

## Alex M. Paschal

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CONTACT INFORMATION	<i>E-mail:</i> <a href="mailto:ampasch@unc.edu">ampasch@unc.edu</a> <i>Website:</i> <a href="http://alexpasch.al">alexpasch.al</a>
EDUCATION	<b>University of North Carolina at Chapel Hill</b> , Chapel Hill, NC B.S., Mathematics, August 2023 - Present.
RESEARCH EXPERIENCE	<b>The Ohio State University</b> , Columbus, OH Thermodynamic formalism, June 2024–Present. ROMUS and tOSU-IM program participant. Mentored by Daniel Thompson. <b>University of North Carolina at Chapel Hill</b> , Chapel Hill, NC Analytic number theory, October 2023–Present. Mentored by Idris Assani.
PUBLICATIONS	[1] Alex Paschal and Amy Somers. The Variational Principle for Entropy of Countable State Shift Spaces With Specification. <i>Submitted</i> . [2] Idris Assani, Aiden Chester, and Alex Paschal. On Robin’s Inequality and the Kaneko-Lagarias Inequality. <i>Submitted</i> , available <a href="#">here</a> .
CONFERENCE TALKS	[3] Young Mathematicians Conference, Ohio State University, July 30–August 1, 2025, Columbus, Ohio. [4] Beyond Uniform Hyperbolicity Conference, International Centre for Theoretical Physics, June 2–13, 2025, Trieste, Italy. [5] 58th Spring Topology and Dynamics Conference, Christopher Newport University, March 6–8, 2025, Newport News, Virginia. [6] Joint Mathematics Meeting, January 8–11, 2025, Seattle, Washington. [7] Regional Mathematics and Statistics Conference, University of North Carolina Greensboro, November 8–9, 2024, Greensboro, North Carolina. [8] Young Mathematicians Conference, Ohio State University, August 13–15, 2024, Columbus, Ohio. [9] Consortium of Summer Undergraduate Research Experiences, Ohio State University, July 25, 2024, Columbus, Ohio.
CONFERENCE POSTERS	[10] Beyond Uniform Hyperbolicity Conference, International Centre for Theoretical Physics, June 2–13, 2025, Trieste, Italy. [11] Midwest Dynamical Systems Conference, Northwestern University, April 25–27, Evanston, Illinois.
OTHER TALKS	[12] Alex Paschal. “Gödel’s First Incompleteness Theorem.” Carolina Math Club, March 4, 2025, Chapel Hill, NC. Notes available <a href="#">here</a> . [13] Alex Paschal. “Paradox in Logical Systems.” Carolina Math Club, February 28, 2025, Chapel Hill, NC. Notes available <a href="#">here</a> . [14] Alex Paschal. “What is Symbolic Dynamics?” Carolina Math Club, August 17, 2024, Chapel Hill, NC. [15] Alex Paschal. “Superabundant Numbers and the Riemann Hypothesis.” Carolina Math Club, April 1, 2024, Chapel Hill, NC.

SERVICE

**University of North Carolina at Chapel Hill**, Chapel Hill, NC

Undergraduate Learning Assistant

- MATH 522 (Advanced Calculus II) (Spring 2025)
- MATH 521 (Advanced Calculus I) (Spring 2024 and Fall 2024)
- MATH 381 (Discrete Mathematics) (Fall 2023)

Carolina Math Club

- President (Spring 2025)
- Academic Chair (Spring 2024 and Fall 2024)

TECHNOLOGY

Proficient: Python, LaTeX, Wolfram Language (Mathematica).  
Familiar: Java, Rust, Javascript.