Kunyi (Mark) Ma

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Education

Columbia University, New York, NY
Ph.D. Student in Mathematics, 4.231/4   2024–2029
Advisors: Daniela De Silva, Ovidiu Savin
Research interest: PDE Analysis, Free Boundaries

New York University Shanghai, Shanghai, China
B.S. in Honors Mathematics and Data Science, magna cum laude, 3.897/4   2020–2024
Existence of Stationary Measure for Incompressible 2D Stochastic Navier-Stokes Equations   Vahagn Nersesyan
On modifying Loss Function for PINO to approach Mathematics Nature in Fluid Mechanic   Zhuang Su

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

1. De Giorgi's Lemma for C^1 Caccioppoli Sets, Nov 6th 2024

2. De Giorgi's Lemma for Harmonic and C^1 function, Oct 16th 2024

3. Regularity of the reduced boundary, Sep 25th 2024

4. Basic properties of functions of bounded variation, Sep 11th 2024

Informal Reading Seminar on GR

1. Local Theory for Quasi-linear Wave Equations, Nov 18th 2024

2. Existence of Solutions to non-constant coefficient linear wave IVP, Oct 7th 2024

3. Representation formula using Homogeneous Distribution, Sep 16th 2024

Teachings

Teaching Assistant

1. Analysis and Optimization S2500, Columbia University, Summer 2025 B

2. Ordinary Differential Equations UN2030, Columbia University, Summer 2025 B

3. Introduction to Modern Analysis I S4061, Columbia University, Summer 2025 A

Student Tutor

1. College Algebra and Calculus I–III, Columbia University, Fall 2024

2. 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

Winter School: Boundary and Singularity in Fluid Mechanics, Simons Center	Jan. 2025
Differential Geometry Summer School 2024, PKU BICMR	Jul.–Aug. 2024
Workshop on Minimal Surfaces and Mean Curvature Flow 2024, PKU BICMR	Jul. 2024
International Congress of Chinese Mathematicians 2022, THU YMSC	Jul.–Aug. 2022

Extracurricular

Orientation Ambassador, NYU Shanghai	May–Sep. 2021
President, Literature@NYUSH Student Club, NYU Shanghai	Jun. 2021–May 2022
Tenor, NYU Shanghai Elite A Cappella Chamber Singers	Feb. 2021–Dec. 2022
Quantitative Researcher, Ipsos China, Shanghai	Jun.–Aug. 2021