

BRIAN MORTON

CONTACT

Brian Morton
Vanderbilt University
Department of Mathematics
SC 1227F
1326 Stevenson Center Lane
Nashville, TN 37240, USA

brian.f.morton@vanderbilt.edu
<https://brianfmorton.github.io/>

RESEARCH INTERESTS

- Partial Differential Equations
- Fluid Mechanics
- Mathematical Physics
- Rarefied Gas Dynamics

EDUCATION

Vanderbilt University, Nashville, TN

Doctorate of Philosophy in Mathematics

May 2028

Advisors: Professor Marcelo Disconzi and Professor Jared Speck

Purdue University, West Lafayette, IN

Bachelor of Science in Aeronautical & Astronautical Engineering

May 2023

Bachelor of Science in Honors Mathematics

May 2023

EMPLOYMENT

Vanderbilt University, Nashville, TN

Graduate Research Assistant, Department of Mathematics

August 2024-Present

Graduate Teaching Assistant, Department of Mathematics

August 2023-Present

Johns Hopkins University Applied Physics Laboratory, Laurel, MD

Intern, Air and Missile Defense Sector and Force Projection Sector

May 2022-January 2024

Purdue University, West Lafayette, IN

Researcher, Department of Aeronautical and Astronautical Engineering

May 2021-October 2023

REU, Department of Mathematics

May 2021-August 2021

Grader, Department of Aeronautical and Astronautical Engineering

January 2022-August 2023

Grader, Department of Mathematics

January 2020-May 2023

PUBLICATIONS

1. Adhikari, N., **Morton, B.**, Alexeenko, A. A., & Hu, J. (2024, February). Verification of a discontinuous Galerkin fast spectral solver for the full Boltzmann equation. In AIP Conference Proceedings (Vol. 2996, No. 1). AIP Publishing.

FELLOWSHIPS AND AWARDS

- Russell G. Hamilton Scholar Fellowship *August 2023-Present*
- Warren G Koerner Scholarship Award *June 2022*
- Thomas Arai Scholarship Award *April 2022*
- Columbian Club Scholarship Award *August 2021 and August 2022*
- OUR Scholars Scholarship Award *August 2021 and January 2022*
- Swaminathan and Garg Scholarship Award *June 2021*
- Alton and Juanita Andrews Scholarship Award *April 2021, and April 2022*
- Hugh W and Edna M Donnan Scholarship Award *August 2020, 2021, and 2022*
- Lorraine K Lawton Scholarship Award *May 2020*
- Guglielmo Marconi Engineering Scholarship Award *November 2019*
- Helen Bertucci Pelnarsh Memorial Scholarship Award *November 2019*
- Dupage Community Foundation Scholarship Award *June 2019*
- Frank J. Vigiante Scholarship Award *June 2019*
- Amici Club Scholarship Award *May 2019*
- HFMA Scholarship Award *April 2019*
- Dr. Erik K Lossin Memorial Scholarship Award *May 2018*

SERVICE

- Vanderbilt Department of Mathematics Directed Reading Program *August 2024-Present*
- PU Aeronautical and Astronautical Student Advisory Council *January 2021-May 2023*

CONFERENCES ATTENDED

- Winter School: Boundary and Singularity in Fluid Mechanics, January 6-10, 2025, Simons Center for Geometry and Physics - Stony Brook, Stony Brook, NY
- Geometry and Analysis of Fluid Flows, January 16-20, 2023, Stony Brook University, Stony Brook, NY
- 32nd International Symposium in Rarefied Gas Dynamics (RDG32), Korea, online, July 2022