Gina Vasey

Contact Information

email: vaseygin@msu.edu

Education

Current PhD Candidate, **Michigan State University**
Sep 2020 Computational Mathematics, Science and Enginerring (CMSE)
Advisors: Dr. Andrew Christlieb and Dr. Brian O'Shea

Dec 2019 Bachelor of Science, **The University of Michigan**
Majors: Physics and Computer Science

Scholarships and Honors

Fall 2024	Dissertation Completion Fellowship **Michigan State University**
2022-2023 Academic Year	MIPSE Fellow **University of Michigan** Michigan Institute for Plasma Science and Engineering
2020-2021 Academic Year	Engineering Distinguished Scholar **Michigan State University**, College of Engineering
2018-2019	James B. Angell Scholar **The University of Michigan**, College of LSA
Spring 2016-Fall 2018 and Fall 2019	University Honors **The University of Michigan**, College of LSA

Publications

Dec 2023	"Influence of initial conditions on data-driven model identification and information entropy for ideal mhd problems" Gina Vasey, Daniel Messenger, David Bortz, Andrew Christlieb, Brian O'Shea, https://arxiv.org/abs/2312.05339, Under review for Journal of Computational Physics
Jul - Oct 2014	"High throughput production for ultrasonic therapy using silicon-based microfluidic system." Mario L. Fabiilli; Justin Silpe; Collin Rush; David Lemmerhirt; Edward Tang; Gina Vasey; Oliver D. Kripfgans, 2014 IEEE International Ultrasonics Symposium Proceedings (pp 1770-1773)

Conferences

August 2024	"Influence of Initial Conditions on Data-Driven Model Identification for Ideal MHD Test Problems" Gina Vasey, Daniel Messenger, David Bortz, Andrew Christlieb, Brian O'Shea, International Conference on Data Driven Plasma Science
August 2024	"Data-Driven Recovery of Hammett-Perkins Closure from Particle Data" Gina Vasey, Daniel Messenger, David Bortz, Andrew Christlieb, Brian O'Shea, Z-Fundamental Science Workshop
August 2023	"Successes and Challenges Using a Data-Driven Model Selection Algorithm on Plasma Simulations" Gina Vasey, Daniel Messenger, David Bortz, Andrew Christlieb, Brian O'Shea, Z-Fundamental Science Workshop
July 2023	"Successes and Challenges Using a Data-Driven Model Selection Algorithm on Plasma Simulations" Gina Vasey, Daniel Messenger, David Bortz, Andrew Christlieb, Brian O'Shea, Dense Z-Pinch Conference
May 2023	"Influence of Initial Conditions on Data-Driven Model Identification for Ideal MHD Test Problems" Gina Vasey, Daniel Messenger, David Bortz, Andrew Christlieb, Brian O'Shea, International Conference on Plasma Science
Oct 2022	"Identifying Governing ODEs in Irregular Physical Domain with Diffusion (SAND2022-9174 A)" Gina Vasey; Kristian Beckwith; Patrick Knapp; William Lewis; Brian O'Shea; Andrew Christlieb; Ravi Patel; Christopher Jennings, 2022 American Physical Society Division of Plasma Physics

Work Experience

January-May 2022 AND August-December 2024	Graduate Teaching Assistant **Michigan State University**
May 2021-Present	Graduate Research Intern **Sandia National Laboratories**
Aug 2020 - Dec 2021 AND May 2022 - August 2024	Graduate Research Assistant **Michigan State University**
May-Aug 2018-2020	ATR Center Intern **Wright State University** Collaboration between Wright State University and AFRL.
Jan - Apr 2017 Sep - Dec 2017	Project Team Member in Multidisciplinary Design Program (MDP) *Electrical Engineering and Computer Science* **The University of Michigan**
Jul-Oct 2014	Laboratory Internship *Radiology, Biomedical Engineering* **The University of Michigan**

Programming Languages/Computer Skills

Mainly use C/C++, Python, Fortran, Matlab, and Bash for code development.
Some experience with html and javascript as well.