

Research interests

I'm primarily interested in [geometric group theory](#). I am a PhD candidate at the [University of Oklahoma](#) working under the direction of [Max Forester](#).

Education

- 2014–Present **PhD (Mathematics)**, THE UNIVERSITY OF OKLAHOMA, expected 2018.
- 2012–2014 **MA (Mathematics)**, THE UNIVERSITY OF OKLAHOMA, *GPA – 4.0*.
- 2007–2011 **BA (Mathematics; Computer Science)**, BETHEL COLLEGE, KS, *Summa Cum Laude*.
- Fall 2010 **Budapest Semesters in Mathematics**.

Teaching experience

- Summer 2016 **Instructor**, CENTER FOR TALENTED YOUTH (*Johns Hopkins University*), Bristol, RI.
Lead a class called Paradoxes and Infinities for gifted 7th through 10th graders in an immersive setting using active learning techniques.
- 2012–Present **Graduate Teaching Assistant**, THE UNIVERSITY OF OKLAHOMA, Norman, OK.
Teach sections and lead discussion hours for 1000-level math courses. Grade assignments and exams. Tutor weekly in the mathematics help center.
[Classes taught](#)
 - Spring 2017 **Accelerated Calculus II Honors (discussion section)**.
 - Fall 2016 **Accelerated Calculus II Honors (discussion section)**.
 - Spring 2016 **Calculus I**.
 - Fall 2015 **Accelerated Calculus III (discussion section)**.
 - Summer 2015 **Accelerated Calculus I**.
 - Spring 2015 **Accelerated Calculus I (discussion section)**.
 - Fall 2014 **Accelerated Calculus I (discussion section)**.
 - Summer 2014 **Calculus I**.
 - Spring 2014 **Calculus I (discussion section)**.
 - Fall 2013 **Pre-Calculus/Trigonometry**.
 - Summer 2013 **Math for Critical Thinking**.
 - Spring 2013 **College Algebra**.
 - Fall 2012 **Math for Critical Thinking (discussion section)**.

Talks

- Spring 2017 **Hartnell's Firefighter Problem and Growth of Groups**, *Student Geometry and Topology Seminar*, University of Oklahoma.
- Spring 2017 **What is Mathematics Research?**, *Norman Science Cafe*, Norman Public Library.
- Fall 2016 **One-Relator Groups and Local Indicability**, *Student Geometry and Topology Seminar*, University of Oklahoma.
- Spring 2016 **The Hopf-Rinow Theorem**, *Differential Geometry II Oral Presentation*, University of Oklahoma.
- Spring 2016 **Quasi-Isometry Invariants and Hyperbolic Groups**, *Student Geometry and Topology Seminar*, University of Oklahoma.
- Fall 2015 **Degree of a Smooth Map**, *Differential Geometry I Oral Presentation*, University of Oklahoma.
- Fall 2015 **Applications of Graph Folding**, *Geometry and Topology Seminar*, University of Oklahoma.
- Fall 2015 **Limits and Colimits**, *Student Category Theory Seminar*, University of Oklahoma.
- Fall 2015 **Introduction to Bass-Serre Theory II**, *Student Geometry and Topology Seminar*, University of Oklahoma.
- Fall 2015 **Introduction to Bass-Serre Theory I**, *Student Geometry and Topology Seminar*, University of Oklahoma.
- Fall 2014 **The Wirtinger Presentation of Fundamental Groups of Knot Complements**, *Student Geometry and Topology Seminar*, University of Oklahoma.
- Spring 2013 **An Algorithmic Approach to Raising the Lower Bound of $R(5, 5)$** , *Graduate Student Combinatorics Conference*, University of Minnesota, Twin Cities.

Conferences

- Spring 2017 **Redbud Topology Conference**, *University of Arkansas*, Fayetteville, AR.
- Spring 2017 **Texas Geometry and Topology Conference**, *Texas Tech University*, Lubbock, TX.
- Fall 2016 **Geometry of Mapping Class Groups and $Out(F_n)$** , *Mathematical Sciences Research Institute*, Berkeley, CA.
- Fall 2016 **Groups Acting on $CAT(0)$ Spaces**, *Mathematical Sciences Research Institute*, Berkeley, CA.
- Fall 2016 **Introductory Workshop: Geometric Group Theory**, *Mathematical Sciences Research Institute*, Berkeley, CA.
- Spring 2016 **Redbud Topology Conference**, *University of Oklahoma*, Norman, OK.
- Fall 2015 **Redbud Topology Conference**, *University of Arkansas*, Fayetteville, AR.
- Spring 2015 **Redbud Topology Conference**, *Oklahoma State University*, Stillwater, OK.
- Spring 2015 **40th Spring Lecture Series**, *University of Arkansas*, Fayetteville, AR.
- Spring 2015 **Texas Geometry and Topology Conference**, *University of Houston*, Houston, TX.

- Fall 2014 **Redbud Topology Conference**, *University of Arkansas*, Fayetteville, AR.
Spring 2013 **3rd Graduate Research Conference in Algebra and Representation Theory**,
Kansas State University, Manhattan, KS.

Service and honors

- Fall 2016 **Graduate Mentor**, University of Oklahoma.
Spring 2017 Mentored undergraduate Andy Jarnevic in a survey of geometric group theory and graduate-level topology
Spring 2015 **Head Learning Specialist**, *Math Help Center*, University of Oklahoma.
2015-2016 **Member**, *Phi Kappa Phi Honor Society*, University of Oklahoma Chapter.
Fall 2014 **Organizer**, *Student Topology and Geometry Seminar*, University of Oklahoma.
Fall 2015
Spring 2014 **Vice President**, *Mathematics Graduate Student Association*, University of Oklahoma.

Computer skills

JAVA, C/C++, PYTHON, Sage, GAP, HTML, CSS, \LaTeX , Linux, Windows, AutoCAD, Photoshop

References available upon request.