

# GINA VASEY

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## EDUCATION

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- Current* PhD Candidate, **Michigan State University**  
SEP 2020 COMPUTATIONAL MATHEMATICS, SCIENCE AND ENGINEERING (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

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- 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 | University Honors  
AND FALL 2019 | **The University of Michigan**, College of LSA

## PUBLICATIONS

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- 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
- NOV 2023 | “*Developing and applying quantifiable metrics for diagnostic and experiment design on Z (SAND-2023-13526)*” William Lewis, Patrick Knapp, Kristian Beckwith, Evstati Evstativ, Jeffrey Fein, Christopher Jennings, Roshan Joseph, Brandon Lkein, Kathryn Maupin, Taisuke Nagayama, Ravi Patel, Marc-Andre Schaeuble, **Gina Vasey**, David Ampleford, <https://www-osti.gov.proxy2.cl.msu.edu/biblio/2335899>, Technical Report
- 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

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- 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

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- JANUARY-MAY 2022 | Graduate Teaching Assistant  
AND AUGUST-DECEMBER 2024 | **Michigan State University**
- MAY 2021-PRESENT | Graduate Research Intern  
**Sandia National Laboratories**
- AUG 2020 - DEC 2021 | Graduate Research Assistant  
AND MAY 2022 - AUGUST 2024 | **Michigan State University**
- MAY-AUG 2018-2020 | ATR Center Intern  
**Wright State University**  
Collaboration between Wright State University and AFRL.
- JAN - APR 2017 | Project Team Member in  
SEP - DEC 2017 | 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**