

Wei Wang

Curriculum Vitae

School of Mathematical Sciences
Peking University
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Beijing, PRC, 100871
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Education

- Sept. **Ph.D. in Theoretical Mathematics**, *Peking University*, Beijing, PRC
2022–Present ○ Advisor: Prof. Zhifei Zhang
- June–Sept. **Summer Research Program**, *The Hong Kong University of Science and Technology*,
2021 Hong Kong, PRC
 ○ Advisor: Prof. Tianling Jin
 ○ Topics: Properties of regional fractional Laplacian operators
- Sept. **B.S. in Mathematics and Applied Mathematics**, *Zhejiang University*, Hangzhou,
2018–June Zhejiang, PRC
2022 ○ Advisor: Prof. Ting Zhang
 ○ Thesis Title: Homogenization Problem of Second Order Elliptic Systems with Lower Order
 Terms

Research Interests

Calculus of variations, geometric measure theory, elliptic equations, and parabolic equations

Publications

- [1] H. Fu, H. Wang, and W. Wang, Improved convergence of Landau-de Gennes minimizers in the vanishing elasticity limit, *arXiv preprint arXiv: 2507.14955*
- [2] W. Wang, W. Wang, and Z. Zhang, Existence of weak solutions for two-phase matrix-valued harmonic map flows, *arXiv preprint arXiv: 2506.16278*
- [3] H. Fu, W. Wang, K. Wu, and Z. Zhang, Stratification and rectifiability of harmonic map flows via tangent measures, *arXiv preprint arXiv: 2504.14880*.
- [4] R.L.Frank, T. Jin, and W. Wang, On the sharp constants in the regional fractional Sobolev inequalities, *Partial Differential Equations and Applications*, **6** (2025), 1-20.
- [5] W. Wang and Z. Zhang, Fine structure of rupture set for semilinear elliptic equations with singular nonlinearity, *arXiv preprint arXiv: 2411.16048*, (2024).
- [6] H. Fu, W. Wang, and Z. Zhang, Quantitative stratification and sharp regularity estimates for supercritical semilinear elliptic equations, *arXiv preprint arXiv: 2408.06726*, (2024).
- [7] W. Wang and Z. Zhang, Landau-de Gennes model with sextic potentials: asymptotic behavior of minimizers, *arXiv preprint arXiv: 2404.00677*, (2024).
- [8] W. Wang, Uniform estimates of resolvents in homogenization theory of elliptic systems, *Journal of Differential Equations*, **370** (2023), 1-65.
- [9] W. Wang and T. Zhang, Homogenization theory of elliptic systems with lower order terms in dimension two, *Communications on Pure and Applied Analysis*, **22** (2023), 787-824.

Honors and Awards

- Apr. 2025 **1st Prize, Graduate Research Exhibition, Peking University**, Beijing, PRC
Apr. 2024 **3rd Prize, Graduate Research Exhibition, Peking University**, Beijing, PRC
Oct. 2023 **Excellent Mathematics Graduate Student, Peking University**, Beijing, PRC
Aug. 2022 **Nomination Award, ICCM Creative Undergraduate Thesis, Southeast University**, Nanjing, Jiangsu, PRC
June 2022 **Outstanding Graduate Student, Zhejiang University**, Hangzhou, Zhejiang, PRC
June 2022 **Honored Degree, Chu Kochen College, Zhejiang University**, Hangzhou, Zhejiang, PRC

Talks and Presentations of the Research

- Aug. 2025 **Conference on Theory and Computation of Liquid Crystal, NanKai University**, Tianjin, PRC
June 2025 **Seminar Talk, Zhejiang University**, Zhejiang, PRC
Apr. 2025 **Graduate Research Exhibition, Peking University**, Beijing, PRC
Dec. 2024 **PDE Seminar, Peking University**, Beijing, PRC
Apr. 2024 **Graduate Research Exhibition, Peking University**, Beijing, PRC
Aug. 2022 **ICCM Creative Undergraduate Thesis, Southeast University**, Nanjing, Jiangsu, PRC

Teaching and Teaching Assistant Experience

PKU

- Fall 2025 TA, Advanced Mathematics (C) (I)
Spring 2025 TA, Advanced Mathematics (B) (II)
Fall 2024 TA, Advanced Mathematics (A) (I)
Spring 2024 TA, Advanced Mathematics (B) (II)
Fall 2023 TA, Harmonic Analysis
Spring 2023 TA, Functional Analysis (I)
Fall 2022 TA, Advanced Mathematics (C) (I)
- ZJU**
- Spring 2022 TA, Mathematical Analysis (II)
Fall 2021 TA, Mathematical Analysis (I)