

# Bradley Zykoski

Department of Mathematics  
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**Last Updated: 6/17/19**

**EDUCATION**      *University of Michigan, Ann Arbor, Michigan*  
Ph.D. Student in Mathematics, September 2017 – Present

*University of Michigan, Ann Arbor, Michigan*  
M.S. in Mathematics, April 2019

*University of Virginia, Charlottesville, Virginia*  
B.A. with Highest Distinction in Mathematics, May 2017  
Minor: Philosophy

**RESEARCH**      With M.I. Bueno, F.M. Dopico, J. Pérez, and R. Saavedra, *A simplified approach to Fiedler-like pencils via block minimal bases pencils*.  
Linear Algebra and its Applications, Vol. 547 (2018), pp. 45-104.

With Greg Muller and Jenna Rajchgot, *Lower bound cluster algebras: presentations, Cohen-Macaulayness, and normality*. Algebraic Combinatorics, Vol. 1 (2018), pp. 95-114.

## TEACHING EXPERIENCE

### University of Michigan:

Winter 2019	Math 116	Calculus II	Primary Instructor
Fall 2018	Math 115	Calculus I	Primary Instructor
Winter 2018	Math 115	Calculus I	Primary Instructor
Fall 2017	Math 105	Data, Functions, and Graphs	Primary Instructor

### University of Virginia:

Spring 2017	Math 4720	Introduction to Differential Geometry	Grader
Fall 2016	Math 3340	Complex Variables with Applications	Grader
Spring 2015	Math 3310	Basic Real Analysis	Grader

2015-2017, Mathematics Tutor, University of Virginia Math Tutoring Center

## AWARDS

E.J. McShane Prize, University of Virginia Mathematics Department, 2017

Goldwater Foundation Honorable Mention, 2016

E.E. Floyd Prize, University of Virginia Mathematics Department, 2015

Phi Eta Sigma Honor Society

## SELECTED TALKS & POSTERS

*Teichmüller spaces are complex manifolds*  
University of Michigan Graduate Student Topology Seminar      March 2019

<i>McShane's identity</i> University of Michigan Graduate Student Dynamics Seminar	January 2019
<i>Counting simple geodesics, part I: Integration over moduli space</i> University of Michigan Graduate Student Dynamics Seminar	October 2018
<i>A brief tour of Teichmüller theory</i> University of Michigan Graduate Student Topology Seminar	September 2018
<i>Pre-workshop learning group on Higgs bundles</i> 1-week mini-course at the University of Michigan	June 2018
<i>TQFTs in context</i> University of Michigan Graduate Student Topology Seminar	January 2018
<i>An introduction to Khovanov homology</i> University of Michigan Graduate Student Topology Seminar	November 2017
<i>Link invariants via quantum <math>\mathfrak{sl}_2</math> representations</i> University of Michigan Graduate Student Representation Theory Seminar	November 2017
<i>A unified approach to Fiedler-like pencils</i> Summer Undergraduate and Graduate Research Colloquium at UCSB (poster) Young Mathematicians Conference at OSU SUMS Conference at JMU (poster)	August 2016 August 2016 September 2016
<i>Lower bound cluster algebras and Stanley-Reisner complexes</i> Geometry Labs United Conference at UIUC (poster) SUMS Conference at JMU Student Research Talks at GMU	August 2015 September 2015 October 2015

**CONFERENCES  
& WORKSHOPS  
ATTENDED**

- Flat Surfaces and Dynamics on Moduli Space, II  
Casa Matemática Oaxaca, May 2019
- Graduate School on Geometry of Teichmüller Spaces  
Simon's Center for Geometry and Physics, April 2019
- Graduate Student Topology and Geometry Conference  
University of Illinois at Urbana-Champaign, March 2019
- Junior Topology and Geometry in the Midwest  
University of Wisconsin, Madison, October 2018
- Workshop on Geometry of Teichmüller Space  
The Fields Institute, August 2018
- RTG Workshop on the Geometry and Physics of Higgs Bundles III  
University of Illinois at Chicago, June 2018
- Graduate Student Topology and Geometry Conference  
University of Illinois at Chicago, April 2018
- Shenandoah Undergraduate Mathematics and Statistics Conference  
James Madison University, September 2016
- Young Mathematicians Conference  
The Ohio State University, August 2016

- Shenandoah Undergraduate Mathematics and Statistics Conference  
James Madison University, September 2015
- Geometry Labs United Conference  
University of Illinois at Urbana-Champaign, August 2015