

# Theodore Weisman

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Department of Mathematics  
University of Texas at Austin

## EDUCATION

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**University of Texas at Austin**, Austin, Texas  
*Ph.D. candidate in Mathematics*  
*Advisor: Jeffrey Danciger*

*Expected 2022*

**Yale University**, New Haven, Connecticut  
*B.S. in Mathematics (intensive), magna cum laude*

*May 2016*

## PUBLICATIONS AND PREPRINTS

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1. *Dynamical properties of convex cocompact actions in projective space*. arXiv:2009.10994, 2020 (submitted).
2. *Realization of Groups with Pairing as Jacobians of Finite Graphs* (with L. Gaudet, D. Jensen, D. Ranganathan, and N. Wawrykow). *Annals of Combinatorics*, 22.4 (2018), pp 781-801.

## AWARDS AND HONORS

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Provost's Graduate Excellence Fellowship  
*University of Texas at Austin*

*2016 – 2021*

Outstanding Presentation Award  
*MAA Mathfest Undergraduate Paper Sessions*

*2014*

## TEACHING EXPERIENCE

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**Teaching Assistant**, University of Texas at Austin  
M408C (Differential and integral calculus)  
M408S (Integral calculus for science)

*Fall 2018, Spring 2020*  
*Spring 2019*

**SI (Supplemental Instruction) Teaching Assistant**, University of Texas at Austin  
M408C (Differential and integral calculus)

*Fall 2019*

In addition to taking on normal TA duties, SI teaching assistants meet weekly to develop better teaching strategies and discuss ways to improve classroom environment.

**Peer Tutor**, Yale University  
MATH 244 (Discrete mathematics)  
MATH 222 (Linear algebra with applications)

*Fall 2014, Fall 2015*  
*Spring 2016*

## OUTREACH

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**Mentor**, Texas Geometry Lab  
*University of Texas at Austin*

*Spring 2021*

Mentored a group of undergraduates on a computer visualization project. Met with students twice a week, and provided guidance and suggestions for their programming project.

**Mentor**, UT Directed Reading Program  
*University of Texas at Austin*

*2017–2021*

Mentored an undergraduate student through the process of reading a mathematical text. Mentoring involved meeting the student weekly to discuss the text and coaching them through a 15-minute talk at the end of the semester.

**Volunteer**, Sunday Morning Math Group  
*University of Texas at Austin*

2019–2020

Worked with Austin middle school and high school students biweekly on math problems, and gave a talk at one session on geometry of map projections.

**Volunteer teacher**, Splash at Yale  
*Yale University*

Summer/Fall 2014, Spring 2015

Taught one-hour long minicourses to high school students. Each class met 1-4 times and had 20-30 students. Titles included *Abstract algebra*, *What is a number?*, and *The game of hex*.

**MathCounts Coach**, Columbus Family Academy  
*New Haven, CT*

2013

Led weekly problem sessions for 7-10 students on the Columbus Family Academy middle school MathCounts team.

## RESEARCH TALKS

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1. “Expansion/contraction dynamics for non-strictly convex projective manifolds” *GTA Philadelphia* 2021
2. “Group actions on boundaries of convex divisible domains” *AMS Fall Southeastern Sectional Meeting: Special Session on Geometric Structures on Manifolds* 2019
3. “Jacobians of finite graphs,” with L. Gaudet and N. Wawrykow. *MAA Mathfest Undergraduate Paper Sessions* 2014

## OUTREACH TALKS

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1. “Geometry in Minkowski space” *UT undergraduate math club* Spring 2021
2. “Solving the word problem with geometry” *UT undergraduate math club* Fall 2020
3. “Map projections” *UT Sunday morning math group* Fall 2019

## SERVICE

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### **Minicourse leader**

“Boundaries of Groups and Spaces”  
“Hyperbolic Groups”

June 2020  
August 2019

Led weeklong courses for graduate students as part of a University of Texas summer minicourse program

**Organizer**, Learning seminar on relative Anosov representations  
*University of Texas at Austin*

Summer 2020

**Organizer**, Junior Topology Seminar  
*University of Texas at Austin*

Fall 2019

**Co-founder**, SUMS  
*Yale University*

2014 – 2016

Co-organized weekly meetings for math talks given by a small group of undergraduates

## CONFERENCES ATTENDED

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1. Graduate Student Geometry and Topology Conference, Michigan State University April 2017
2. Graduate Student Conference in Algebra Geometry and Topology, Temple University May 2017
3. Texas Geometry and Topology Conference, University of Texas at Austin November 2017
4. Thin Groups in Number Theory, Geometry, and Topology, Rice University May 2018
5. Representation Varieties and geometric structures in low dimensions, University of Warwick July 2018
6. Young Topologists Meeting, University of Copenhagen July 2018

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| 7. Young Geometric Group Theory, UPV/EHU   | <i>June 2019</i>    |
| 8. Aspects of Geometric Group Theory, IHES   | <i>July 2019</i>    |
| 9. Nearly Carbon Neutral Geometric Topology (virtual)  | <i>June 2020</i>    |
| 10. Virtual Topology Festival, NUS   | <i>January 2021</i> |
| 11. Graduate Student Geometry and Topology Conference (virtual), University of Indiana Bloomington | <i>April 2021</i>   |
| 12. GTA Philadelphia (virtual)   | <i>May 2021</i>     |