Zhi-Feng Wei

CONTACT INFORMATION

Department of Mathematics
Indiana University
831 East Third Street,
Bloomington, IN 47405, USA

Mobile: +1 (812)391-0426
Email: zfwei@iu.edu
Homepage: zf-wei.github.io

INTERESTS

Random Walk on Graphs, Spectral Graph Theory, Network Science.

EDUCATION

Department of Mathematics, Indiana University (IU)

Ph.D. in Mathematics (expected May 2024)

- Advisor: Prof. Russell Lyons
- Minor in Statistics

School of Mathematical Sciences, Beijing Normal University (BNU)

M.S. in Mathematics, June 2018

- Advisor: Prof. Mu-Fa Chen
- Graduation with Honor: Excellence Award from Beijing City & BNU

Beijing International Center for Mathematical Research, Peking University

Visiting Student, 7th Enhanced Program for Graduate Study, 2015 Spring Semester
Courses: Spectral Theory of Linear Operators, Differential Manifold

Cuiying Honors College, Lanzhou University (LZU)

B.S. Cum Laude in Mathematics, June 2015

- Advisor: Prof. Heping Zhang

EMPLOYMENT

2023 Summer	Research Intern, **Oak Ridge National Lab**.
2018 – present	Teaching/Research Assistant, **IU Math Department**.

PUBLICATIONS & PREPRINTS

(1) **Zhi-Feng Wei**, *Sharp Bounds on Eigenvalues via Spectral Embedding Based on Signless Laplacians*, **J. Funct. Anal.**, Vol. 284, No. 5 (2023), Article 109799.

(2) **Zhi-Feng Wei and Pablo Moriano**, *Recovering Cluster Structure using Graph Embedding in Perturbed Networks*, in preparation.

(3) **Zhi-Feng Wei**, *Inverse Problems for Ergodicity of Markov Chains*, **J. Math. Anal. Appl.**, Vol. 505, No. 2 (2022), Article 125483.

(4) **Zhi-Feng Wei and Heping Zhang**, *Number of Matchings of Low Order in (4,6)-Fullerene Graphs*, **MATCH Commun. Math. Comput. Chem.**, Vol. 77, No. 3 (2017), 707–724.

INVITED TALKS

(1) *Spectral Embedding, Signless Laplacian, and Random Walk Convergence*, Invited by Prof. S. Liu, University of Science and Technology of China, Sept 2023.

(2) *Sharp Bound on Return Probabilities via Spectral Embedding Method*, Grad Student Probability Conference, University of Wisconsin, Sept 2022.

(3) *Bound Return Probabilities via Spectral Embedding Method*, 20th Northeast Probability Seminar, CUNY (Zoom talk), Nov 2021.

Awards

2023	**Mathematical Sciences Grad Intern Fellowship, NSF** Awarded by the National Science Foundation to support my intern at Oak Ridge National Lab.
2023	**Lawrence M. Blatt Biotech Internship Fund, IU**
2019	**James Williams Memorial Award, IU Math Department** Recognizing excellence in academic performance for top 1st-year graduate students in IU Math Department.
2018	**Anna L. Homquest Fellowship, IU**
2016	**National Merit Scholarship of China for Grad Students**
2016	**Excellent Teaching Assistant Award, BNU**
2014	**Cuiying Student Innovation Fund, LZU** Supporting undergraduate research for honors students at LZU.
2014	**Outstanding Student Scholarship, LZU**
2012	**Outstanding Student Scholarship, LZU**
2012	**Scholarship for Outstanding Mathematics Majors, LZU**

Teaching

2023 Spring	**Assisting**, Math-M118: Finite Mathematics
2022 Fall	**Teaching**, Math-M018: Basic Algebra for Finite Math
2022 Summer	Preparation Session for Math PhD Qualifying Exam in Analysis
2021 Fall	**Recitation**, Math-M211: Calculus I
2021 Summer	Preparation Session for Math PhD Qualifying Exam in Analysis
2021 Spring	**Recitation**, Math-M106: Mathematics of Decision and Beauty
2020 Fall	**Grading**, Math-M463: Intro to Probability Theory I
2020 Spring	**Grading**, Math-M464: Intro to Probability Theory II
2019 Fall	**Grading**, Math-M463: Intro to Probability Theory I
2019 Summer	**Assisting**, Math-M106: Mathematics of Decision and Beauty
2018 Fall	**Grading**, Math-M365: Intro to Probability and Statistics
2016 Fall	**Assisting**, Linear Algebra (BNU)

Languages

Chinese (Native), English (Fluent), French (Elementary)

Skills

C++, Python, TEX, High-Performance Computing (HPC), Mathematica, R

Professional Affiliation

American Mathematical Society