

# Ethan Gwaltney

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## EDUCATION

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Ph.D. in Mathematics, Rice University *Expected May 2023*  
Advisor: Milivoje Lukić

Graduate Certificate in Teaching and Learning, Rice University Center for Teaching Excellence *2020*

M.A. in Mathematics, Rice University *2018*

B.A. in University Scholars, Baylor University (GPA: 3.93) *2017*  
Honors Thesis: A Probabilistic Proof of the Vitali Covering Lemma, advisors: Paul Hagelstein, Daniel Herden.

## TEACHING EXPERIENCE

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Instructor of record:

FWIS 153: Introduction to Infinity *Fall 2022*  
A writing-intensive, math-centered course that I designed for first-year undergraduates.

COLL 300: Pedagogy for Student Instructors *Fall 2021-Spring 2023*

MATH 211: Ordinary Differential Equations and Linear Algebra *Spring 2022*

MATH 355: Linear Algebra *Summer 2020*

MATH 211: Ordinary Differential Equations and Linear Algebra *Spring 2020*

MATH 355: Linear Algebra *Summer 2019*

Teaching assistant:

MATH 101, 355, 381, 443/538 *2018-2021*

MATH 101, 102, 211, 212 *2017-2018, 2021*

## PUBLICATIONS

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**Limit periodic Dirac operators with thin spectra** (with B. Eichinger, J. Fillman, M. Lukić), to appear in *Journal of Functional Analysis*, arXiv:2203.12650, 2022.

**Dirac operators with operator data of Wigner-von Neumann type**, arXiv:2109.13402, 2021.

**Stahl-Totik regularity for Dirac operators** (with B. Eichinger, M. Lukić), arXiv:2012.12889, 2020.

## PRESENTATIONS

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AMS Southeastern Sectional Meeting *November 2021*  
*Dirac operators with operator data of Wigner-von Neumann type*

SIAM Texas-Louisiana Sectional Meeting *October 2021*  
*Stahl-Totik regularity for Dirac operators*

AMS Western Sectional Meeting *October 2021*  
*Stahl-Totik regularity for Dirac operators*

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| Rice Spectral Theory Seminar<br><i>Dirac operators with operator data of Wigner-von Neumann type</i> | September 2021 |
| AMS Western Sectional Meeting<br><i>Stahl-Totik regularity for Dirac operators</i>                   | May 2021       |
| Rice Spectral Theory Seminar<br><i>Stahl-Totik regularity for Dirac operators</i>                    | February 2021  |
| Rice Spectral Theory Seminar<br><i>Dirac operators and asymptotic behavior of eigensolutions</i>     | October 2020   |

## HONORS AND AWARDS

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|---|--------------|
| Center for Teaching Excellence (CTE) Graduate Teaching Fellowship, Rice University<br>Co-instruction with stipend of introductory pedagogy course to undergraduates with Director of CTE. | 2021-2023    |
| SIAM Sectional Meeting Travel Award   | 2021         |
| Summer Northwestern Analysis Program in Semiclassical Analysis, Northwestern University   | 2019         |
| Baylor Young Scholars Program Fellowship, Baylor University   | 2018-2020    |
| Graduate Teaching Assistantship, Rice University  | 2017-Present |
| Outstanding Student and Outstanding Math Major Awards, Baylor University  | 2017         |
| Math REU Fellowship, San Diego State University   | 2016         |
| Bodine, Royer, F. Ray Wilson Awards, Baylor University<br>Mathematics scholarships and recognition for undergraduate thesis in mathematics.   | 2015-2017    |

## PROFESSIONAL DEVELOPMENT RELATED TO TEACHING

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|---|----------------|
| Rice University Math Department Anti-racist Teaching Seminar Participant  | 2021-Present   |
| Rice University First-year Writing Intensive Seminar Instructor Training<br>Designed 15-week writing course to be taught the following fall semester. | August 2022    |
| BEAM (Bridge to Enter Advanced Mathematics) Junior Faculty<br>Designed and taught two 18-hour topics courses to underrepresented eighth graders.      | July 2022      |
| CTE Symposium with Dr. Frank Tuitt  | April 2022     |
| Ivy+ Teaching Transformations Graduate Summit   | May 2021, 2022 |
| Rice University Directed Reading Program Mentor<br>Led a small group of early undergraduates in a machine learning and optimization project.          | Fall 2021      |
| CTE Teaching Orientation for New Instructors  | January 2020   |
| CTE Symposium with Dr. Claire Major   | January 2019   |

## SERVICE AND COMMUNITY ENGAGEMENT

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| Department Representative to Rice University's Graduate Student Association   | 2020-Present |
| CTE Graduate Liaison to the Math Department<br>Answered questions concerning CTE programming and directed students to CTE resources and events.                                       | 2019-Present |
| Rice University School Mathematics Project High School Teachers Seminar<br>Led a professional development session for Houston area high school teachers.                              | June 2022    |
| Graduate Student Coordinator for Rice University Mathematics Department<br>Organized and communicated departmental duties to graduate students.                                       | 2019-2020    |
| Department representative to the Dean's Graduate Student Advisory Board<br>Included composing a school-wide student handbook with minimum expectations for sick leave, time off, etc. | 2018-2020    |