

Mengni Li | Curriculum Vitae

Department of Mathematics, Tsinghua University, Beijing 100084, China

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Researcher Committed to Partial Differential Equations:

Research through nonlinear wave equations and Monge-Ampère equations. With passion for further study of partial differential equations. Effective presentations. Proficiency in Chinese and English language.

Education

08/2017–present: Ph.D. in Mathematics, Tsinghua University

08/2013–06/2017: B.S. in Mathematics, Sun Yat-sen University

Honors and Awards

09/2018–08/2021: YMSC Scholarship, Tsinghua University

12/2020: The Second Prize of Comprehensive Excellent Scholarship, Tsinghua University

12/2020: Excellent Teaching Assistant Award, Tsinghua University

06/2017: Excellent Graduate Award, Sun Yat-sen University

10/2015: The First Prize of Excellent Student Scholarship, Sun Yat-sen University

Research Interests

Analysis, Nonlinear PDEs. In particular, the long time behavior of the solution to nonlinear wave equations (via commuting vector field method and energy estimates). I am also interested in the global regularity of solutions to Monge-Ampère type equations, especially in convex domains of (a, η) type.

Publications

[1]: Mengni Li, Pin Yu. On the rigidity from infinity for nonlinear Alfvén waves, to appear in **Journal of Differential Equations**, arXiv: 2001.01834

[2]: Mengni Li. Asymptotic behavior of global solutions to one-dimension quasilinear wave equations, to appear in **Dynamics of Partial Differential Equations**.

[3]: Mengni Li, You Li. Global regularity for a class of Monge-Ampère type equations, **Science China-Mathematics**, 2020. doi: 10.1007/s11425-019-1691-1

[4]: Mengni Li. Global regularity for a class of Monge-Ampère type equations with nonzero boundary conditions, **Communications on Pure and Applied Analysis**, 20 (2021), no.1, 301-317. doi: 10.3934/cpaa.2020267

Conference and Invited Talks

[1]: *Global existence for MHD system*, Analysis Seminar, Yanqi Lake Beijing Institute of Mathematical Sciences and Applications (BIMSA), September 18, 2020, Beijing.

[2]: *Long time behavior of solutions to three dimensional MHD equations*, Wuhan University, July 27, 2020, Tencent Meeting.

[3]: *On the rigidity from infinity for nonlinear Alfvén waves*, The 5th Young Scholar Forum of Nanjing University, May 20, 2020, Zoom Meeting.

[4]: *On the rigidity from infinity for nonlinear Alfvén waves*, The 598th Doctoral Forum of Tsinghua University, May 16, 2020, Tencent Meeting.

[5]: The 8th International Congress of Chinese Mathematicians (ICCM 2019), June 9–14, 2019, Beijing.

Teaching Experience

Fall 2019, Spring 2020, Fall 2020: Teaching Assistant, Introduction to Equations of Mathematical Physics given by Prof. Huihui Zeng, Tsinghua University

Spring 2019: Teaching Assistant, Nonlinear Functional Analysis given by Prof. Jinxin Xue, Tsinghua University

Fall 2017, Fall 2018: Teaching Assistant, Mathematical Analysis 1 & 3 given by Prof. Pin Yu, Tsinghua University

Spring 2016, Fall 2016: Student Lecturer, Remedial class for Advanced Mathematics (Advanced Mathematics 2), Sun Yat-sen University