

Ivan V. Morozov

New York, NY

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Summary

Motivated mathematics student and researcher specialising in analysis and combinatorial and analytic number theory. Also studies music composition and clarinet, with experience in cross-disciplinary collaborations in geology, focusing on data analysis and quantitative problem-solving.

Education

The City College of New York	May, 2025/2026
<i>M.S., Mathematics (2026)</i>	<i>New York, NY</i>
<i>Hon. B.S., Pure Mathematics (2025) (Summa Cum Laude)</i>	
Manhattan School of Music	May, 2027
<i>B.M., Classical Clarinet</i>	<i>New York, NY</i>
Fiorello H. LaGuardia High School of Music & Art	June, 2022
<i>High School Diploma, Instrumental Music</i>	<i>New York, NY</i>
The Juilliard School	May, 2022
<i>Pre-College Diploma, Clarinet Performance</i>	<i>New York, NY</i>

Publications

- Qualitative model for hurricane-induced debris flow prediction: a case study of the impact of Hurricane Maria (2017) in Puerto Rico (with Y. Gorokhovich, G. Erpul, C.-Y. Lee, C. Hultquist, and Z. Q. Yin), *Geomatics* **6** (1) (2026), Article 15, pp. 1–14.
- On quotients of a more general theorem of Wilson, *Integers* **25** (2025), A93, pp. 1–12.

Awards & Honours

Dr. Barnett and Jean Hollander Rich Mathematics Scholarship	2025
<i>The City College of New York</i>	
The Belden Medal	2025
<i>The City College of New York</i>	
Bennington P. Gill Memorial Award	2025
<i>The City College of New York</i>	
Israel E. Drabkin Memorial Award	2025
<i>The City College of New York</i>	
William Feinberg Memorial Music Award	2022
<i>Alumni & Friends of Fiorello H. LaGuardia High School of Music & Art and Performing Arts</i>	
Concerto Competition Winner	2020
<i>Fiorello H. LaGuardia High School of Music & Art and Performing Arts</i>	

Research Experience

Research Assistant

June, 2024 – May, 2025

New York, NY

National Aeronautics and Space Administration (NASA)

- Title: Surface-based Precipitation Measurement Network in the Bronx: Science and Education Opportunities for Diverse and Minority Students.
- Supervisor: Dr. Yuri Gorokhovich.
- This project aims to add scientific and educational components to existing courses on weather and climate, geospatial data integration, hydrology, and environmental science, providing research experience to students of Lehman College using NASA GPM data and Geographic Information Systems.
- Responsible for preparing and testing teaching materials with Excel and Python.
- This poster was presented at the Annual American Geophysical Union Meeting held in Washington, D.C., December 9–14, 2024.

Research Assistant

October, 2023 – December, 2024

New York, NY

Columbia University, Lehman College, University of Ankara

- Title: Innovative Methodology for Real-Time Hurricane Induced Landslides Prediction: A Case Study of Hurricane Maria (2017) in Puerto Rico.
- In collaboration with Columbia University (Lamont-Doherty Earth Observatory), Lehman College (City University of New York), and University of Ankara (Turkey).
- Effectively utilising wind-driven rain as the principal criterion for an innovative methodology of predicting landslides. These forecasts were compared to the actual landslides in Puerto Rico that occurred after Hurricane Maria (2017). Responsible for data analysis and assessment, and quality control.
- This paper was presented at the Annual American Geophysical Union Meeting held in Washington, D.C., December 9–14, 2024.

Student Researcher, Emerging Scholars Program

July, 2023 – August, 2023

New York, NY

New York City College of Technology

- Title: Approaches to the Erdős–Straus Conjecture.
- Advisor: Dr. Satyanand Singh.
- Studying the long-standing problem that touches on properties of Egyptian fractions, which had been used in ancient Egyptian mathematics. There exist many partial solutions, mainly in the form of arithmetic progressions and therefore residue classes. This work explores partial solutions and aims to expand them.
- This poster was presented at the 1st Annual Celebrating Research Excellence Symposium at City Tech held at the New York City College of Technology, New York, August 10, 2023.

Student Researcher, Emerging Scholars Program

February, 2023 – May, 2023

New York, NY

New York City College of Technology

- Title: Number Theoretic Arithmetic Functions and Dirichlet Series.
- Advisor: Dr. Satyanand Singh.
- Studying number theoretic functions and their associated Dirichlet series. This field lay the foundation for deep research that has applications in cryptography and theoretical studies. This work ventures into the complex plane.
- This poster was presented at the Annual Metro New York Section Meeting of the Mathematical Association of America held at Pace University, New York, April 29, 2023.

Conferences and Presentations

American Geophysical Union

December, 2024

Washington, D.C.

Paper presentation

- Innovative Methodology for Real-Time Hurricane Induced Landslides Prediction: A Case Study of Hurricane Maria (2017) in Puerto Rico.

- Poster presentation*
- Surface-based Precipitation Measurement Network in the Bronx: Science and Education Opportunities for Diverse and Minority Students.

Annual Metro New York Section Meeting of the MAA April, 2024

- Poster presentation*
New York, NY
- On Quotients of a More Generalised Theorem of Wilson.

1st Annual Celebrating Research Excellence Symposium at City Tech August, 2023

- Poster presentation*
New York, NY
- Approaches to the Erdős–Straus Conjecture.

Annual Metro New York Section Meeting of the MAA April, 2023

- Poster presentation*
New York, NY
- Number Theoretic Arithmetic Functions and Dirichlet Series.

Work Experience

Clarinet Teacher September, 2024 –

- P.S. 183 New York, NY
- Teaching 4th and 5th graders basics of clarinet and music-making in a small classroom setting.

Private teacher

- Providing private instruction for beginner and intermediate clarinet players.

Substitute Orchestra Musician January, 2024 –

- The Children's Orchestra Society Syosset, NY
- Occasional clarinet substitute in an orchestra during rehearsals and performances.

IT Student Worker September, 2023 –

- Manhattan School of Music New York, NY
- Resolving technical issues, providing assistance, and responsible for assembly and disassembly of various technical equipment.

Part-Time Mathematics and Physics Tutor January, 2023 – March, 2023

- Paper Online
- Tutored students in mathematics and physics from elementary to high school, helping them overcome difficulties and meet their academic potential.

Programs, Festivals, and Extramural Performances

Downtown Music at Grace 20 November, 2024

Grace Episcopal Church, White Plains, New York

Leroy Anderson House Concert 7 November, 2021

Leroy Anderson House, Woodbury, Connecticut

Manhattan Borough Arts Festival 5 June, 2018

Peter Jay Sharp Theater, The Juilliard School

Skills

Other Languages: Russian (fluent), French (limited proficiency)

Programming Languages: Proficient knowledge of Python and Arduino languages.

Musical: Proficient clarinet playing, intermediate piano playing. Proficient knowledge of music theory and ear training.

Pedagogy: Excellent reputation of tutoring and teaching children in both classroom and virtual settings.