# AMELIA POMPILIO

Webpage: https://ameliapompilio.github.io/

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## RESEARCH INTERESTS

My research interests lie broadly in the intersection of metric and projective geometry. Keywords: divisible convex sets, Hilbert geometries, $p$-uniform convexity, CAT($\kappa$) spaces, Finsler geometry

## POSITIONS

**Ross Assistant Professor** *August 2025 - Present*
The Ohio State University
Department of Mathematics

## EDUCATION

**University of Illinois at Chicago** *August 2019 - Present*
Graduate Student in Pure Mathematics PhD Program
Department of Mathematics, Statistics, and Computer Science

**University of Dayton** *August 2015 - May 2019*
B.S. in Mathematics
Attended Math in Moscow in Spring 2019

## PAPERS

Pompilio, Amelia. *$\beta$-Uniform Convexity and Divisible Domains.* arXiv:2410.20071 (2024) (Link)

Jeffrey A. Bennett*, Jonathan D. Ogland-Hand, Kyle J. Cox, Peter J. Johnson, Erin J. Middleton, Amelia I. Pompilio, Samanwita Samal, Carl J. Talsma, Velimir V. Vesselinov, Kevin M. Ellett, Richard S. Middleton, *Beam Me Up $SCO_2T^{PRO}$: A Comparison to the FE/NETL $CO_2$ Saline Storage Cost Model and Updates on Tool Development.* (August 26, 2022). Proceedings of the 16th Greenhouse Gas Control Technologies Conference (GHGT-16) 23-24 Oct 2022. (Link)

## TALKS

**Big Ideas in Dynamics and Geometry** (Invited) *September 2024*
"Divisible Convex Sets and $\beta$-Uniform Convexity"
**Buckeye Metric Geometry Workshop** *August 2024*
"Divisible Convex Sets and $p$-Uniform Convexity"
**Groups and Dynamics Learning Seminar** *April 2024*
"Anosov Flows on Divisible Convex Domains"
**Graduate Student Colloquium** *April 2024*
"On Hilbert Geometries and Having a Good Time in Grad School"

## TEACHING

**Instructor of Record:**

**UIC Young Scholars Program** *Summer 2024 2023, 2022, and 2021*
**MATH 589 Teaching and Presentation of Mathematics** *Fall 2024, 2023*
**MATH 294 Abstract Algebra Workshop** *Spring 2024*

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| **MATH 194 Special Topics in Mathematics for UIC Global Students** | *Spring 2023* |
| **MATH 090 Intermediate Algebra** | *Fall 2022, 2021* |
| **MATH 211 Calculus III ESP** | *Fall 2020, Spring 2021* |

**Teaching Assistant:**

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| **MATH 180 Calculus I** | *Spring 2024* |
| **MATH 105 Mathematical Reasoning** | *Fall 2022* |
| **MATH 110 College Algebra** | *Spring 2022* |
| **MATH 210 Calculus III** | *Fall 2020, Spring 2021* |
| **MATH 181 Calculus II** | *Fall 2019, Spring 2020* |

**Grading:**

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| **Math 330 Abstract Algebra** | *Spring 2024* |
| **Math 549 Differentiable Manifolds I** | *Spring 2022* |
| **Math 417 Complex Analysis** | *Fall 2021* |

## OUTREACH AND SERVICE

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| **UIC Directed Reading Program** | *Summer 2024* |
| Mentor in geometry for undergraduate math and public policy double major | |
| **Math Circles of Chicago** | |
| At Gads Hill Community Center in Pilsen, Chicago | *Fall 2022 to Spring 2024* |
| At University of Chicago for the Young Scholars Program | *Fall 2019* |
| **Outreach Day** | *June 2024* |
| For visiting students, organized by Laura Schaposnik | |
| **Graduate Geometry, Topology, and Dynamics Seminar Co-Organizer** | |
| Seminar co-organizer | *AY 2022-2023* |
| **Graduate Student Colloquium Co-Organizer** | |
| Organized as Mathematics Graduate Student Association Co-President | *AY 2020-2021* |
| **Peer Notetaker** | |
| Through Disability Resource Center | *Fall 2019* |

## AWARDS

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| **Graduate Service Award** | *Spring 2024* |
| **Teaching Assistant Award** | *Spring 2023* |

## WORK EXPERIENCE

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| **Research Associate, Carbon Solutions LLC** | *Summer 2022* |
| Modeled geological dynamics of carbon sequestration using machine learning tools in Python | |