Lucia Williams

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Education

Montana State University (MSU)
Ph.D., Computer Science, 2022
Advisor: Brendan Mumey
Dissertation: Flow Decomposition Algorithms for Multiassembly Problems

University of Washington
B.S., Applied Computational and Mathematical Sciences, 2014
B.A., Community, Environment, and Planning, 2014
Minor: Mathematics

Work

Research Assistant
School of Computing, MSU, 2017-2022

Visiting PhD Researcher
Graph Algorithms Group, University of Helsinki, fall 2021

Instructor
MSU
- C Programming, summer 2021
- Python Programming, summers 2020 and 2019

Data Scientist
Marchex (online advertising company), 2014-2017

Data Visualization Intern
Mazama Science (data visualization consulting company), 2013

REU Student
MSU, summer 2013
Project: An integer linear programming solution to the collaborative group provisioning problem.

Grader
University of Washington, 2012-2014
Courses: Real Analysis, Linear Algebra, Multivariable Calculus, Discrete Mathematical Modeling

Publications	Fernando Dias, Lucia Williams, Alexandru I. Tomescu, Brendan Mumey.
	Fast, Flexible, and Exact Flow Decompositions via ILP.
	Accepted at RECOMB 2022.
	Shahbaz Khan, Milla Kortelainen, Manuel Cáceres, Lucia Williams,
	Alexandru I. Tomescu.
	Safety and Completenes in Flow Decompositions for RNA Assembly.
	Accepted at RECOMB 2022.
	Lucia Williams, Alexandru I. Tomescu, Brendan Mumey.
	Flow Decomposition with Subpath Constraints.
	IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2022.
	Lucia Williams, Brendan Mumey.
	Maximal Perfect Haplotype Blocks with Wildcards.
	iScience, vol 101149. 2020.
	DOI: https://doi.org/10.1016/j.isci.2020.101149
	Lucia Williams, Brendan Mumey.
	Extending Maximal Perfect Haplotype Blocks to the Realm of Pangenomics.
	Algorithms for Computational Biology (AlCoB).
	Lecture Notes in Computer Science, vol 12099. 2020.
	Robin Lynne Belton, Brittany Terese Fasy, Rostik Mertz, Samuel Micka,
	David L. Millman, Daniel Salinas, Anna Schenfisch, Jordan Schupbach,
	Lucia Williams.
	Reconstructing Embedded Graphs from Persistence Diagrams.
	Computational Geometry, 2020.
	Lucia Williams, Gillian Reynolds, Brendan Mumey.
	RNA Transcript Assembly Using Inexact Flows.
	IEEE International Conference on Bioinformatics and Biomedicine (BIBM),
	2019.
Posters	*Decomposing inexact flows with application to RNA transcript assembly.*
	Research in Computational Molecular Biology (RECOMB), May 2019,
	Washington, D.C.
Awards & Fellowships	**Scholarship Excellence Award**
	MSU Graduate School, Spring 2022
	Finalist, Three Minute Thesis Competition
	MSU, February 2022
	Outstanding PhD Researcher Award
	MSU Computer Science Department, 2020-2021
	Benjamin Fellowship
	MSU College of Engineering, 2017-2018

Travel & Conference Awards
- MSU School of Computing award to attend the Tapia Celebration of Diversity in Computing, fall 2020
- MSU Graduate School Professional Advancement Grant, spring 2020
- Montana INBRE Competitive Student Travel Award, spring 2019

Workshops **Computing Research Association Grad Cohort for Women**
- Chicago, 2019
- San Francisco, 2018

Service **Mentor**
Directed Reading Program (pairs undergraduate graduate and undergraduate student for semester-long project), spring 2020

Conference Volunteer
Research in Computational Molecular Biology (RECOMB), spring 2019

Organizer or Co-organizer
- MSU Graduate Career Ladder Program, spring 2022
- MSU computer science graduate student lunch series, fall 2021, funded by a Community Building Mini-Grant from the MSU Graduate School
- MSU Department of Computer Science prospective student visit day, spring 2019 and 2020
- MSU Department of Computer Science new graduate student orientation, fall 2020

Ultimate Frisbee Coach
- MSU women's club, 2018-present
- University of Washington women's club, 2015-2017

References Dr. Brendan Mumey   Dr. David Millman
Computer Science   Computer Science
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