

Bojue Wang

Quantitative Research | Machine Learning | Scientific Computing
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Education

Rutgers University

Ph.D. in Mathematics

New Brunswick, NJ

Aug 2021 – May 2027 (Expected)

- Concentration in Computational Algebraic Geometry; Graduate Certificate in Machine Learning
- Dissertation: *Fake Projective Planes: From Existence to Equations* (in progress); Advisor: [Lev Borisov](#)

Stevens Institute of Technology

M.S. in Applied Mathematics

Hoboken, NJ

Aug 2020 – Aug 2021

M.S. in Physics

Aug 2018 – May 2020

Tongji University

B.S. in Applied Physics

Shanghai, China

Sep 2013 – Jun 2017

Skills

- Programming Languages: Python, Julia
- ML & Statistics: PyTorch, XGBoost, PyMC
- Optimization & Scientific Computing: CVXPY, FEniCSx, GUDHI
- Computer Algebra & Formal Methods: Magma, Macaulay2, GAP, Mathematica, Lean 4

Projects

Robust Optimization: Order Flow Imbalance Prediction

EE509, 2026

- Built 500ms order-flow-imbalance features from 10-level LOBSTER samples across five NASDAQ stocks
- Applied graph-robust PGDA across four horizons ($\tau = 1, 2, 10, 20$), reducing graph-perturbation MSE degradation and graph sensitivity at every horizon

Financial Fraud Detection

Erdős Institute, 2026

- Modeled the Elliptic Bitcoin transaction graph with labels comprising 2% illicit, 21% licit, and 77% unknown transactions
- Achieved the best illicit-class F1 of 0.77 with XGBoost; analysis suggested that aggregated transaction features captured relational information more effectively than the tested GNNs

Publications

Finding Equations of the Fake Projective Plane

Accepted, J. Korean Math. Soc., 2026

Lev Borisov and **Bojue Wang**

- Derived explicit defining equations from theoretical existence results using computational algebra and symbolic search

G-PASTA: GPU-Accelerated Partitioning Algorithm for Static Timing Analysis

DAC, 2024

Boyang Zhang, Dian-Lun Lin, Che Chang, Cheng-Hsiang Chiu, **Bojue Wang**, et al.

- Proposed the core graph-theoretic argument establishing the correctness of the task-dependency DAG partitioning method

Experience

micro1

Remote

Mathematics Researcher

Jul 2026 – Present

- Developed 35 benchmarks by perturbing conditions in standard problems from linear algebra, ring theory, and algebraic geometry to probe frontier LLMs' computational and deductive reasoning limits
- Designed automated numerical and symbolic test harnesses with concise, verifiable outputs to detect whether models recovered hidden mathematical structure

Handshake AI

Remote

MOVE Fellow

Fall 2025

- Created and reviewed approximately 400 prove-or-disprove benchmarks by perturbing hypotheses and reversing implications in commutative algebra and algebraic geometry
- Identified and formalized counterexamples in underexplored cases, strengthening benchmark coverage and evaluation quality

Institute for Advanced Study

Editorial Assistant

Princeton, NJ

Summer 2025, 2026

- Each summer, supported [Dr. Phillip Griffiths](#) in preparing a ~30-page mathematical manuscript and a ~100-slide research presentation

Princeton University, SPIA

Instructor, Advanced Statistics

Princeton, NJ

Summer 2024

- Independently taught probability and statistical modeling to approximately 20 students

Rutgers University

Instructor and Teaching Assistant

New Brunswick, NJ

Fall 2022 – Present

- Courses: Linear Algebra, Advanced Calculus, Probability, Differential Equations

Fellowships & Awards

Joel Lebowitz Research Fellowship, Rutgers University

Summer 2024, 2025, 2026

Summer Research Grant, Stevens Institute of Technology

Summer 2021

Provost Master's Fellowship, Stevens Institute of Technology

Fall 2018