Junyan Zhang

CONTACT INFORMATION

Johns Hopkins University
Department of Mathematics
3400 North Charles Street
Baltimore, Maryland 21218, USA
Email: zhang.junyan@jhu.edu
Personal webpage: https://www.zhangjy9610.me

CITIZENSHIP

Chinese (The People's Republic of China).

EDUCATION

Johns Hopkins University

Ph.D. Candidate, Mathematics, Aug 2017-expected May 2022.

- Thesis Title: On the motion of the free interface in plasma-vacuum model in magnetohydrodynamics.
- Advisor: Professor Hans Lindblad.

University of Science and Technology of China (USTC)

B. Sc. in Mathematics, August 2013-June 2017.

- Undergrad Thesis: Inviscid dampimg and Asymptotic Stability of PDEs in fluids.
- Advisor: Professor Lifeng Zhao.

RESEARCH INTERESTS

PDEs of fluids, especially the free-boundary problems.

PUBLICATIONS & PREPRINTS

- ❑ Junyan Zhang. *A priori Estimates for the Free-Boundary problem of Compressible Resistive MHD Equations and Incompressible Limit.* arxiv 1911.04928 preprint.
- ❑ Chenyun Luo, Junyan Zhang. *A priori Estimates for the Incompressible Free-Boundary Magnetohydrodynamics Equations with Surface Tension.* arxiv 1907.11827 preprint.
- ❑ Chenyun Luo, Junyan Zhang. *A Regularity Result for the Incompressible Magnetohydrodynamics Equations with Free Surface Boundary.* Nonlinearity, 33(4), 1499-1527 (2020).

TALKS & SEMINARS

- *On the free-boundary problem of MHD equations with or without surface tension*, University of Science and Technology of China, Dec 23 2019.
- *On the Incompressible MHD with or without Surface Tension*, Institute of Mathematics, Chinese Academy of Sciences, May 23 2019.

CONFERENCES & WORKSHOPS ATTENDED

- *Workshop on Free Surface Hydrodynamics*, the Fields Insitute, University of Toronto, October 2020 (Expected).
- *2019 Southern California Analysis and PDE Conference*, UCSD, November 2019.
- *Summer School on Mathematical General Relativity and the Geometric Analysis of Waves of Fluids*, MIT, June 2018.

Teaching Experience

Johns Hopkins University

2020 Spring	Teaching assistant, Honor Analysis II
	Grader, Undergraduate PDEs
2019 Fall	Teaching assistant, Honor Analysis I
	Grader, Graduate Real Analysis
2019 Spring	Teaching assistant, Honor Analysis II
	Teaching assistant, Calculus II (Engineering)
2018 Fall	Teaching assistant, Calculus II (Engineering)
2018 Spring	Grader, Undergraduate PDEs
2017 Fall	Grader, Undergradute Complex Analysis, Calculus I (Engineering)

University of Science and Technology of China

2017 Spring	Teaching assistant, Differential Equations II (Graduate PDE)
2016 Fall	Teaching assistant, Advanced Real Analysis (Graduate)
2016 Spring	Teaching assistant, Honor Real Analysis

Honors and Awards

Johns Hopkins University

2017-Now	Full tuition fellowship and Teaching assistantship.

University of Science and Technology of China

2017	Outstanding Undergraduates
2016-2017	Outstanding Teaching Assistant
2016	Huang Yu Honored Scholarship
2015	First Prize in The Chinese Mathematics Competitions
	Zhang Zong-zhi Sci-Tech Scholarship
2013-2014	Silver Prize, Outstanding Freshmen/Undergraduates Scholarship

Relevant Skills

Languages: Chinese(native), English(fluent)

References

- **Hans Lindblad**, Professor of Department of Mathematics, Johns Hopkins University.
  Email: `lindblad@math.jhu.edu`
- **Chenyun Luo**, NTT Assistant Professor of Department of Mathematics, Vanderbilt University. Assistant Professor at Chinese University of Hong Kong (CUHK).
  Email: `chenyun.luo@vanderbilt.edu`