

# Mehrdad Najafpour

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Toronto, Canada

## POSITION HELD

### • York University

Postdoctoral Visitor

2025 – Present

Toronto, Canada

## EDUCATION

### • University of Quebec in Montreal (UQAM)

Ph.D. Mathematics

2018 – 2024

Montreal, Canada

- **Supervisors:** Vestislav Apostolov, Frédéric Rochon

### • Amirkabir University of Technology (AUT)

M.Sc. Mathematics

2013 – 2015

Tehran, Iran

- **Supervisors:** Behroz Bidabad, Eaman Eftekhary

### • Amirkabir University of Technology (AUT)

B.Sc. Mathematics

2009 – 2013

Tehran, Iran

- **Minor:** Electrical Engineering

## RESEARCH INTERESTS

Geometric Deep Learning • Mathematical Biology • Statistical & Stochastic Learning • PDE • Time Series Modeling

## PUBLICATIONS AND TALKS

### • Papers

- A. Norouziyazad, Mahan Najafpour, F. Esmaeildoost, **Mehrdad Najafpour**, & R. Salahandish, **Robust Colonoscopy Polyp Segmentation Using Dynamic-Nu T-Loss with Multi-Scale and Uncertainty-Aware Adaptation**, *Frontiers in Medicine*, manuscript submitted June 2025.
- **M. Najafpour**, **Constant Scalar Curvature Kähler Metrics on Resolutions of Orbifold Singularities with Holomorphic Vector Fields**, under review.
- **M. Najafpour**, **CSC Kähler Metrics on Resolutions of an Orbifold Singularity of Depth 1**, *The Journal of Geometric Analysis*, Volume 35, article number 186, 2025.
- Z. Fathi, B. Bidabad & **M. Najafpour**, **An exact penalty function method for optimal control of a Dubins airplane in the presence of moving obstacles**, *Optimization Letters*, Volume 16, 1197–1213, 2022.

### • Books

- M. Najafpour, **Problem Solving Skills in ODE**. Sharab Press (Written in Farsi), Tehran, Iran, 2017.
- M. Najafpour, **Problem Solving Skills in Multivariable Calculus**. Sharab Press (Written in Farsi), Tehran, Iran, 2016.
- M. Najafpour, **Problem Solving Skills in One Variable Calculus**. Sharab Press (Written in Farsi), Tehran, Iran, 2015.

## SUPERVISION

- Jaber Habib: The characterization of singularities of type  $\mathcal{I}$ , (Co-supervised with Frédéric Rochon), Summer ISM Research, UQAM, April-May, 2022.

## TEACHING EXPERIENCE

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### INSTRUCTOR:

General Mathematics, UQAM	Montreal, Canada Summer 2020, Winter 2022, Winter 2023, Winter 2024
Differential Calculus, UQAM	Montreal, Canada Fall 2022
Introduction to Quantitative Methods Applied to Management, UQAM	Montreal, Canada Winter 2021, Fall 2021
Integral Calculus, UQAM	Montreal, Canada Fall 2019, Winter 2020
Euclidean and Non-Euclidean Geometry, Public Teacher Training University	Tehran, Iran Fall 2015
Discrete Mathematics, Public Teacher Training University	Tehran, Iran Winter 2016
Calculus in Industrial Engineering, University of Applied Science and Technology	Tehran, Iran Winter 2015
Fundamentals of Business Mathematics, University of Applied Science and Technology	Tehran, Iran Fall 2014

### TEACHING ASSISTANT:

University of Quebec in Montreal (UQAM)	Montreal, Canada
<i>Differential Calculus, Integral Calculus, Calculus I, Linear Algebra and Vector Geometry, Analysis II, Differential Geometry, Introduction to Quantitative Methods Applied to Management, Statistical Methods</i>	2018 – 2024
Amirkabir University of Technology (AUT)	Tehran, Iran
<i>Calculus I, II, III, Ordinary Differential Equations, Partial Differential Equations, Engineering Mathematics, Fundamentals of Matrices and Linear Algebra, Algebra I, II, Mathematical Analysis, Local Differential Geometry, Geometry of Manifolds I (Smooth Manifolds), Number Theory, Problem-Solving Strategies</i>	2011 – 2015

