

# JOHN WEEKS

Blocker Building 353, Texas A&M University  
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## EDUCATION

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### Texas A&M University

*August 2017 - Present*

Ph.D. in Mathematics (Advisor: Dr. Michael Brannan, UWaterloo)  
Department of Mathematics

### Lee University

*August 2013 - May 2017*

Bachelor of Science in Mathematics  
Department of Science and Mathematics  
President of Kappa Mu Epsilon, Tennessee Zeta Chapter (2016-2017)

## TEACHING EXPERIENCE

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### Texas A&M University

*College Station, TX*

*Instructor of Record*

January 2019-December 2020

- Concepts of Calculus, January 2019-May 2019. General calculus course. Taught a class of 65 from limits and continuity to area between functions.
- Business Calculus, January 2020-May 2020, August 2020-December 2020. Open to business and related majors. Taught two classes of 65, included finance applications of the derivative and the integral. August 2020 class was taught in hybrid class format, using online tools like Zoom, Edpuzzle, and Edfinity to teach both in-person and online students.

### *Graduate Teaching Assistant*

*August 2017-Present*

- Recitation Leader and Teaching Assistant for Calculus I, January 2021-May 2021, Dr. Alexandra Foran. Taught in hybrid course format
- Grader for Graduate Analysis I, August 2019-December 2019, August 2021-December 2021, Drs. Thomas Schlumprecht and Kenneth Dykema.
- Recitation Leader and Teaching Assistant for Calculus I for Engineering Honors Section, August 2018-December 2018, Dr. Dean Baskin. Covered epsilon-delta proofs and other advanced calculus concepts. Introduced the MATLAB computer language and guided students through weekly MATLAB coding assignments.
- Recitation Leader and Teaching Assistant for Calculus II for Biology, January 2018-May 2018, Ms. Heather Ramsey. Covered introductory advanced integration techniques, basic linear algebra, and ordinary differential equations. Gave Leslie matrices, equilibria in ODEs as biological applications.
- Grader for Introductory Logic and Set Theory, August 2017-December 2017, Dr. Oksana Shatalov. Held voluntary office hours for students.

## PUBLICATIONS

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2017 December. Johnson, P.; and Weeks, J. "On the Secure-Domination Number of the Full Balanced Binary Tree with  $2^n$  Leafs." *International Journal of Mathematics and Computer Science*, 11.2 (2017).

Forthcoming. Brannan, M.; Gao, L.; and Weeks, J. "Property RD and Free Wreath Products."

Forthcoming. Gao, L.; and Weeks, J. "The Furstenberg Boundary of the Quantum Automorphism Group."

## FIELDS OF INTEREST

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Quantum Information Theory  
Operator Algebras  
Topological Groups

## RESEARCH EXPERIENCE

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### University of Waterloo

September 2021-October 2021

*Visitor*

*Waterloo, ON*

- Networked with University of Waterloo pure mathematics department; worked with Michael Brannan, Priyanga Ganesan on quantum graphs and the quantum automorphism group

### Oak Ridge National Laboratory

May 2017-August 2017

*Recent B.S. Intern*

*Oak Ridge, TN*

- Worked with Dr. Clayton Webster on problems in sparse information in image processing

## EXTRA-CURRICULAR

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### American Mathematical Society Graduate Student Chapter

August 2020-May 2021

*President*

*College Station, TX*

- Cofounded Texas A&M Diversity Committee with colleague Elise Walker (<https://diversitytamugithub.io>)
- Co-organized two department conferences for graduate students to share their appreciation for mathematics (<https://tamuams.github.io/GIG'EM/2021/GIGEM2021.html>)
- Hosted department-wide social events during national lockdown

### Texas A&M Math Circle

January 2018-December 2019

*Organizer*

- Organized logic activities for advanced 5th-12th grade students in local area
- Co-taught point-set topology to college-bound high-school students

## ACADEMIC ACHIEVEMENTS

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### Outstanding TA Award

April 2021

- Awarded to a graduate student for showing a notable effort in their TA positions at Texas A&M

## CONFERENCES AND WORKSHOPS ATTENDED

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Brazos Analysis Seminar, March 30-31, 2019, University of Houston

ICMAT Thematic Research in Operator Algebras and Quantum Information, May 5-17, 2019, Universidad Automata de Madrid

Workshop in Classification in von Neumann Algebras, October 29-November 4, 2019, Banff International Research

Brazos Analysis Seminar, November 9-10, 2019, Baylor University

QLA Meets QIT, November 14-16, 2019, Purdue University

Brazos Analysis Seminar, November 7-8, 2020, Texas A&M University (hybrid)