

Maxwell Scott Hosler

CONTACT INFORMATION	8533 Ridgeview Road Huntingdon, PA 16652	(814) 644-3961 mhosler22@wooster.edu
EDUCATION	Huntingdon Area High School, Huntingdon, PA Attended Fall 2013 to Spring 2018 Juniata College, Huntingdon, PA Attended Fall 2016 to Fall 2017 Took classes in High School Calculus I, Calculus II, and Multivariate Calculus College of Wooster, Wooster, OH Attended Fall 2018 to Spring 2022 B.A. Mathematics, <i>summa cum laude</i> , May 2022 Computer Science Minor GPA: 3.977, Dean's List (2018-2022)	
RELEVANT COURSEWORK	Linear Algebra, Theory of Computation, Differential Equations, Numerical Analysis, Real Analysis I, Operations Research, Abstract Algebra, Combinatorics & Graph Theory, Introduction to Topology (Tutorial Course), Abstract Algebra II (Tutorial Course), Intro to Complex Variables	
HONORS	Phi Beta Kappa, <i>membership</i> Pi Mu Epsilon, <i>membership</i> National Merit Scholarship William H. Wilson Prize in Mathematics, <i>College of Wooster award for excellence in senior-year mathematics.</i>	
ACADEMIC AND PROFESSIONAL EXPERIENCE	Research <i>Independent Study (Capstone Research Project)</i> 2021-2022 <ul style="list-style-type: none">Senior thesis: <i>Counting the Moduli Space of Pentagons on Finite Projective Planes</i>Researched the automorphism structure of finite projective planes through the lens of embedded pentagons.Applied both theoretical and computational methods to gain insight and prove results.Proved combinatorial results regarding the number of pentagons, up to automorphism. <i>Summer Research</i> Summers 2020, 2021 <ul style="list-style-type: none">Developed code for a phone application for the identification of different tomato varieties for biological study.Applied principles of computer vision and simple machine learning. Work Summers 2018, 2019 <i>Contamination Source Identification</i> Summer and Fall, 2022 <ul style="list-style-type: none">Developed Python code for the analysis of biological data.Created interactive user interfaces for viewing and manipulating said data.	

Teaching

Teacher's Assistant, Numerical Analysis
Grader, Theory of Computation

Spring 2022
Spring 2022

TECHNICAL PROFICIENCIES

Programming Languages

Proficient in Python, L^AT_EX, C#, Java, Javascript
Familiar with Maple, C, C++, Mathematica, Haskell

Software

Proficient in Photoshop, Blender, Word, Excel, Powerpoint

PUBLICATIONS AND PRESENTATIONS

On Designing and Implementing a Tomato Shape App for Android
Maxwell Hosler, Craig Akiri, Mircea Ionescu, Esther van der Knaap, Sofia Visa
Sixth International Conference on Applied Informatics
Sibiu, Romania, May 5-7, 2022

Mathemalchemy (comic)

Maxwell Hosler (writer, colorist) and Jay Hosler (writer, line-artist)
A short comic story to accompany the math and art exhibit of the same name.
<https://mathemalchemy.org/a-comic-book-adventure-in-math-and-art/>

Adventures in Mathemalchemy: Exploring math and art through a comic book narrative.

Maxwell Hosler and Jay Hosler
Invited talk, Joint Math Meetings 2023
January 6, 2023

Counting the Classes of Pentagons on Finite Projective Planes

Maxwell Hosler, advised by Dr. Robert Kelvey
Submitted to the Rose-Hullman Undergraduate Mathematics Journal for consideration.
A condensed version of the main ideas of the senior research project.

Metatranscriptomics approach for identifying pathogens associated with prosthetic joint infections: A blinded clinical validation study

Maxwell Hosler*, Justin Wright*, Vasily Tokarev*, Truc Ly*, Christine Walls, Sam Anderson, Sydeny Reigel, Jillian Liester, Regina Lamendella.
Nature Microbiology (In preparation for submission February 2023)
*equal contribution

REFERENCES

Dr. Drew Pasteur

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Computational Sciences
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puter Science
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Dr. Robert Kelvey

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Dr. Regina Lamendella

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