

Brian A. Mintz

EDUCATION

Third year PhD Program in Applied Mathematics at Dartmouth College, Hanover, NH
Graduated Brandeis University, GPA 3.87 / 4.00

B.A. Mathematics with Highest Honors, Brandeis University 5/20

B.S. Computer Science, Brandeis University 5/20

Ph.D. Applied Mathematics, Dartmouth University Expected 5/25
Advisor Feng Fu

PUBLICATIONS

1. *"The Point of No Return: Evolution of Excess Mutation Rate is Possible Even for Simple Mutation Models,"* with Feng Fu, published in MDPI mathematics.
2. *"Data Assimilation in Operator Algebras,"* with David Freeman, Dimitrios Giannakis, Abbas Ourmazd, and Joanna Slawinska, submitted to the Proceedings of the National Academy of Sciences.

CURRENT PROJECTS

The effects of learning and exploration rates on the dynamics of Multi-Agent Reinforcement Learning.

Incorporating personality metrics to improve predictions of an Adaptive Voter model with survey data from Ukraine.

How social norms, including fairness and compassion, evolve and resolve social dilemmas.

SKILLS

Programming in Python, MATLAB, Java, Sage, Scheme.

AI and Machine Learning with SciKitLearn and Pandas.

Statistical data analysis with SPSS and R.

Technical communication through LaTeX, MS Word, PowerPoint, and Excel.

COURSEWORK

Graduate Mathematics

Uncertainty Quantification, Numerical Linear Algebra, Partial Differential Equations, Stochastic Processes, Numerical Analysis, Networks, Algebra I/II, Topology I, Combinatorics, Real Analysis and Measure Theory, Complex Analysis.

Undergraduate Computer Science

Big Data Analysis, Data Mining, Programming Language Theory, Data Structures, Structure and Interpretation of Programs, Programming: Java and C, Advanced Programming Techniques, Operating Systems, Theory of Computation.

CONTRIBUTED TALKS

1. “The Point of No Return: Evolution of Excess Mutation Rate is Possible Even for Simple Mutation Models,” at the AMS section meeting in UMass Amherst, Fall 2022
2. “Reducing Speckle in Ultrasound by Sampling the Posterior Distribution of Reconstructions” at the SIAM conference on Imaging Science, Spring 2022

RECOGNITIONS

Jerome A. Schiff Fellowship for undergraduate research	Fall 2018 – Spring 2019
Dean’s List	All undergraduate
Phi Beta Kappa	

EXPERIENCE

Instructor – Calculus	Winter 2023
Instructor – Exploring Mathematics Camp, for middle/high school children	Summer 2022
T.A. – Differential Equations	Winter 2022
T.A. – Calculus of Vector-valued Functions	Fall 2021
T.A. – Statistics	Winter 2021
T.A. – Honors Multivariate Calculus	Fall 2020
Undergraduate representative for Brandeis Math Department	Fall 2019 – Spring 2020
Peer Advisor – “Statistics in Psychology,” Brandeis	Fall 2018