

THEODORE SANDSTROM

CURRICULUM VITAE

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FIELDS OF INTEREST: Singularities in commutative algebra and algebraic geometry

EDUCATION

University of Illinois Chicago - Chicago, IL

Ph.D. in Mathematics

Aug 2023-present

University Fellow, RTG Fellow

Advisor: Kevin Tucker

Yale University – New Haven, CT

M.S. in Mathematics

Aug 2021-May 2023

B.S. in Mathematics and Linguistics

Aug 2019-May 2023

Magna cum laude, honors in both majors

Thesis: Geometric Probes for Constituency Structure in BERT Embeddings

PUBLICATIONS/PREPRINTS

1. *ACC for F-signature: a likely counterexample* (with C. Adams, A. Simpson), submitted 2024.
2. *On localization of tight closure in line- S_4 quartics* (with L. Borevitz, N. Nader, A. Shapiro, A. Simpson, J. Zomback). *J. Pure Appl. Algebra*, 2024.
3. *Realizing pairs of multicurves as cylinders on translation surfaces* (with J. Aygun, J. Barkdoll, A. Calderon, J. Lorman), submitted 2024.
4. *Virtual multicrossings and petal number for virtual knots and links* (with C. Adams, C. Even-Zohar, J. Greenberg, R. Kaufman, D. Lee, D. Li, D. Ping, X. Wang), *J. Knot Theory Ramifications*, 2023.

CONFERENCES

Joint Math Meetings (poster), “Localization of tight closure in line- S_4 quartics”

Jan 2023

UIC UMS (poster), “Localization of tight closure in line- S_4 quartics”

Nov 2022

MAA MathFest, “Cylinder configurations on translation surfaces”

Aug 2021

WORKSHOPS

Teaching and Presentation of Mathematics

Aug 2023-Dec 2023

University of Illinois Chicago

TEACHING

University of Illinois Chicago – Chicago, IL

Calculus I (TA)

Aug 2025-Dec 2025

Workshop, Intro to Advanced Math (Instructor)

Aug 2024-Dec 2024

Updated: Dec 2025

Calculus II (TA)	<i>Aug 2024-Dec 2024</i>
Introduction to Computer Science (TA)	<i>Jul 2024-Aug 2024</i>
Elementary Linear Algebra for Business (TA)	<i>Aug 2023-Jun 2024</i>
Yale University – New Haven, CT	
Linear Algebra (Undergraduate TA)	<i>Sep 2022-Dec 2022</i>
Analysis II: Lebesgue Integration (Undergraduate TA)	<i>Jan 2022-May 2022</i>
Applied Linear Algebra (Peer Tutor)	<i>Sep 2021-Dec 2021</i>
Vector Analysis and Linear Algebra (Grader)	<i>Sep 2020-Dec 2020</i>

SERVICE

Commutative & Homological Algebra Graduate Student Seminar (Organizer)	<i>May 2025-present</i>
<i>University of Illinois Chicago</i>	
Directed Reading Program (Mentor)	<i>Jan 2024-present</i>
<i>University of Illinois Chicago</i>	
Young Scholars' Program (Instructor)	<i>Jun 2025-Aug 2025</i>
<i>University of Illinois Chicago</i>	
Mathematics Graduate Student Association (President)	<i>May 2024-present</i>
<i>University of Illinois Chicago</i>	
SMALL REU Project (Mentor)	<i>Jun 2023-Aug 2024</i>
<i>Williams College</i>	