

Mahdi Salehzadeh

Address - Department of Mathematics, SFU,
8888 University Dr, Burnaby, BC. V5A 1S6 Canada
Email - mahdi_salehzadeh@sfu.ca
Website - <https://msalehzadeh.github.io>

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

CAIMS Fredericton, NB, Canada

Posters:

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

October 2023

A Sequential Approach to Bark Beetle Outbreaks.
SIAM PNW Bellingham, WA, US

October 2023

Honors & Ranking

First Poster Presentation Award SIAM PNW, Bellingham, WA, US	2023
MSc Thesis with Distinction Mathematics Department, SFU, BC, Canada	2022
Top 5 Percent Rank in GPA in BSc. AmirKabir University of Technology, Tehran, Iran	2019
Top 5 Percent Rank Iranian National Universities Entrance Exam (Mathematics and Physics branch)	2014
Top 5 Percent Rank Iranian National Universities Entrance Exam (Foreign Languages)	2014

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 ^A T _E X, 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