

HAYLEY OLSON

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EDUCATION

University of Nebraska - Lincoln

August 2017 - Present

Graduate Studies in Mathematics, Second Year

Gonzaga University

September 2013 - May 2017

Bachelor of Science in Mathematics with Honors, *summa cum laude*

Thesis: Who Broke Ohms Law? An Investigation of Why Experimental Results in a Simple Circuit Came Out Wrong

EMPLOYMENT

Graduate Teaching Assistant

August 2017-Present

Department of Mathematics, University of Nebraska - Lincoln

Gonzaga Math Tutoring Lab

January 2015 - May 2017

Department of Mathematics, Gonzaga University

TEACHING EXPERIENCE

Math 100A: Intermediate Algebra

Fall 2018

Math 810T: Algebra for Algebra Teachers

Summer 2018

Math 107R: Calculus II Recitation

Spring 2018

Math 106R: Calculus I Recitation

Fall 2017

RESEARCH EXPERIENCE

Klein Link Research

September 2015 - May 2017

Student Researcher

Spokane, WA

- Student research lead by Drs. Vesta Coufal, M. Kate Kearney, and Joel Pereira at Gonzaga University.
- Classifying Klein links and determining Klein link to torus link equivalences.

Mathematics Research Experience for Undergraduates

June 2016 - August 2015

Student Researcher

San Bernardino, CA

- Worked with Drs. Rolland Trapp and Corey Dunn at CSU, San Bernardino. Funded by the NSF.
- Produced original research in a subcategory of hyperbolic knot theory.

PUBLICATIONS

A classification of Klein links as torus links Steven Beres, Vesta Coufal, Kaia Hlavacek, M. Kate Kearney, Ryan Lattanzi, Hayley Olson, Joel Pereira, and Bryan Strub. *Involve*. **11**, no.4, (2018), 609-624.

Hyperbolic tangle surgeries on augmented links John Harnois, Hayley Olson, Rolland Trapp. *Algebraic and Geometric Topology*. **18**, no.3, (2018), 1573-1602.

Linking numbers of Klein links Steven Beres, Vesta Coufal, M. Kate Kearney, Ryan Lattanzi, and Hayley Olson. Preprint. 2018.

GRADUATE COURSEWORK

Course No.	Course Title	Instructor	Semester
Math 817/818	Intro to Modern Algebra I/II	Susan Hermiller	Fall 2017/Spring 2018
Math 825/826	Mathematical Analysis I/II	Petronela Radu	Fall 2017/Spring 2018
Math 850	Discrete Mathematics I	Xavier Perez	Fall 2017
Math 815	Theory of Linear Transformations	Jamie Radcliffe	Spring 2018
Math 830/831	Differential Equations I/II	Petronela Radu	Fall 2018/Spring 2019
Math 921/922	Real Analysis I/II	Mohammad Rammaha	Fall 2018/Spring 2019
Math 924	Theory of Analytic Functions I	David Pitts	Fall 2018
Math 997	Reading Course: Nonlocal Operators	Petronela Radu	Spring 2019

AWARDS AND SOCIETIES

Mathematics Underclassman Award Gonzaga University Mathematics Department, April 2014.

Gonzaga MAA Award Gonzaga University Mathematics Department, April 2016.

Pi Mu Epsilon Washington Epsilon Chapter, Member since April 2016, Executive Committee Member September 2016-May 2017.

Gonzaga Carsrud Award Gonzaga University Mathematics Department, April 2017.

UNL Math Graduate Student Advisory Board University of Nebraska - Lincoln Mathematics Department, Member since September 2018.

AFFILIATIONS AND MEMBERSHIPS

AMS American Mathematical Society

TECHNICAL SKILLS

Proficient with LaTeX.

Comfortable with MATLAB, Python 3.4, SnapPy, and Sage.

TALKS & PRESENTATIONS

AT CONFERENCES:

Klein links versus torus links Pacific Northwest joint MAA and NUMS Meeting, Oregon State University, April 2016.

Klein links versus torus links Spokane Intercollegiate Research Conference, Whitworth University, April 2016.

Sharpening the volume bound on a class of hyperbolic augmented links CSUSB REU Poster Session, California State University, San Bernardino, August 2016.

Nested Links: the links that act fully augmented CSUSB REU Presentation Session, California State University, San Bernardino, August 2016.

Sharpening the volume bound on a class of hyperbolic augmented links Nebraska Conference for Undergraduate Women in Mathematics (poster session), University of Nebraska - Lincoln, February 2017.

Link Invariants on Klein Links Spokane Intercollegiate Research Conference, Gonzaga University, April 2017.

Sharpening the volume bound on a class of hyperbolic augmented links AMS Sectional Meeting, Washington State University, April 2017.

FOR UNL SEMINARS:

Comparison of local and nonlocal Laplacian operators Continuum Mechanics Seminar. October 2018.

Space Camp: Introduction to oft used vector spaces in differential equations Students in PDEs Seminar. October 2018.

Introduction to Global Attractors and the Kuratowski measure of non-compactness Partial Differential Equations Seminar. 2 talks. November 2018