Olivia Strahan

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Academic Interests

My research is in mixed characteristic commutative algebra, with a combinatorial flavor. In particular, I am developing the theory of "p-monomials," an original framework for defining and studying concrete examples of mixed characteristic rings.

Education

University of Michigan

- Ph.D. in Mathematics (expected graduation: 2025).

- Advisor: Professor Karen E. Smith

McGill University

- B.Sc. First Class Honors Math and Computer Science, *Distinction* (2019).

Publications and Preprints

1. **Content and Q-sequences in Mixed Characteristic Local Rings**. Accepted at Journal of Algebra. ArXiv

Talks and Poster Presentations

1. *Combinatorial recipes for rings in mixed characteristic* (talk). Algebra and Geometry seminar, University of New Mexico, Sep 26, 2024.

2. *Mixed Characteristic Variants of Classic Combinatorial Rings* (poster). Recent Developments in Commutative Algebra, SLMath at Berkeley, Apr 15-19, 2024.

3. *Mixed Characteristic Variants of Classic Combinatorial Rings* (poster). Algebra Days at Arizona State, Arizona State University, Nov 2-5, 2023.

Teaching Experience

University of Michigan

- Instructor of Record, Math 105: Functions, Data, and Graphs (Fall 22, Fall 21, Fall 19).

- Instructor of Record, Math 110: Pre-calculus, self-directed (Fall 20)

- Instructor of Record, Math 115: Calculus 1 (Fall 23, Winter 22, Winter 21, Winter 20)

- Course Assistant, MMSS Graph theory (Summer 2023, 2024)

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[1]Updated October 14, 2024

Professional Activities

- Co-organizer of Student Commutative Algebra seminar at UofM (Fall 23-present)

- Directed Reading Program mentor (Fall 23-Winter 24)