Wei WANG

Curriculum Vitae

Yiheyuan Rd, 20th Building, Peking University
100871, Beijing China
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Education

2022–present **Ph.D in Theoretical Mathematics**, *Peking University*, Beijing, China
Advisor: Prof. Zhifei Zhang

June.-Sept. 2021 **Summer Research Program**, *The Hong Kong University of Science and Technology*, HongKong, China
Advisor: Assoc Prof. Tianling Jin

2018–2022 **B.S. in Mathematics and Applied Mathematics**, *Zhejiang University*, Hangzhou, Zhejiang, China
Advisor: Prof. Thing Zhang
Thesis Title: Homogenization Problem of Second Order Elliptic Systems with Lower Order Terms

Research Interests

Geometric Variational problems, liquid crystal models, harmonic maps, elliptic equations, parabolic equations, and harmonic heat flows

Publications and Preprints

2024
- W. Wang, and Z. Zhang, Fine structure of rupture set for semilinear elliptic equation with singular nonlinearity, *arXiv preprint arXiv:2411.16048*
- H. Fu, W. Wang, and Z. Zhang, Quantitative stratification and sharp regularity estimates for supercritical semilinear elliptic equations, *arXiv preprint arXiv:2404.00677*
- W. Wang and Z. Zhang, Landau-de Gennes model with sextic potentials: asymptotic behavior of minimizers, *arXiv preprint arXiv:2404.00677*
- R.L. Frank, T. Jin, and W. Wang, On the sharp constants in the regional fractional Sobolev inequalities, *arXiv preprint arXiv:2403.00357*

2023
- W. Wang, Uniform estimates of resolvents in homogenization theory of elliptic systems, *Journal of Differential Equations*, **370** (2023), 1-65
- W. Wang and T. Zhang, Homogenization theory of elliptic system with lower order terms for dimension two, *Communications on Pure and Applied Analysis*, **22** (2023), 787-824

Honors and Awards

Apr. 2024 Third Prize at the Graduate Research Exhibition of the School of Mathematics
Oct. 2023 Mathematics Graduate Student Excellence Program, Peking University

Aug. 2022	Excellence Award of ICCM Creative Undergraduate Thesis
June. 2022	Outstanding Graduate Student of Zhejiang University
June. 2022	Honored Degree of Chu Kochen College, Zhejiang University
Nov. 2021	Second Prize in the Exhibition of the Colloquium on "Questions and Conjectures"

Seminars Organized

Fall 2024	Reading Seminar on Geometric Measure Theory, Peking University
Spring 2023	Reading Seminar on Papers about Harmonic maps by Aaron Naber and et al., Peking University
Fall 2022	Reading Seminar on Elliptic Free Boundary Problems, Peking University

Talks

Dec. 2024	Seminar on Analysis and PDEs, Peking University, PRC
Dec. 2024	Seminar on Geometric Measure Theory, Wuhan University, PRC
Apr. 2024	Graduate Research Exhibition, Theoretic Mathematics, Peking University, PRC
Aug. 2022	ICCM Creative Undergraduate Thesis, Southeast University, PRC

Teaching and TA Experiences

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