

Zhifeng Wei

CONTACT INFORMATION

Pacific Northwest National Lab
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INTERESTS

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

EDUCATION

Department of Mathematics, Indiana University (IU)

Ph.D. in Mathematics, August 2018 – June 2024

- 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

[Cuiying Honors College, Lanzhou University](#) (LZU)

B.S. Summa Cum Laude in Mathematics, September 2011 – June 2015

- Advisor: [Prof. Heping Zhang](#)

EMPLOYMENT

Pacific Northwest National Laboratory (PNNL), United States of America

PNNL Distinguished Postdoctoral Fellow, August 2024 – present

Oak Ridge National Laboratory (ORNL), United States of America

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

- Mentors: [Dr. Pablo Moriano](#) and [Dr. Ramakrishnan Kannan](#)
- Supported by the [GRO Program](#) and [NSF-MSGI](#) program

Department of Mathematics, Indiana University

Research Assistant/Associate Instructor, August 2018 – May 2024

PUBLICATIONS & PREPRINTS

- (1) **Zhi-Feng Wei, Pablo Moriano, and Ramakrishnan Kannan**, *Robustness of Graph Embedding Methods for Community Detection*, [arXiv:2405.00636](#)
- (2) **Zhi-Feng Wei**, *Sharp Bounds on Eigenvalues via Spectral Embedding Based on Signless Laplacians*, **J. Funct. Anal.**, Vol. 284, No. 5 (2023), [Article 109799](#).
- (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.

PRESENTATIONS	(1)	<i>Graph Embedding for Community Detection and Random Walks</i> , Indiana University Mathematics Graduate Seminar, March 2024.
	(2)	<i>Spectral Embedding, Signless Laplacian, and Random Walk Convergence</i> , Invited by Shiping Liu, University of Science and Technology of China, Sept 2023.
	(3)	<i>Sharp Bound on Return Probabilities via Spectral Embedding Method</i> , Grad Student Probability Conference, University of Wisconsin, Sept 2022.
	(4)	<i>Bound Return Probabilities via Spectral Embedding Method</i> , 20 th Northeast Probability Seminar, CUNY (Zoom talk), Nov 2021.
AWARDS	2024	William B. Wilcox Mathematics Award, IU Math Department Awarded to outstanding graduate students in the IU Math Department.
	2023	Mathematical Sciences Graduate Intern Fellowship, NSF Awarded by the National Science Foundation to support my internhsip at Oak Ridge National Laboratory during the summer of 2023.
	2023	Lawrence M. Blatt Biotech Internship Fund, IU
	2019	James P. Williams Memorial Award, IU Math Department Recognizing excellence in academic performance among top first-year graduate students in the IU Math Department.
	2018	Anna L. Homquest Fellowship, IU
	2016	National Merit Scholarship of China for Graduate Students
	2016	Excellent Teaching Assistant Award, BNU
	2014	Outstanding Student Scholarship (Grade 3), LZU
	2012	Outstanding Student Scholarship (Grade 2), LZU
	2012	Scholarship for Outstanding Mathematics Majors, LZU
TEACHING	2024 Spring	Grading , Math-M303: Linear Algebra for Undergrad
	2024 Spring	Recitation , Math-S311: Honors Calculus III
	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)
SERVICES	2024	Indiana State Mathematics Contest 2024 Writing exam for “Pre-Algebra” contest.

GRANTS	2024	AMS’s Mathematics Research Communities (MRC) program Supporting early-career mathematicians to experience hands-on collaborative research in their field of inquiry.
	2014	Cuiying Student Innovation Fund, LZU Supporting undergraduate research for honors students at LZU.
LANGUAGES	Chinese (Native), English (Fluent), French (Elementary)	
SKILLS	C++, Python, T _E X, High-Performance Computing (HPC), Mathematica, R	
PROFESSIONAL AFFILIATION	(1) American Mathematical Society	
	(2) Society for Industrial and Applied Mathematics	

(Updated: July 14, 2024)