Mahdi Salehzadeh

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Highlights

Familiar with Mathematical Softwares	Expert in Problem Modeling
Familiar with Optimization Methods	Strong Time Management Skills
Proven Track Record of Teamwork Experiences	Expert in Computation Subjects

Education

Ph.D. Applied Mathematics, Simon Fraser University, BC, Canada　　　　2023 – current
Infectious Disease Modelling and Estimation
Advisor: Ailene MacPherson, John M. Stockie

MSc. Applied Mathematics, Simon Fraser University, BC, Canada　　　　2021 – 2022
Thesis: Computational Study of 2D Jellyfish with the Immersed Boundary Method
Advisor: John M. Stockie

BSc. Computer Science, Amirkabir University of Technology, Tehran, Iran　　　　2015 – 2019
Project: Cardinality Optimization (Cardinality Constrained Problems)
Advisor: S. A. Mirhassani

Teaching

Stochastic Modelling and Simulation, MATH 348.　　　　Spring 2025
Graduate Teaching Assistant. SFU.

Numerical Analysis, MACM 316.　　　　Summer 2024, Fall 2023, Fall 2021
Graduate Teaching Assistant. SFU.

Introduction to Biomathematics, MATH 360.　　　　Fall 2023
Graduate Teaching Assistant. SFU.

Mathematics in Sports, MAT 303.　　　　Fall 2022, Fall 2024
Graduate Teaching Assistant. SFU.

Applied Calculus Workshop, ACW.　　　　2021, 2022, 2023
Graduate Teaching Assistant. SFU.

Applied Linear Algebra, MATH 232.　　　　Summer 2022
Graduate Teaching Assistant. SFU.

Complex Variables, MATH 322.　　　　Fall 2024
Grader. SFU.

Talks & Posters

Conferences Talks:

Evolution of Seed Masting (Or Not?). CAIMS　　　　June 2024
Kingston, ON, Canada

Evolution of Seed Masting (Or Not?). CSEE　　　　May 2024
Vancouver, BC, Canada

Computational Study of 2D Jellyfish with the IBM. CAIMS　　　　June 2023
Fredericton, NB, Canada

Posters:

A Sequential Approach to Bark Beetle Outbreaks. Eco-Evo　　　　October 2023
Squamish, BC, Canada

A Sequential Approach to Bark Beetle Outbreaks. SIAM PNW　　　　October 2023

Bellingham, WA, US

Honors & Ranking

First Poster Presentation Award 2023
SIAM PNW, Bellingham, WA, US

MSc Thesis with Distinction 2022
Mathematics Department, SFU, BC, Canada

Top 5 Percent Rank in GPA in BSc. 2019
AmirKabir University of Technology, Tehran, Iran

Top 5 Percent Rank 2014
Iranian National Universities Entrance Exam (Mathematics and Physics branch)

Top 5 Percent Rank 2014
Iranian National Universities Entrance Exam (Foreign Languages)

Funding & Awards

Research Accelerator, Maud Menten Institute, Summer 2025	5,000 CAD
Travel & Minor Research Award, SFU, Summer 2025	1,200 CAD
Travel & Minor Research Award, SFU, Summer 2024	1,200 CAD
Graduate Fellowship, SFU, Summer 2024	7,000 CAD
Travel & Minor Research Award, SFU, Fall 2023	900 CAD
First Place Poster Award, SIAM PNW, Fall 2023	100 USD
Travel & Minor Research Award, SFU, Spring 2023	900 CAD
Travel Fund, CAIMS, Spring 2023	1,200 CAD
Graduate Fellowship, SFU, Summer 2022	7,000 CAD
Travel & Minor Research Award, SFU, Spring 2022	800 CAD
Travel & Minor Research Award, SFU, Summer 2021	800 CAD

Research Interests

Epidemiological Disease Modelling, Computational Fluid Dynamics, Numerical Analysis, Optimization

Technical Strengths

Programing Languages	Python, MATLAB, Mathematica, C, Java
Software & Tools	LaTeX, Word, Excel, Powerpoint

Languages

Persian, English, Turkish, Azeri

Professional Activities

Peer Reviews	Journal of Forestry Research
University Services	President, Mathematics Graduate Caucus, SFU, Summer 2024 - Summer 2025
	Vice-President, Mathematics Graduate Caucus, SFU, Spring 2024
	Member of the Central Council, Student Cultural Association, AUT, 2017
	Member of the Central Council, Student Environmental Association, AUT, 2017
Working Groups	PIMS-Maud Menton Institute, 2024
Social Services	First Aid Volunteer, Iranian Red Crescent Society, 2017

Publications

Mahdi Salehzadeh, John M. Stockie, and Ailene MacPherson. Aggregation unveiled: A sequential modelling approach to bark beetle outbreaks. *Theoretical Population Biology*, 160:62–69, 2024. ISSN 0040-5809. doi: https://doi.org/10.1016/j.tpb.2024.10.002.