Megan Christina Davis

14550 Abbey Lane, Apt B10
Bath, MI 48808
USA

+1 810 588-8754
davis191@msu.edu
davis191.github.io

Education

2015 – 2019 Michigan State University (MSU), East Lansing, MI.
Bachelors of Science from the Honors College in Astrophysics with a minor in Computational Mathematics, Science, and Engineering.

Thesis: Modeling the Radial Migration of Stars and Gas in the Milky Way
Advisors: Dr. Brian O'Shea (MSU/JINA-CEE) and Dr. Benoit Côté (MSU/Konkoly Observatory)

Work and Research Experience

May – Aug. 2018 **National Aeronautics and Space Administration (NASA) Intern**
Jet Propulsion Laboratory in Pasadena, California under Dr. Mike Bottom

- Built a fully-automated testbed model of a Starshade-Telescope System to test formation flying concepts to be used in direct exoplanet imaging

May – Aug. 2017 **IceCube International Research Experience for Students (IRES)**
Vrije Universiteit Brussel in Brussels, Belgium under Dr. Katie Mulrey

- Worked on scintillator data reduction and analysis for the LOFAR Radio Telescopes LORA scintillating detectors and made Monte Carlo simulations of cosmic ray showers

May – Aug. 2016 **IceCube Research Experience for Undergraduates (REU)**
University of Wisconsin in River Falls, Wisconsin under Dr. Lowell McCann

- Studied optical fibers and their optical properties for possible use in IceCube Gen2 light detectors

Michigan State University

2019 – Present **Post-Baccalaureate Researcher**

- Studies compact objects and their spectral variability in the x-ray waveband

2018 – 2019 **Undergraduate Researcher**

- Used the NuPyCEE Galactic Chemical Evolution Python code to make simulations of the Milky Way
- Built new functionality to account for radial migration of gas and stars in the thin disk of the Milky Way

2017 – Present **Expert Observer and Outreach Coordinator at the Campus Observatory**

- Takes calibration frames and images of various sources, like exoplanet candidates or cataclysmic variable stars
- Reduces raw data and submits it to the American Association of Variable Star Observers, KELT Collaboration, and Center for Backyard Astrophysics
- Develops educational activities and displays for the Public Outreach Program
- Practices science communication by running the social media accounts and advertising public observing events

2017 – 2019 **Learning Assistant**
AST 208: an introduction to exoplanets and observational techniques
AST 207: an introductory course for astronomy majors
ISP 205: an introductory astronomy course for non-science majors

2016 – 2017 **Resident Assistant in *Case Hall***

- Assisted fellow undergraduate students by providing resources and support to the building community

Publications

M. Bottom, S. Martin , E. Cady , **M. C. Davis**, et al. 2019. Starshade formation flying I: optical sensing, submitted to **JATIS** on 28 May 2019.

Awards

2019 1st Prize in the University Undergraduate Research and Arts Forum (UURAF) for presenting a poster titled Modeling the Radial Migration of Stars and Gas in the Milky Way ($100)

2019	Outstanding Teaching Assistant Award from the Department of Physics and Astronomy ($800)
2017 – 2018	Society of Physics Students Honorable Chapter (on the leadership team)
2016 – 2017	Most Compassionate Campus Resident Assistant
2016	Alternate Student selected to be sent to the Amundsen-Scott South Pole Station in Antarctica (IceCube REU)

Committees

2019 – Present Astronomy Department Reporting Task Force

- Developing the infrastructure for reporting harassment/bullying/bad behavior within the group for students, faculty, and research associates

2019 – Present Undergraduate Leader for the Stellar Mentorship Program

- Overseeing the development and implementation for a mentor/mentee program for students within the astronomy department

Conferences Attended and Presentations

July 2019	Mid-Michigan Symposium for Undergraduate Research Experiences (Mid-SURE) Poster Presentation
May 2019	JINA-CEE Frontiers and the First Frontiers Summer School in East Lansing, MI
April 2019	University Undergraduate Research and Arts Forum (UURAF) Poster Presentation
January 2019	Conference for Undergraduate Women in Physics (CUWiP) in East Lansing, MI

Outreach Experience

2019 – Present	MSU Observatory Outreach Coordinator
2015 – 2019	Abrams Planetarium and MSU Observatory Outreach Assistant
2014 – Present	Conference organizer - Rotary Internationals Seminar for Tomorrows Leaders, ran in London, Ontario, Canada

Invited Outreach Talks and Panels

January 2019	MSU Honors College Student Recruitment Weekend Panelist
November 2018	**Storytellers: The Insight on InSight**- Impact89 FM Radio Interview
October 2018	**Interview a Professional** at Freeman Elementary School in Flint, MI

Additional Skills

- Competent to program in Python and familiar with C++, Bash, and HTML
- Regularly uses version control software for academic and research work
- Proficient in AstroImageJ, MaximDL, and XSPEC
- Regularly uses a DSLR and CCD cameras for astrophotography and photometry
- Proficient in French with elementary German, Spanish, and Dutch language skills
- Conflict resolution and personal development training

Extracurricular Activities

2016 – 2019	Alpha Omicron Pi Sorority, Beta Gamma Chapter
2017 – 2019	Order of Omega Greek Honors Society
2018 – 2019	Sigma Pi Sigma Physics Honors Society
2015 – 2019	MSU Astronomy Club
2015 – 2019	Society of Physics Students
	2018 – 2019 President
	2017 – 2018 Vice President
	2016 – 2017 Treasurer