

# BLAZE OKONOGI-NETH

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## EDUCATION

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**Reed College** May 2023  
Bachelor of Arts: Major in Mathematics GPA 3.5

**The University of Pennsylvania** Fall 2023, Spring 2024  
Visiting Student  
Completed graduate courses in Algebra I, Analysis I, Differential Geometry, and Partial Differential Equations. Scheduled to take Algebra II, Analysis II, Algebraic Topology, and Algebraic Geometry.

## AWARDS

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**Commendations for Excellence in Scholarship, Reed College** 2020-2021, 2022-2023  
Awarded to the top 5% of that year's class.

**PGE Foundation Scholarship, The Alliance** 2020-2021, 2021-2022, 2022-2023  
Awarded for academic excellence in a STEM field.

## RESEARCH

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**Summer Math Research** June 2023 - August 2023  
*Ross Mathematics Program*

- Our group improved a known algorithm for computing minimal distances of quadratic residue codes.

**Senior Thesis** September 2022 - May 2023  
*Advised by Dr. Robert Chang*

- A senior project on elliptic curves, modular forms, and Galois representations with computations in SageMath and PARI/GP.

## EXPERIENCE

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**Counselor** June 2022 - July 2022, June 2023 - July 2023  
*Ross Mathematics Program*

- Mentored advanced high school students through a six-week course in number theory.

**Paper Grader** September 2020 - May 2023  
*Mathematics Department, Reed College*

- Graded weekly homework assignments for Introduction to Analysis, Abstract Algebra, and Number Theory.

**Peer Tutor** September 2020 - May 2023  
*Mathematics Department, Reed College*

- Provided weekly drop-in tutoring for Calculus, Introduction to Analysis, Discrete Structures, Linear Algebra, Vector Calculus, Real Analysis, and Abstract Algebra.

**Private Tutor** September 2017 - June 2023  
*Self-employed*

- Helped middle school, high school, and college students with their math courses.

## CONFERENCES AND SEMINARS ATTENDED

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The University of Pennsylvania Algebra Seminar	September 2023 - Present
The University of Pennsylvania Student Seminar	September 2023 - Present
Philadelphia Area Number Theory Seminar	September 2023 - Present
AGNES (Algebraic Geometry, Northeast Section)	October 2023
Cascade Lectures in Combinatorics	April 2023
Oregon Number Theory Days	February 2023

## TALKS

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<b>An Introduction to Representation Theory</b> <i>Ross Mathematics Program</i>	July 2023
<b>The Modularity Theorem</b> <i>Reed College Student Colloquium</i>	April 2023
<b>Elliptic Curves and the Birch and Swinnerton-Dyer Conjecture</b> <i>Reed College Student Colloquium</i>	November 2022
<b>A Brief Introduction to Modular Forms</b> <i>Ross Mathematics Program</i>	July 2022
<b>Set Theory and Cardinality</b> <i>Ross Mathematics Program</i>	June 2022

## INDEPENDENT STUDIES

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<b>Atiyah and Macdonald's <i>Introduction to Commutative Algebra</i></b> <i>Wrote a solution manual</i>	August 2023 - Present
<b>Apostol's <i>Modular Functions and Dirichlet Series in Number Theory</i></b> <i>Wrote a solution manual</i>	May 2022 - August 2022

## SKILLS

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SageMath, PARI/GP, Magma,  $\text{\LaTeX}$ , Python, Java, C++, R