## HONORS & AWARDS

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- Graduate PhD Fellow, Université du Québec à Montréal (UQAM) 2018 – 2024
- International Graduate Student Entrance Scholarship, Université du Québec à Montréal (UQAM) 2018
- Top Master's Student, Amirkabir University of Technology (AUT) 2015
- Top Bachelor's Student, Amirkabir University of Technology (AUT) 2013
- Honorable Mention, 35th and 37th Mathematics Competitions (I.M.S.) for University Students 2011, 2013
- Ranked in the Top 0.6% of Over 350,000 Participants, Iran's National University Entrance Exam 2009
- Achieved 3rd National Rank, Iranian High School Book Reading National Competition 2008

## PROFESSIONAL SERVICES AND MEMBERSHIPS

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- Member, American Mathematical Society (AMS) 2024 – Present
- Member, Organizing Committee, Cirget Junior Seminar, UQAM 2019 – 2020  
Montreal, Canada
- Member, Iranian Mathematical Society (IMS) 2014 – Present

- **Member, Organizing Committee, Workshop on Ricci Flow, AUT** 2014  
Tehran, Iran
- **Organizer, 2nd and 3rd Tarho-Hal Math Competitions** 2011 – 2012  
Tehran, Iran
- **Organizer & CEO, 3rd Annual Sudoku Competition, AUT** 2011  
Tehran, Iran
- **Member, Organizing Committee, Khayyam-Turing Day, AUT** 2010  
Tehran, Iran

## PROFESSIONAL DEVELOPMENT

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- **Google Project Management** January 2025  
Google
- **Google Advanced Data Analytics** January 2025  
Google
- **Introduction to Psychology** January and February 2025  
Yale University
- **New Learning: Principles and Patterns of Pedagogy** July 2024  
University of Illinois Urbana-Champaign
- **Organizational Leadership in Diversity, Equity & Inclusion Specialization** July 2024  
Rice University
- **Deep Learning** July 2021  
Coursera
- **100 Days of Code, The Complete Python Bootcamp for 2021** June-July 2021  
Udemy Academy

## SKILLS

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- **Programming Languages and Tools:** Python, R, LaTeX, C, Matlab, Maple
- **Languages:** English, French (Professional working proficiency), Persian (Native)

## REFERENCES

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1. **Razieh Salahandish**  
Assistant Professor, Department of Electrical Engineering & Computer Science  
York University, Toronto, Canada  
Email: [raziehs@yorku.ca](mailto:raziehs@yorku.ca)
2. **Vestislav Apostolov**  
Professor, Department of Mathematics  
University of Quebec in Montreal, Montreal, Canada  
Email: [apostolov.vestislav@uqam.ca](mailto:apostolov.vestislav@uqam.ca)
3. **Frédéric Rochon**  
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University of Quebec in Montreal, Montreal, Canada  
Email: [rochon.frederic@uqam.ca](mailto:rochon.frederic@uqam.ca)
4. **Jérôme Vétois**  
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5. **Yann Rollin**  
Professor, Department of Mathematics  
Nantes University, Nantes, France  
Email: [yann.rollin@univ-nantes.fr](mailto:yann.rollin@univ-nantes.fr)
6. **Eric Bahuaud**  
Professor, Math Department  
Seattle University, Seattle, USA  
Email: [bahuaude@seattleu.edu](mailto:bahuaude@seattleu.edu)

7. **Behroz Bidabad**

Professor, Department of Mathematics  
Amirkabir University of Technology, Tehran, Iran  
Email: [bidabad@aut.ac.ir](mailto:bidabad@aut.ac.ir)

8. **Massoud Pourmahdian**

Associate Professor, School of Mathematics  
IPM - Institute for Research in Fundamental Sciences, Tehran, Iran  
Email: [pourmahd@ipm.ir](mailto:pourmahd@ipm.ir)