AMELIA POMPILIO

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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(κ) spaces, Finsler geometry

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

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 β-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*
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:

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:

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

OUTREACH AND SERVICE

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

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

WORK EXPERIENCE

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