

# Zhifeng Wei

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## CONTACT INFORMATION

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## INTERESTS

Spectral Graph Theory, Network Science, Random Walk

## EDUCATION

### Department of Mathematics, Indiana University (IU)

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

- Minor in Statistical Sciences
- Thesis: Graph Embedding for Random Walks and Community Detection

### School of Mathematical Sciences, Beijing Normal University (BNU)

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

- Graduation with Distinction: Excellence Award from Beijing City & BNU

### Beijing International Center for Mathematical Research, Peking University

Visiting Student, 7<sup>th</sup> Enhanced Program for Graduate Study, 2015 Spring Semester

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

**B.S. in Mathematics**, September 2011 – June 2015

## EMPLOYMENT

### Pacific Northwest National Laboratory (PNNL), Richland, WA, USA

**PNNL Distinguished Postdoctoral Fellow**, August 2024 – present

- Mentor: [Dr. Panos Stinis](#)
- Supported by a Postdoctoral Fellowship from [the DOE Office of Advanced Scientific Computing Research](#)

### Oak Ridge Institute for Science and Education, Oak Ridge, TN, USA

**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, Bloomington, IN, USA

**Student Academic Appointment**, 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		<ul style="list-style-type: none"> <li>(1) <i>Graph Embedding for Community Detection</i>, <a href="#">2025 Joint Mathematics Meetings</a>, January 2025.</li> <li>(2) <i>Graph Embedding for Community Detection and Random Walks</i>, Indiana University Mathematics Graduate Seminar, March 2024.</li> <li>(3) <i>Sharp Bound on Return Probabilities via Spectral Embedding Method</i>, <a href="#">Grad Student Probability Conference</a>, University of Wisconsin, Sept 2022.</li> <li>(4) <i>Bound Return Probabilities via Spectral Embedding Method</i>, <a href="#">20<sup>th</sup> Northeast Probability Seminar</a>, CUNY (Zoom talk), Nov 2021.</li> </ul>
AWARDS	2024	<b>William B. Wilcox Mathematics Award, IU Math Department</b> Awarded to outstanding graduate students in the IU Math Department.
	2023	<b><a href="#">Mathematical Sciences Graduate Intern Fellowship, NSF</a></b> Awarded by the National Science Foundation to support my internhsip at Oak Ridge during the summer of 2023.
	2023	<b><a href="#">Lawrence M. Blatt Biotech Internship Fund, IU</a></b>
	2019	<b><a href="#">James P. Williams Memorial Award, IU Math Department</a></b> Recognizing excellence in academic performance among top first-year graduate students in the IU Math Department.
	2018	<b><a href="#">Anna L. Homquest Fellowship, IU</a></b> Merit-based fellowship in recognition of exceptional academic accomplishments.
	2016	<b>National Merit Scholarship of China for Graduate Students</b>
	2016	<b>Excellent Teaching Assistant Award, BNU</b>
	2014	<b>Outstanding Student Scholarship (Grade 3), LZU</b>
	2012	<b>Outstanding Student Scholarship (Grade 2), LZU</b>
	2012	<b>Scholarship for Outstanding Mathematics Majors, LZU</b>
GRANTS	2024	<b><a href="#">AMS's Mathematics Research Communities (MRC) program</a></b> Supporting early-career mathematicians to experience hands-on collaborative research in their field of inquiry.
	2014	<b><a href="#">Cuiying Student Innovation Fund, LZU</a></b> Supporting undergraduate research for honors students at LZU.
SERVICES	2024	<b>Indiana State Mathematics Contest 2024</b> Writing exam for “Pre-Algebra” contest.

TEACHING	2024 Spring	<b>Grading</b> , Math-M303: Linear Algebra for Undergrad
	2024 Spring	<b>Recitation</b> , Math-S311: Honors Calculus III
	2023 Fall	<b>Recitation</b> , Math-M211: Calculus I
	2023 Spring	<b>Assisting</b> , Math-M118: Finite Mathematics
	2022 Fall	<b>Teaching</b> , Math-M018: Basic Algebra for Finite Math
	2022 Summer	Preparation Session for Math PhD Qualifying Exam in Analysis
	2021 Fall	<b>Recitation</b> , Math-M211: Calculus I
	2021 Summer	Preparation Session for Math PhD Qualifying Exam in Analysis
	2021 Spring	<b>Recitation</b> , Math-M106: Mathematics of Decision and Beauty
	2020 Fall	<b>Grading</b> , Math-M463: Intro to Probability Theory I
	2020 Spring	<b>Grading</b> , Math-M464: Intro to Probability Theory II
	2019 Fall	<b>Grading</b> , Math-M463: Intro to Probability Theory I
	2019 Summer	<b>Assisting</b> , Math-M106: Mathematics of Decision and Beauty
	2018 Fall	<b>Grading</b> , Math-M365: Intro to Probability and Statistics
	2016 Fall	<b>Assisting</b> , Linear Algebra (BNU)
LANGUAGES	Chinese (Native), English (Fluent), French (Elementary)	
SKILLS	C++, Python, PyTorch, $\text{\TeX}$ , R, Mathematica, Git	
PROFESSIONAL AFFILIATION	(1) American Mathematical Society	
	(2) Society for Industrial and Applied Mathematics	

(Updated: March 31, 2025)