Bojue Wang

Mathematics | Quantitative Research | Machine Learning | Scientific Computing
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Education

Rutgers University — New Brunswick, NJ
Ph.D. in Mathematics — Aug 2021 – May 2027 (Expected)
- Concentration: Computational Algebraic Geometry
- Dissertation: *Fake Projective Planes: From Existence to Equations* (in progress)
- Advisor: Lev Borisov
- Graduate Certificate in Machine Learning

Stevens Institute of Technology — Hoboken, NJ
M.S. in Applied Mathematics — Aug 2020 – Aug 2021
M.S. in Physics — Aug 2018 – May 2020

Tongji University — Shanghai, China
B.S. in Applied Physics — Sep 2013 – Jun 2017

Skills

- Programming Languages: C++, SQL, Python, OCaml, Julia
- Machine Learning & Data: PyTorch, XGBoost, CVXPY, PyMC
- Formal Methods: Lean 4
- Scientific Computing: GPU computing, FEniCSx, GUDHI
- Computer Algebra: GAP, Magma, Macaulay2, Mathematica

Projects

Robust Optimization: Order Flow Imbalance Prediction — EE509, 2026
- Built a reproducible Python pipeline for short-horizon price-movement prediction from LOBSTER order-book data
- Modeled own-asset order-flow features and cross-asset graph perturbations to evaluate signal robustness

Financial Fraud Detection — Erdös Institute, 2026
- Built fraud classifiers for graph-structured transaction data using temporal splits to avoid look-ahead leakage
- Benchmarked XGBoost against graph neural networks and analyzed interpretability and failure modes

Publications

Finding Equations of the Fake Projective Plane — J. Korean Math. Soc., 2025
Lev Borisov and Bojue Wang
- Derived explicit defining equations from theoretical existence results using computational algebra and symbolic search

GPU-Accelerated Partitioning Algorithm for Static Timing Analysis — DAC, 2024
- Implemented GPU-accelerated graph partitioning algorithms for static timing analysis, improving scalability for large-scale optimization workflows

Experience

micro1 — Remote
Mathematics Researcher — Jul 2026 – Present
- Numerical LLM benchmark in linear algebra, ring theory, and algebraic geometry

Handshake AI — Remote
MOVE Fellow — Fall 2025
- Proof-based LLM reasoning evaluation in commutative algebra and algebraic geometry

Institute for Advanced Study — Princeton, NJ
Editorial Assistant — Summer 2025, 2026
- Supported Dr. Phillip Griffiths in preparing publication-quality mathematical manuscripts and research presentation slides

Princeton University, SPIA — Princeton, NJ
Instructor, Advanced Statistics — Summer 2024
- Probability and statistical modeling

Rutgers University New Brunswick, NJ
Instructor / TA 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