

Kunyi (Mark) Ma

km4046@columbia.edu | km5239@nyu.edu | (+1) (332) 265-9287
Personal Webpage: markmamathematics.com

Education

Columbia University , New York, NY Ph.D. Student in Mathematics, 4.15/4 Advisors: Daniela De Silva, Ovidiu Savin Research interest: PDE Analysis, Free Boundaries	2024–2029
New York University Shanghai , Shanghai, China B.S. in Honors Mathematics and Data Science, magna cum laude, 3.897/4 <i>Existence of Stationary Measure for Incompressible 2D Stochastic Navier-Stokes Equations</i> (with Vahagn Nersesyan) <i>On modifying Loss Function for PINO to approach Mathematics Nature in Fluid Mechanic</i> (with Zhuang Su)	2020–2024
Nanyang Model High School , Shanghai, China	2017–2020

Talks

Seminar Talks @ Columbia

The Theory of Bounded Variation Functions & Regularity Analysis of the Minimal Surface PDE

De Giorgi's Lemma for C^1 Caccioppoli Sets	Nov. 6th 2024
De Giorgi's Lemma for Harmonic and C^1 function	Oct. 16th 2024
Regularity of the reduced boundary	Sep. 25th 2024
Basic properties of functions of bounded variation	Sep. 11th 2024

Informal Reading Seminar on GR

Local Theory for Quasi-linear Wave Equations	Nov. 18th 2024
Existence of Solutions to non-constant coefficient linear wave IVP	Oct. 7th 2024
Representation formula using Homogeneous Distribution	Sep. 16th 2024

Teachings

Teaching Assistant

Linear Algebra S2010, Columbia University	Summer 2025 B
Analysis and Optimization S2500 (Grader), Columbia University	Summer 2025 B
Introduction to Modern Analysis I S4061, Columbia University	Summer 2025 A

Student Tutor

College Algebra and Calculus I–III, Columbia University	Fall 2024
ARC Learning Assistant for Pre-Calculus, NYU Shanghai	Fall 2021

Honors and Awards

NYU Shanghai

Magna cum laude; Phi Beta Kappa; NYU Shanghai Excellence Award; NYU Honors Scholar: Founders Day Award; 2023 NYU Shanghai Dean's Undergraduate Research Funding; 2022 NYU Shanghai Hack the Pearl, Champion of Data Modelling Track; 2020–2022 NYU Shanghai Recognition Award; 2020–2023 NYU Shanghai Dean's List

Attendance

The Third Joint SIAM/CAIMS Annual Meetings (AN25), Montréal, Québec, Canada	July 2025
PDE Summer School 2025 Theory and Applications of Elliptic PDE, UC Irvine	June 2025
Rocky Mountain Mathematics Consortium Summer School 2025, ASU, University of Wyoming	June 2025
Duke Mathematics Journal 2025 Conference, Duke University	Apr. 2025
Winter School: Boundary and Singularity in Fluid Mechanics, Simons Center	Jan. 2025
Differential Geometry Summer School 2024, PKU BICMR	July-Aug. 2024

Workshop on Minimal Surfaces and Mean Curvature Flow 2024, PKU BICMR
International Congress of Chinese Mathematicians 2022, THU YMSC

July 2024
July-Aug. 2022

Extracurricular

Orientation Ambassador, NYU Shanghai
President, Literature@NYUSH Student Club, NYU Shanghai
Tenor, NYU Shanghai Elite A Cappella Chamber Singers
Quantitative Researcher, Ipsos China, Shanghai

May-Sep. 2021
Jun. 2021-May 2022
Feb. 2021-Dec. 2022
Jun.-Aug. 2021