



# Nicholas (Nick) Meyer

Assistant Professor  
of Mathematics



<https://nickmeyer.phd>



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## About me

I am a Assistant Professor of Mathematics at the University of Central Missouri specializing in low-dimensional topology. I'm primarily interested in knot theory and manifold decompositions in dimensions three and four.

## Professional Experience

August 2024 – Present

### Assistant Professor of Mathematics

*University of Central Missouri*

August 2018 – July 2024

### Graduate Teaching Assistant

*University of Nebraska — Lincoln*

May 2023 – August 2023

### NSF INTERN

*Ocuvera*

August 2016 – May 2018

### Math, Statistics, and Physics Peer Tutor

*Winona State University*

## Education

July 2024

### Ph.D. in Mathematics

Advised by Dr. Alex Zupan

*University of Nebraska — Lincoln*

May 2020

### M.S. in Mathematics

*University of Nebraska — Lincoln*

May 2018

### B.S. in Mathematics (Minor: Physics)

Cum Laude, Winona State University

## Courses Taught

Topology I and II

Multivariable Calculus

Discrete Mathematics

Foundations of Geometry

Calculus I and II

Number Theory

College Algebra

College Trigonometry

## Publications

July 2024

### Torus Surgery, Fibrations, Multisections, and Spun 4-Manifolds

PhD Dissertation. ProQuest

July 2023

### Pants distances of knotted surfaces in 4-manifolds

Joint work with R. Aranda, S. Blackwell, D. Gulati, H. Karimi, G. Kim, and P. Pongtanapaisan. *Submitted*. arXiv:2307.13874

June 2023

### Tri-plane Diagrams for simple surfaces in $S^4$

Joint work with W. Allred, M. Aragón, Z. Dooley, A. Goldman, Y. Lei, I. Martinez, D. Peters, S. Warrander, A. Wright, and A. Zupan. In *Journal of Knot Theory and its Ramifications*. doi:10.1142/S0218216523500414

## Service

July 2025 – June 2028

### MAA Committee for Minority Participation in Mathematics (CMPM)

Member of the MAA CMPM, supporting national efforts to advance diversity, equity, and inclusion in mathematics.

April 2025 – Present

### Vice Chair of MAA Missouri Section

Assisted the Chair in overseeing section activities. Will become Chair in 2026.

April 2025

### MAA Project NExT (Missouri Section)

Selected for a teaching fellowship through the Missouri section of the MAA.

March 2025

### Kappa Mu Epsilon Awards Committee

Member of Awards Committee for the 47th Biennial Convention of Kappa Mu Epsilon

Summer 2021

### Polymath REU Jr. 2021

Mentored for an undergraduate research program with Alex Zupan on bridge trisections and knotted surfaces.



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### Selected Talks

October 2023	<b>Torus surgeries on the Hopf surface</b> AMS Fall Central Sectional Meeting, Creighton University
March 2023	<b>Group Deficiencies from a 4-manifolds perspective</b> Groups, Semigroups, and Toplogy Seminar, UNL
September 2022	<b>The Casson-Gordon signature invariant and sliceness obstructions</b> Groups, Semigroups, and Toplogy Seminar, UNL
June 2022	<b>Meier-Zupan Square Links and The Andrews-Curtis Conjecture</b> New Developments in Four Dimensions, University of Victoria
February 2022	<b>A quest for residual finiteness: Geometrization and the word problem for 3-manifolds</b> Groups, Semigroups, and Toplogy Seminar, UNL
October 2021	<b>Maps from 3-manifolds to 4-manifolds that induce isomorphism on fundamental groups (Part 2)</b> Groups, Semigroups, and Toplogy Seminar, UNL
June 2021	<b>A Geometric Introduction to Heegaard Splittings and Trisections</b> GOSS (Graduate Online Seminar Series), Online

### Selected Conference/Workshop Participation

June 2025	<b>Trisectors Workshop 2025</b>
April 2025	<b>MAA Missouri Section Meeting</b>
March 2025	<b>KME National Convention</b>
January 2025	<b>Joint Mathematics Meeting</b>
June 2024	<b>Trisectors Workshop 2024</b>
June 2022	<b>New Developments in Four Dimensions</b>
June 2022	<b>Junior Trisectors Retreat</b>
July 2021	<b>Gauge Theory in Geometry and Topology, Summer Graduate School at MSRI</b>
June 2021	<b>Nearly Carbon Neutral Topology Conference</b>
June 2021	<b>Georgia Topology Conference 2021</b>
June 2021	<b>Summer Trisectors Workshop 2021</b>
December 2020	<b>Winter Trisectors Workshop 2020</b>
June 2020	<b>Nearly Carbon Neutral Topology Conference</b>
September 2019	<b>Midwest Geometry Conference</b>