

Curriculum Vitae
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Appointments.

- **James Madison University.** Assistant Professor (2024-present).
- **Montana State University.** Teaching and Research Assistant (2018-2024).
- **Western Washington University.** Mathematics Instructor (2012-2018).
- **Johns Hopkins University Center for Talented Youth.** Mathematics Instructor (Summers 2013, 2014, 2015).

Education.

- **Montana State University.** Ph.D. Computer Science (2024).
Advised by: Brittany Fasy.
- **Western Washington University.** M.S. Mathematics (2012).
- **Mercyhurst University.** B.A. Mathematics, Mathematics Education (2008).

Research Papers.

1. **Bounding mean orders of sub- k -trees of k -trees.** [The Electronic Journal of Combinatorics 2024] Joint with Stijn Cambie, Stephan Wagner, Corrine Yap.
2. **Guarding Precise and Imprecise Polyhedral Terrains with Segments** [Conference on Combinatorial Optimization and Applications 2023] Joint joint with Aakash Dutt, Binhai Zhu.
3. **Ant and Bear Dance for Dokweebah: Using a Skokomish Story to Engage Middle School Students in Event-Driven Programming** [ACM Global Computing Education Conference 2023] Joint with Joseph Chipps, Brittany Fasy, Stacey Hancock
4. **Integrating Computer Science into Middle School Curricula Through Storytelling: A Lesson Plan on Beaded Bags of the Columbia Plateau** [ACM Global Computing Education Conference 2023] joint with Barbara Do Amaral, Brittany Fasy, Olivia Firth, Stacey Hancock, Patrick Jeffers, Barbara Komlos, Sweeney Windchief.
5. **From Curves to Words and Back Again: Geometric Computation of Minimum-Area Homotopy** [WADS2023: 18th Algorithms and Data Structures Symposium] joint with Hsien-Chih Chang, Brittany Terese Fasy, David L. Millman, Carola Wenk.
6. **Trees maximizing the number of almost-perfect matchings.** [Submitted] Joint with Stijn Cambie, Gunjan Sharma, Stephan Wagner, Corrine Yap.
7. **Catching Polygons** [Fall Workshop on Computational Geometry 2021] joint with Eli Quist, Anna Schenfisch.

8. **If You Must Choose Among Your Children, Pick the Right One** [Canadian Conference on Computational Geometry 2020] joint with Benjamin Holmgren, Brittany Terese Fasy, David Millman.

Software.

1. **Possion Disk Sampling** Computational Geometry Algorithms Library [To appear] (2024).

Selected Talks.

- **From Curves to Words and Back Again** Algorithms and Data structures (2023).
- **From Curves to Words** Young Researchers Forum (2023).
- **Minimum Homotopy Area** SIAM Pacific Northwest Section (2022).
- **Catching Polygons** Fall Workshop on Computational Geometry (2021).
- **As Seen On TV: Examples of Calculus on Television** Washington Two-Year College Mathematics Conference (2015).

Service.

Storytelling Project

- Develop culturally responsive curriculum that engages American Indian and rural students in computer science. (2018-present).
- Taught many outreach events aimed at increasing participation in computer science among underrepresented groups (2018-present).
- Published research papers on serving underrepresented groups in computer science (2018-present).

Reviewer

- External Reviewer Symposium on Computational Geometry (2019,2021).
- External Reviewer Canadian Conference on Computational Geometry (2020,2021).
- External Reviewer European Workshop on Computational Geometry (2019).

Science Olympiad

- Organized Montana Science Olympiad Codebusters event (2021-2022).

Teaching.

James Madison

- Discrete Structures

Montana State Instructor

- Basic Data Structures and Algorithms
- Data Structures and Algorithms
- Discrete Mathematics

Montana State Teaching Assistant

- Advanced Algorithms
- Social and Ethical Issues in Computer Science
- Programming Languages
- Discrete Mathematics

Western Washington Instructor

- Pre-Calculus I and II
- Calculus I, II and III
- Introduction to Statistics
- Introduction to Proofs
- Linear Algebra I and II
- Calculus based Statistics