

Wei WANG

Curriculum Vitae

Yiheyuan Rd, 20th Building, Peking University
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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: 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 and Conferences Organized

- 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

- Apr. 2024 Graduate Research Exhibition, Theoretic Mathematics, Peking University
- Aug. 2022 ICCM Creative Undergraduate Thesis, Southeast University

Teaching Assistant Experiences

TA in PKU

- Fall 2024 Advanced Mathematics (A) (I), Lecturer: Assoc Prof. Jinbiao Wu
- Spring 2024 Advanced Mathematics (B) (II), Lecturer: Prof. Xufeng Liu
- Fall 2023 Harmonic Analysis, Lecturer: Asst Prof. Dongyi Wei
- Spring 2023 Functional Analysis (I), Lecturer: Prof. Zhifei Zhang
- Fall 2022 Advanced Mathematics (C) (I), Lecturer: Prof. Zhengdong Wang

TA in ZJU

- Fall 2021 Mathematical Analysis (I), Lecturer: Prof. Meng Wang