

Christopher Potvin

CONTACT INFORMATION

Warren Wilson College
Department of Math and Data Science
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<https://sites.google.com/view/christopherpotvin>

EDUCATION

Michigan State University, East Lansing MI

Ph.D. in Mathematics, May 2023
Advisor: Dr. Elizabeth Munch
Hypergraphs and their Homology

Bowling Green State University, Bowling Green OH

M.S. in Mathematics, August 2018

Bridgewater College, Bridgewater VA

B.S. in Physics and Mathematics, May 2016

RESEARCH EXPERIENCE

PNNL National Security Internship (NSIP)

Pacific Northwest National Laboratory Spring and Summer 2022
• PhD Intern in the Mathematics of Data Science Group

PUBLICATIONS

Bill Kay, Sinan G. Aksoy, Molly Baird, Daniel M. Best, Helen Jenne, Cliff Joslyn, Christopher Potvin, Gregory Henselman-Petrusek, Garret Seppala, Stephen J. Young, Emilie Purvine. “Hypergraph Topological Features for Autoencoder-Based Intrusion Detection for Cybersecurity Data.” In 2022 ICML workshop on Machine Learning for Cybersecurity. In press. [Link to Paper](#)

Sean Yee, Jessica Deshler, Kimberly Rogers, Robert Petrusis, Christopher Potvin, James Sweeney. (2021). Bridging the gap between observation protocols and formative feedback. *Journal of Mathematics Teacher Education*. 10.1007/s10857-020-09485-x. [Link to Paper](#)

PRESENTED WORK

Escapism in Math: The Mathematics of Escapes, Colloquium, Calvin College. November 2022.

Topology and Hypergraphs for Cyber, Virtual Research Symposium, Pacific Northwest National Laboratory. May 2022.

Hypergraphs and their Homology, Student Geometry and Topology Seminar, Michigan State University. September 2021.

Understanding (some) one word proofs, GAUSS Seminar, Michigan State University. November 2020.

PROFESSIONAL AFFILIATIONS

MAA Project NExT

TEACHING EXPERIENCE

Warren Wilson College

MAT 1510,1520	Precalculus	Fall 2023
MAT 2510	Differential Equations	Fall 2023

Michigan State University

Instructor of Record

MTH 126	Survey of Calculus II	Fall 2022
MTH 201	Elem. Math for Teachers I	Fall 2021, Spring 2022
MTH 101	Quantitative Literacy I	Fall 2019, Spring 2020

Teaching Team (Online)

MTH 101	Quantitative Literacy I	Fall 2020, Spring 2021
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Curriculum Development

MTH 101	Quantitative Literacy I	Summer 2020
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Professional Development

Facilitating Accessible and Inclusive Mathematics Learning Environments, Spring 2022.

Undergraduate Mentoring

RTG Undergraduate Peer Mentoring Program Fall 2022

“Adding Graphs to the BuZZ.” Fall 2022

Undergraduate Research Project in TDA
with Dr. Elizabeth Munch. [Project Proposal](#).

Students: *Denis Selyuzhitsky, Ari Markov*

Bowling Green State University

Instructor of Record

MATH 1220	College Algebra	Fall 2016, Spring 2017, Fall 2017
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SERVICE

2022,2023	Volunteer, MSU Girls Math and Science Day
2020-23	Volunteer, MathCounts, MacDonald Middle School, MI
2020-21,2023	MSU Math Camps, Instructor and Assistant
2015,2016	Volunteer, STEM Day, Bridgewater College