

Jie Zeng

Department of Mathematics, University of Texas at Tyler, Tyler, TX
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Education

- 2015 – 2023 **The University of Oklahoma**, Norman, OK, United States
Ph.D. candidate in Mathematics Advisor: *Dr. Christian Remling*
Research Field: Spectral Theory
Thesis: Spectral Theory of Dirac Operators with Measures
- 2013 – 2015 **Stevens Institute of Technology**, Hoboken, NJ, United States
Master of Science in Mathematics
- 2009 – 2013 **Beijing Normal University**, Beijing, China
Bachelor of Science in Mathematics and Applied mathematics
Thesis: Some properties of Riemann Zeta Function
Thesis Advisor: Dr. Guantie Deng

Publications

My research interests currently lie in functional analysis, especially in spectral theory and differential equations.

1. Jie Zeng, [Gelfand-Levitan Condition for Dirac Operators](#), submitted, 2025
2. Chrisitan Remling and Jie Zeng, [Reflectionless Dirac Operators and Canonical Systems](#), Journal of Spectral Theory, VOL.15, No.3, PP. 1305-1336, 2025
3. Jie Zeng, [Spectral Theory of Dirac Operators with Measures](#), dissertation thesis, 2023
4. Jie Zeng and Wenwen Li, Generalized ECT in Higher Dimensional Spaces, in preparation

Teaching

- 2025 – now **The University of Texas at Tyler**, *Assistant Professor of Instruction*, TX, United States.
- 2026 **summer**, *Statistics I section 301*.
- 2026 **Spring**, *Statistics I section 07, Statistics I section 008, Statistics I section 012, Math for Business section 01, Math for Business section 02*.
- 2025 **Fall**, *Statistics I section 04, Statistics I section 012, Statistics I section 013, Intermediate Algebra section 01, Intermediate Algebra section 05*.

- 2023 – 2025 **The University of Texas at Tyler**, *Visiting Assistant Professor*, TX, United States.
- 2025 **Summer**, *Precalculus (adjunct lecturer)*.
- 2025 **Spring**, *Calculus I section 02, Calculus I section 03, Statistics I section 005, Statistics I section 009*.
- 2024 **Fall**, *Calculus II section 01, Calculus II section 02, Statistics I section 012, Statistics I section 013*.
- 2024 **Spring**, *Calculus II section 02, Calculus II section 03, Math for business*.
- 2023 **Fall**, *Calculus II section 01, Calculus II section 02, Math for Liberal Arts I*.
- 2015 – 2023 **The University of Oklahoma**, *Teaching Assistant*, OK, United States.
- The instructor of record**, *Differential and Integral Calculus I, Differential and Integral Calculus II (fast track), College Algebra, Functions and Modeling for Business, Life, and Social Sciences*.
- Grader**, *Introduction to Ordinary Differential Equations, Linear Algebra, Partial Differential Equations*.
- Tutor in Math Center**, *Differential and Integral Calculus, Multi-variable Calculus, Introduction to Ordinary Differential Equations, Physical Mathematics*.

Conferences

- 2026 Brazos Analysis Seminar, TAMU
- 2025 Brazos Analysis Seminar, UT Austin
- 2025 Brazos Analysis Seminar, Baylor
- 2024 Brazos Analysis Seminar, University of Houston
- 2024 Brazos Analysis Seminar, Texas Christian University
- 2023 Brazos Analysis Seminar, Baylor
- 2023 Spectral Theory and Applications, Texas A&M
- 2023 SIAM CSS Computational and Applied Mathematics Forum, OU
- 2023 AMS 2023 Spring Southeastern Sectional Meeting, Georgia Tech
talk: de Branges spaces of a Dirac operator with a measure
- 2022 1st workshop on Quantum Science and Technology, OU
- 2018 Texas Analysis and Mathematical Physics Symposium 2018, Baylor

Presentations

1. Gelfand-Levitan condition for Dirac operators I, Analysis Seminar, UT at Tyler, Fall 2025
2. An Introduction to Weyl Theory, Mathematics Colloquium, UT at Tyler, Fall 2024
3. Marchenko Representation of Canonical systems II, Analysis Seminar, UT at Tyler, Fall 2024
4. Marchenko Representation of Canonical systems I, Analysis Seminar, UT at Tyler, Fall 2024
5. Spectral Theory of Dirac Operators with Measures, Mathematics Colloquium, UT at Tyler, Fall 2023
6. de Branges Spaces of a Dirac Operator with a Measure, AMS 2023 Spring Southeastern Sectional Meeting, Georgia Tech
7. An Introduction to Spectral Theory of Canonical Systems, Analysis Seminar, University of Oklahoma, Spring 2018

Funding/Scholarship

AMS Graduate Student Travel Grants

Skills

Proficient in Microsoft Office, LaTeX.

Intermediately proficient in MATLAB and Mathematica.

Language Chinese (native)

English (Highest certification granted by The University of Oklahoma)