Zhi-Feng Wei

CONTACT INFORMATION

Department of Mathematics
Indiana University
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Bloomington, IN 47405, USA

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

EDUCATION

Department of Mathematics, Indiana University (IU)

Ph.D. in Mathematics, August 2018 – May 2024 (expected)

- Advisor: Prof. Russell Lyons
- Minor in Statistics

School of Mathematical Sciences, Beijing Normal University (BNU)

M.S. in Mathematics, September 2015 – June 2018

- Advisor: Prof. Mu-Fa Chen
- Graduation with Distinction: 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, September 2011 – June 2015

- Advisor: Prof. Heping Zhang

PUBLICATIONS

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

(3) **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.

IN PREPARATION

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

INVITED TALKS

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

(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.

EMPLOYMENT	**Oak Ridge National Laboratory, United States of America**	

Research Intern, October 2023 – March 2024 and May 2023 – July 2023

- Mentor: Dr. Pablo Moriano
- Supported by the Graduate Research Program at ORNL (GRO)
- Supported by NSF-MSGI program

Department of Mathematics, Indiana University

Research Assistant/Associate Instructor, August 2018 – present

TEACHING	2023 Fall	**Recitation**, Math-M211: Calculus I
	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)

AWARDS	2023	**Mathematical Sciences Grad Intern Fellowship, NSF**
		Awarded by the National Science Foundation to support my intern at Oak Ridge National Lab during the summer of 2023.
	2023	**Lawrence M. Blatt Biotech Internship Fund, IU**
	2019	**James Williams Memorial Award, IU Math Department**
		Recognizing excellence in academic performance among top 1st-year graduate students in the 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**

LANGUAGES	Chinese (Native), English (Fluent), French (Elementary)
SKILLS	C++, Python, TeX, High-Performance Computing (HPC), Mathematica, R

(Updated: September 7, 2023)