

Chloe' Napier

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Education

- **University of Kentucky** Lexington, KY
Fourth year Mathematics Ph.D. student
– MS in Mathematics
2021-present
- **Marshall University** Huntington, WV
Bachelor's of Science in Mathematics
– BS in Pure Mathematics and Applied Mathematics
– Minor in Chemistry
– 4.0 GPA
2017 - 2021
- **Spring Valley High School** Huntington, WV
High School Degree: Highest Honors
2013 - 2017

Research/ Work Experience

- University of Kentucky** Lexington, KY
Spring 2023-present
- Graduate student researcher in algebraic combinatorics with Dr. Khrystyna Serhiyenko. We are researching to find the combinatorial criteria for when there exists extension between certain modules in preprojective algebra.
 - Polytopes 3.0 research working group
- University of Kentucky** Lexington, KY
Summer 2023
- MA 202 Course Developer
- Marshall University** Huntington, WV
Spring 2018-2021
- Student researcher in algebraic combinatorics with Dr. Elizabeth Niese
- University of Virginia** Charlottesville, VA
Summer 2020
- University of Virginia Topology REU participant
- Marshall University** Huntington, WV
Summer 2019
- Summer Undergraduate Research Experience (SURE) participant
- Marshall University** Huntington, WV
2019-present
- University Tutor

- Marshall University** Huntington, WV
2018-2019
- Math Department Tutor
- St. Mary's College of Maryland** St. Mary's City, MD
Summer 2018
- ESP-REU participant
- Freelance** Huntington, WV
2016 - present
- Freelance tutoring in Mathematics, Chemistry, and Physics
- Spring Valley Freedom Baptist Church** Huntington, WV
2017 - 2021
- Youth group leader
 - Child care volunteer

Presentations

- University of Kentucky** Lexington, KY
April 2023
- Master's Exam. Title: *New Interpretations of the Higher Stasheff-Tamari Orders.*
- Marshall University** Online
April 2021
- Marshall University Mathematics Capstone Poster Seminar. Title: *Extended Schur Functions.*
- University of Virginia Topology REU** Online
July 17, 2020
- University of Virginia Topology REU Final Presentation. Title: *Embedded Cobordisms*
- Joint Mathematics Meetings** Denver, CO
January 17, 2020
- AMS Undergraduate Poster Session. Title: *Extended Schur Functions.*
- Marshall University** Huntington, WV
September 18, 2019
- Marshall University Math Department Colloquium. Title: *Extended Schur Functions.*
- Marshall University** Huntington, WV
August 2, 2019
- Final presentation for SURE program. Title: *Extended Schur Functions.*
- Joint Mathematics Meetings** Baltimore, MD
January 19, 2019
- AMS Special Session on Not Knerds. Title: *Restrictions of Homflypt and Kauffman Polynomials Arising from Local Moves.*

Marshall University

Huntington, WV

October 17, 2018

- Marshall University Math Department Colloquium. Title: *Using Polynomials to Study Knots*

St. Mary's College of Maryland

St. Mary's City, MD

July 27, 2018

- Final presentation for St. Marys College of Maryland ESP-REU. Title: *Knots and Links: Local Moves and Polynomial Invariants*

Mathematics Publications

- *Restrictions on Homflypt and Kauffman Polynomials Arising from Local Moves* (with S. Ganzell, M. Gonzalez, N. Ryalls, M. Santos). *Journal of Knot Theory and its Ramifications*. Vol. 29, No. 6, 2050036, 2020.
- *Positive expansions of extended Schur functions* (with E. Niese). (*involve- a journal of mathematics* . Vol. 17, no.2, 2024, pp. 217-232.

Teaching Experience

University of Kentucky

Lexington, KY

2021-present

- Primary Instructor for MA 202: Mathematics for Elementary Teachers (Spring 2024)
- Primary Instructor for MA 201: Mathematics for Elementary Teachers (Fall 2023)
- Recitation leader for MA 114: Calculus II (Spring 2023)
- Recitation leader for MA 162: Finite Math and its Applications (Fall 2022)
- Instructor of record for MA 322: Matrix Algebra and its Applications (Summer 2022)
- Co-teacher for MA 109: College Algebra Coreq (Spring 2022)
- Recitation leader for MA 110: Algebra and Trig for Calculus (Fall 2021)

Academic Organizations

University of Kentucky

Lexington, KY

2022-present

- UKY chapter of AWM treasurer

University of Kentucky

Lexington, KY

2021-2022

- Mathematics Graduate Student Council First Year Representative

Marshall University

Huntington, WV

2017-2021

- Pi Mu Epsilon WV Beta Chapter President (Vice President and Treasurer 2017-Spring 2018)

Marshall University

Huntington, WV

2017-2021

- *Thundering Nerds* Math Club President (Secretary 2019-Spring 2020)

Awards, Grants & Honors

Carl Lee Teaching Assistant Award	2024
NASA Student Fellowship Grant	Spring 2019
Marshall University Mathematics Department Scholarship	Spring 2019
SURE Grant	Summer 2019
Outstanding Undergraduate in Mathematics	Spring 2020
Jean McAlister Albarran Scholarship	2020-2021