

Talks and Lectures

1. Criteria for Stability of Intermediate Shocks, UW Madison (Nov. 2024)

Conferences and Workshops Attended

1. Winter School in PDE, Stony Brook (Jan. 2025)

2. Stability & Multiscale Analysis for PDEs, UW Madison (Nov. 2024)

3. HYP2024, SJTU (Jul. 2024)

4. Stability & Multiscale Analysis for PDEs, UT Austin (May 2024)

5. Shocking Developments: New Directions in Compressible and Incompressible Flows, MPI MIS (Jun. 2023)

6. New Trends in Mathematical Fluid Dynamics, Institut Fourier, Grenoble (Jun. 2023)

7. Summer School in PDE, UT Austin (Aug. 2022)

Teaching and Service

1. Organizer of the Junior Analysis seminar (2024 - 2025 AY)

2. Complex analysis summer boot camp (2022, 2024, and 2025)

3. Directed reading program mentor (Fall 2021, Spring 2024)

4. Teaching assistant at UT Austin for differential equations (M 427J, Fall 2022 and Spring 2023), discrete mathematics (M 325K Spring 2022), and business calculus (M 408Q, Fall 2021)