Curriculum Vitae*

Mengni Li†

Degrees: Ph.D., Tsinghua University; B.S., Sun Yat-sen University

Position: Lecturer, Master's Advisor, Southeast University

Short-term Visits: University of Macau, The Chinese University of Hong Kong

Awards: (From ICCM) Invited Speaker for a 45-minute Invited Lecture at the 9th International Congress of Chinese Mathematicians; (From SEU) Doctor of High-Level Innovation and Entrepreneurship Talent in Jiangsu Province, Zhi-Shan Youth Scholar of Southeast University; (From THU) Jiang Nan Xiang Scholarship, National Scholarship for Doctoral Students, Outstanding Doctoral Graduate of Beijing Municipality, Outstanding Teaching Assistant in Department of Mathematics, YMSC (Yau Mathematical Sciences Center) Full Scholarship for Doctoral Students; (From SYSU) Outstanding Graduate of Sun Yat-sen University

Research Interest: Geometric Analysis and Partial Differential Equations, especially with passion for wave equations and related fluid equations (such as MHD equations and Boussinesq equations), as well as fully nonlinear elliptic equations (such as Monge-Ampère equations and k-Hessian equations)

9 Representative Publications:

[1] Li, Mengni; Yu, Pin. *On the rigidity from infinity for nonlinear Alfvén waves.* **J. Differential Equations** 283 (2021), 163–215.

[2] Li, You; Li, Mengni. *Boundary Hölder regularity for a class of fully nonlinear elliptic partial differential equations.* **Nonlinear Anal.** 216 (2022), Paper No. 112681, 19 pp.

[3] Li, Mengni; Li, You. *Global regularity for a class of Monge-Ampère type equations.* **Sci. China Math.** 65 (2022), no. 3, 501-516.

[4] Li, Mengni; Li, You. *Boundary lower estimates for a class of fully nonlinear elliptic partial differential equations*. **Front. Math.** 18 (2023), no. 1, 81-104.

[5] Li, You; Li, Meng Ni; Liu, Yan Nan. *Boundary regularity for k-Hessian equations*. **Acta Math. Sin. (Engl. Ser.)** 39 (2023), no. 12, 2393-2413.

[6] Li, Mengni. *Inverse scattering of Alfvén waves in three dimensional ideal magnetohydrodynamics.* **Adv. Math.** 435 (2023), Paper No. 109363, 69 pp.

[7] Li, Mengni; Wang, Yan-Lin. *Zero-viscosity limit for Boussinesq equations with vertical viscosity and Navier boundary in the half plane.* **Nonlinear Anal. Real World Appl.** 80 (2024), Paper No. 104150, 16 pp.

[8] Jiang, Feida; Ji, Jingwen; Li, Mengni. *Necessary and sufficient conditions on entire solvability for real* $(n-1)$ *Monge-Ampère equation.* **Ann. Mat. Pura Appl. (4)**, to appear.

[9] Li, Mengni; Li, You. *Existence, uniqueness and interior regularity of viscosity solutions for a class of Monge-Ampère type equations.* **J. Differential Equations**, 415 (2025), 202-234.

Academic Activities: 28 talks at conferences/seminars (such as ICCM 2022, HYP 2024, and CMS 2024 Annual Conference); One of Session Chairs for PDE 45 minutes Invited Lectures in ICCM 2022 (chaired 8 lectures); One of Organizers for Minisymposium TM33 in CSIAM 2024 Annual Conference (invited 3 experts); Online invited 18 experts at seminars and 10 experts at 3 workshops

Permanent Member: CMS, CSIAM **Reviewer:** Zentralblatt MATH **Referee:** such as Inverse Problems

Teaching Experience: Instructor for the courses (at SEU) Complex Functions, Advanced Mathematics, Mathematical Analysis for Engineering; Teaching Assistant for the courses (at THU) Introduction to Equations of Mathematical Physics, Mathematical Analysis, Nonlinear Functional Analysis; Student Lecturer for the course (at SYSU) Remedial Class for Advanced Mathematics

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†Email: krisymengni@gmail.com, krisymengni@163.com; Homepage: https://mengnimath.github.io/academic/