

Alexander Jay Brower

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Education

- University of Georgia**, Ph.D. in Mathematics Aug 2022 - May 2027
(Expected)
- **Advisor:** Weiwei Hu
 - GPA: 3.94/4.0
- University of South Florida**, BA in Pure Mathematics Aug 2019 – May 2022
- GPA: 3.9/4.0

Research Interests

- Optimal control of partial differential equations
- Boundary control problems
- Stochastic partial differential equations
- Mathematical control theory of network-transport systems
- Numerical approximation to solutions of control problems

Conferences

- Invited Talk at SIAM Conference on Control and Its Applications 2025 (CT25) July 2025

Papers

- **Optimal Time Scheduling for a Simple Repairable System** *Under Review*
D.O. Adu, **A.J. Brower**, W. Hu, H-N. Wu
Proceedings of 2026 American Control Conference (ACC)
- **Boundary Control for Optimal Data Exchange** *Accepted*
D.O. Adu, **A.J. Brower**, W. Hu, Z. Shen
Communications in Optimization Theory, *A Special Issue on Control and Systems Theory dedicated to the memory of Professor Sanjoy Kumar Mitter*

Teaching and Grading

- University of Georgia *Instructor of Record*
- **MATH2260 - Calculus II for Science and Engineering**, Fall 2026
 - **MATH2250 - Calculus I for Science and Engineering**, Spring 2024, Spring 2026
 - **MATH1113 - Precalculus**, Fall 2023, Fall 2024 (x2), Spring 2025 (x2)
- University of Georgia *Teaching Assistant*
- **MATH4700 - Qualitative ODES**, Fall 2023
 - **MATH4600 - Probability**, Spring 2023
 - **MATH3300 - Applied Linear Algebra**, Fall 2022
- University of South Florida *Grader*
- **MAA4211 - Intermediate Analysis 1**, Spring 2022

Service

- **Reviewer**, American Control Conference 2026
- Tutor for Math Study Hall, University of Georgia, 2022-2026
- Tutor in Academic Success Center, University of South Florida, 2021-2022