Wei Wang

Basic Information

Office Location	Room 314, 20th Building, Peking University, No. 5 Yiheyuan Road, Haidian District, Beijing 100871, P. R. China
Email	gjmtamag@gmail.com & 2201110024@stu.pku.edu.cn
Citizenship	China
Gender	Male

Research interests

Research areas	Calculus of variations, geometric measure theory, elliptic equations, parabolic equations
Focused Topics	Homogenization theory for elliptic systems, semilinear elliptic/parabolic equations, geometric variational problems, nonlocal operators

Education

Sept. 2022 – Present	**Peking University** Ph.D. Candidate in Theoretical Mathematics Advisor: Prof. Zhifei Zhang.
June – Sept. 2021	**The Hong Kong University of Science and Technology (HKUST)** Summer Research Program Advisor: Prof. Tianling Jin.
Sept. 2018 – June 2022	**Zhejiang University** B.S. in Mathematics and Applied Mathematics Advisor: Prof. Ting Zhang. Bachelor Thesis: *Homogenization Problem of Second Order Elliptic Systems with Lower Order Terms.*

Honors and scholarships

Apr. 2025	1st Prize, 2025 Graduate Research Exhibition of the School of Mathematical Sciences *Peking University*
Apr. 2024	3rd Prize, 2024 Graduate Research Exhibition of the School of Mathematical Sciences *Peking University*
Oct. 2023	Excellence Program for Graduate Students in Mathematics (Class of 2022) *Peking University*

Aug. 2022	Nomination Award, ICCM Creative Undergraduate Thesis
	Southeast University, PRC
June 2022	Outstanding Graduate
	Zhejiang University
June 2022	Honored Degree, Chu Kochen College
	Zhejiang University
June 2021	Nomination Award, S.-T. Yau College Student Mathematics Contest
	Tsinghua University
Apr. 2021	1st Prize in the 11th Chinese Mathematics Competitions Finals
	Chinese Mathematical Society

Published Papers

2025   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.

2023   W. Wang, Uniform estimates of resolvents in the homogenization theory of elliptic systems, *Journal of Differential Equations*, **370** (2023), 1–65.

2023   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.

Preprints

2025   H. Fu, H. Wang, and W. Wang, Uniform estimates of Landau-de Gennes minimizers in the vanishing elasticity limit with line defects, *arXiv preprint arXiv:2508.01811*.

2025   H. Fu, H. Wang, and W. Wang, Improved convergence of Landau-de Gennes minimizers in the vanishing elasticity limit, *arXiv preprint arXiv:2507.14955*.

2025   W. Wang, W. Wang, and Z. Zhang, Existence of weak solutions for two-phase matrix-valued harmonic map flows, *arXiv preprint arXiv:2506.16278*.

2025   H. Fu, W. Wang, K. Wu, and Z. Zhang, Stratification and rectifiability of harmonic map flows via tangent measures, *arXiv preprint arXiv:2504.14880*.

2024   W. Wang and Z. Zhang, Fine structure of rupture set for semilinear elliptic equations with singular nonlinearity, *arXiv preprint arXiv:2411.16048*.

2024   H. Fu, W. Wang, and Z. Zhang, Quantitative stratification and sharp regularity estimates for supercritical semilinear elliptic equations, *arXiv preprint arXiv:2408.06726*.

2024   W. Wang and Z. Zhang, Landau-de Gennes model with sextic potentials: asymptotic behavior of minimizers, *arXiv preprint arXiv:2404.00677*.

Teaching experience

Peking University

Fall 2025   Teaching Assistant, Advanced Mathematics (C) (I)

Spring 2025   Teaching Assistant, Advanced Mathematics (B) (II)

Fall 2024   Teaching Assistant, Advanced Mathematics (A) (I)

Spring 2024   Teaching Assistant, Advanced Mathematics (B) (II)

Fall 2023   Teaching Assistant, Harmonic Analysis

Spring 2023   Teaching Assistant, Functional Analysis (I)

Fall 2022   Teaching Assistant, Advanced Mathematics (C) (I)

Zhejiang University

Spring 2022   Teaching Assistant, Mathematical Analysis (II)

Fall 2021   Teaching Assistant, Mathematical Analysis (I)

Talks and presentations

Conference/Workshop Talks

Nov. 2025   The 3rd National Academic Exchange Forum for Doctoral Students in Frontier Mathematics
Peking University

Aug. 2025   Conference on the Theory and Computation of Quasi Crystals
Nankai University

Dec. 2024   Year-End Conference of the PDE Group
Peking University

Aug. 2022   Exhibition of ICCM Creative Undergraduate Thesis
Southeast University, PRC

Seminar/Colloquium Talks

June 2025   PDE and Geometry Seminar
Zhejiang University

Poster Presentations

Apr. 2025   2025 Graduate Research Exhibition of the School of Mathematical Sciences
Peking University

Apr. 2024   2024 Graduate Research Exhibition of the School of Mathematical Sciences
Peking University

Technical skills

Software
LaTeX, MATLAB, Mathematica

Languages
English (fluent), Mandarin Chinese (native)