

# Jie Zeng

Department of Mathematics, University of Texas at Tyler, Tyler, TX  
✉ jzeng@uttyler.edu

## 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. Christian 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 **Fall**, *Statistics I section 006, Statistics I section 007, Precalculus section 005, Math for Liberal Arts section 001, Math for Liberal Arts section 002.*
- 2026 **summer**, *Statistics I section 301.*
- 2026 **Spring**, *Statistics I section 007, Statistics I section 008, Statistics I section 012, Math for Business section 01, Math for Business section 02.*

- 2025 **Fall**, *Statistics I section 004, 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

2018 Arizona School of Analysis, UA

## 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)