

# Wei Wang

## Curriculum Vitae

School of Mathematical Sciences  
Peking University  
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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.

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## 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

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## 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

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## 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)