Yixuan Wang (Roy)

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Peking University, No.5 Yiheyuan Road Haidian District, Beijing, P. R. China 100871

EDUCATION BACKGROUND

Peking University

B.S., School of Mathematics, Peking University, Beijing, China   2016—2020

Elite Undergraduate Training Program in Applied Math and in Pure Math

Overall GPA: **3.84**/4, Rank: **7**/200, Major GPA: **3.91**/4, GRE (**166+170+4.5**), TOEFL (**112**)

Graduation Date: 2020.07   **Summa Cum Laude in Beijing**

Summer Intern at **Caltech** on multiscale problems, supervised by Prof. Thomas Hou   2019

Beijing International Center for Mathematical Research (BICMR)

Research Assistant, Hosted by Prof. Ruo Li, Prof. Zhenfu Wang, and Prof. Zhennan Zhou   2020—2021

BICMR, Peking Univeristy, Beijing, China

California Institute of Technology

Graduate Student, Applied + Computational Mathematics, supervised by Prof. Thomas Hou   2020—

Department of Computing + Mathematical Sciences, Caltech, Pasadena, California

PUBLICATIONS

- R. Li, Y.L Wang and **Y.X. Wang**. (2018) Approximation to Singular Quadratic Collision Model in Fokker-Planck-Landau Equation, SIAM Journal on Scientific Computing, 42(3), 2020, pp. B792-B815.
- Y. Chen, T.Y. Hou and **Y. Wang**. (2020) Exponential Convergence for Multiscale Linear Elliptic PDEs via Adaptive Edge Basis Functions, Multiscale Modeling and Simulation, 19(2), 2021, pp. 980–1010.
- Z. Liu, S. Qian, **Y. Wang,** Y. Yan and T Yang. (2020) Schrödinger PCA: You Only Need Variances for Eigenmodes, submitted to Physical Review E, under revision.
- Y. Chen, T.Y. Hou and **Y. Wang**. (2020) Exponentially convergent multiscale methods for high frequency heterogeneous Helmholtz equations, submitted to SIAM Journal on Numerical Analysis.

INVITED TALKS

- Model reduction for FPL equation, Forum of elite Ph. D. program, Peking University, November 2018
- Hermite spectral method for kinetic equations, CSAIM's students' forum, Tsinghua, December 2018
- Oversampling edge basis for Helmholtz equations, CSAIM's annual meeting, Foshan, September 2019
- Multiscale basis for Helmholtz equation with rough coefficients and high frequency, Workshop on Complex Fluids, CSRC, November 2019
- Exponential convergence for Helmholtz equations, ACM lunch seminar, Peking University, May 2021

AWARDS AND HONORS

- Silver Award at 56th International Mathematical Olympiad, 2016
- All Three 2nd Places in Analysis, Applied Math, and Overall Individual Competitions, S.-T. Yau College Mathematics Contests, 2019
- 1st Place in Team Competition, S.-T. Yau College Mathematics Contests, 2019
- 1st Prize in National University Math Competition, 2017
- 1st Prize in National University Math Modeling Competition, 2017
- 1st Place in Citadel Datathon, China, 2018
- Excellent Graduate of Elite Undergraduate Training Program in Applied Math, 2020
- National Scholarship, 2017-2018
- Representative of PKU for National Scholarship, 2018-2019
- PKU Person of the Year, 2019
- PKU May 4th-Award, 2020

PERSONAL INFORMATION

- GRE (**166+170+4.5**), TOEFL (**112**)
- Proficient in Python, MATLAB, C, and C++

- Proficient in Chinese and English, fluent in French, intermediate in Spanish and German, and a beginner in Italian and Cantonese