

Mahdi Salehzadeh

Address - Department of Mathematics, SFU,
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Education

Ph.D. Applied Mathematics , Simon Fraser University, BC, Canada Infectious Disease Modelling and Estimation Advisor: Ailene MacPherson, John M. Stockie	2023 – current
MSc. Applied Mathematics , Simon Fraser University, BC, Canada Thesis: Computational Study of 2D Jellyfish with the Immersed Boundary Method Advisor: John M. Stockie	2021 – 2022
BSc. Computer Science , Amirkabir University of Technology, Tehran, Iran Project: Cardinality Optimization (Cardinality Constrained Problems) Advisor: S. A. Mirhassani	2015 – 2019

Publications

Mahdi Salehzadeh. Computational study of 2d jellyfish with the immersed boundary method. URL
<https://summit.sfu.ca/item/35829>. Defended with distinction.

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>.

Teaching

Stochastic Modelling and Simulation , MATH 348. Graduate Teaching Assistant. SFU.	Spring 2025
Numerical Analysis , MACM 316. Graduate Teaching Assistant. SFU.	Fall 2025, Summer 2024, Fall 2023, Fall 2021
Introduction to Biomathematics , MATH 360. Graduate Teaching Assistant. SFU.	Fall 2023
Mathematics in Sports , MAT 303. Graduate Teaching Assistant. SFU.	Fall 2022, Fall 2024
Applied Calculus Workshop , ACW. Graduate Teaching Assistant. SFU.	2021, 2022, 2023
Applied Linear Algebra , MATH 232. Graduate Teaching Assistant. SFU.	Summer 2022
Complex Variables , MATH 322. Grader. SFU.	Fall 2024

Talks & Posters

Conferences Talks:

Mathematical Models of Synchrony: From External Forcing to Stage-Structure. SIAM/CAIMS Montreal, QC, Canada	July 2025
Evolution of Seed Masting (Or Not?). CAIMS Kingston, ON, Canada	June 2024
Evolution of Seed Masting (Or Not?). CSEE Vancouver, BC, Canada	May 2024
Computational Study of 2D Jellyfish with the IBM.	June 2023

CAIMS Fredericton, NB, Canada

Posters:

A Sequential Approach to Bark Beetle Outbreaks.

October 2023

Eco-Evo Squamish, BC, Canada

A Sequential Approach to Bark Beetle Outbreaks.

October 2023

SIAM PNW 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

L^AT_EX, 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