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EDUCATION

- 2020 – Present* **University of Connecticut (UConn)**, Storrs, CT.
PhD in Physics, expected in May 2025. MSc in Physics, conferred in 2022.
- Thesis:** Timing is Everything: Binary Black Holes and Hypervariable Quasars in Massive Time-Domain Surveys
Advisor: Dr. Jonathan Trump
- 2015 – 2019* **Michigan State University (MSU)**, East Lansing, MI.
Bachelors of Science 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)

RESEARCH EXPERIENCE

- 2020 – Present* **NSF Graduate Research Fellow (UConn)**
Isaac S. and Lois W. Blonder Graduate Research Fellow (UConn)
- 2019 – 2020* Post-Baccalaureate Researcher in X-ray Binary Variability Studies (MSU)
- 2017 – 2020* Expert Observer at the MSU Observatory
- 2018 – 2019* Undergraduate Research Assistant in Computational Galactic Chemical Evolution (MSU)
- 2018* NASA (JPL) Summer Intern in Direct Exoplanet Detection with Roman
- 2017* International Research Experience for Students (IRES) Summer Researcher in Nuclear Astrophysics (UWRF/VUBrussels)
- 2016* Research Experience for Undergraduates (REU) Summer Researcher in Nuclear Astrophysics and Optics (UWRF)

PUBLICATIONS

Bolded work denotes first-authored work or significant contribution.

- [1] **Megan C Davis** et al. “Reliable Identification of Binary Supermassive Black Holes from Rubin Observatory Time-domain Monitoring”. In: *The Astrophysical Journal* 965.1 (2024), p. 34.
- [2] **Megan C Davis** and AL Stevens. “Spectral Variability of a Soft-intermediate State QPO from MAXI J1820+ 070”. In: *Research Notes of the AAS* 4.6 (2020), p. 95.

- [3] **Bottom** et al. “Starshade formation flying I: optical sensing”. In: *Journal of Astronomical Telescopes, Instruments, and Systems* 6.1 (2020), pp. 015003–015003.
- [4] **Fries** et al. “The SDSS-V black hole mapper reverberation mapping project: unusual broad-line variability in a luminous quasar”. In: *The Astrophysical Journal* 948.1 (2023), p. 5.
- [5] Sharp et al. “The Sloan Digital Sky Survey Reverberation Mapping Project: investigation of continuum lag dependence on broad-line contamination and quasar properties”. In: *The Astrophysical Journal* 961.1 (2024), p. 93.
- [6] Fries et al. “The SDSS-V Black Hole Mapper Reverberation Mapping Project: A Kinetically Variable Broad-Line Region and Consequences for Masses of Luminous Quasars”. In: *arXiv preprint arXiv:2409.12229* (2024).
- [7] Zeltyn et al. “Exploring Changing-look Active Galactic Nuclei with the Sloan Digital Sky Survey V: First Year Results”. In: *The Astrophysical Journal* 966.1 (2024), p. 85.
- [8] Shen et al. “The Sloan Digital Sky Survey Reverberation Mapping Project: Key Results”. In: *arXiv preprint arXiv:2305.01014* (2023).
- [9] Almeida et al. “The eighteenth data release of the Sloan Digital Sky Surveys: targeting and first spectra from SDSS-V”. In: *The Astrophysical Journal Supplement Series* 267.2 (2023), p. 44.
- [10] Homayouni et al. “A Fundamental Test of Black Hole Masses: Ultraviolet Echo Mapping the Multi-Scale Broad Line Gas around Quasars”. In: *HST Proposal* (2023), p. 17487.
- [11] Zeltyn et al. “A Transient “Changing-look” Active Galactic Nucleus Resolved on Month Timescales from First-year Sloan Digital Sky Survey V Data”. In: *The Astrophysical Journal Letters* 939.1 (2022), p. L16.
- [12] Flinois et al. “S5: Starshade technology to TRL5 Milestone 4 Final Report: Lateral formation sensing and control”. In: *Jet Propulsion Laboratory Publications* (2018).

Software

- [13] Bachetti et al. “StingraySoftware/stingray: v1. 1”. In: *Zenodo* (2022).
- [14] Bachetti et al. “StingraySoftware/stingray: Version 1.0”. In: *Zenodo* (2020).

Abstracts

- [15] Anderson et al. “The Black Hole Mapper in SDSS-V”. In: *American Astronomical Society Meeting Abstracts*. Vol. 55. 2. 2023, pp. 301–03.
- [16] Kaylee Grace, **Megan C Davis**, and Jonathan Trump. “Electromagnetic Detectability of Binary Supermassive Black Holes with the Vera Rubin Observatory”. In: *Bulletin of the American Physical Society* 67 (2022).
- [17] **Megan C Davis**, AL Stevens, and J Strader. “Rapid spectral variability in the black hole transient MAXI J1820+ 070”. In: *American Astronomical Society Meeting Abstracts# 235*. Vol. 235. 2020, pp. 170–13.

TEACHING AND OUTREACH EXPERIENCE

- 2022 – Present* **Co-Organizer of Astronomy on Tap- Storrs, CT**
- Organizes monthly public outreach events comprising of astronomy-themed talks and trivia at local restaurants and bars
- 2017 – Present* **Academic and Research Mentor of Undergraduate Students**
- 2020 – Present* *Research Mentor*
- Micah Banschick (UConn BSc ‘26)
 Matthew Tiongko (UConn BSc ‘26)
 Abena Adzenyah (UConn BEng ‘25)
 Kaylee Grace (UDel PhD ‘28, UConn BSc ‘22, Thesis Mentor)
- 2017 – 2020* *Academic Mentor*
- Caleb Rispler (MSU MD ‘26, MSU BSc ‘22)
 Trevor Fush (Princeton PhD ‘28, MSU BSc ‘22)
 Elizabeth Kowalczyk (UMD PhD ‘28, MSU BSc ‘22)
 Jessie Miller (Caltech PhD ‘27, MSU BSc ‘21)
- 2019 – 2020* **Outreach Coordinator at the MSU Campus Observatory**
- Developed educational activities for the Public Outreach Program, ran social media accounts, and organized monthly outreach events
- 2017 – 2019* **Undergraduate Teaching Assistant (MSU)**
- ISP 205 (two semesters): an introductory astronomy course for non-science majors
 - AST 207: an introductory course for astronomy majors
 - AST 208: an introduction to exoplanets and observational techniques
- 2015 – 2019* Abrams Planetarium and MSU Observatory Outreach Assistant

AWARDS AND SCHOLARSHIPS

- 2024* Summer Doctoral Dissertation Fellowship
- 2024, 2023* UConn National Fellowships Incentive Program Award
- 2020 - 2021* The Isaac S. and Lois W. Blonder Graduate Research Fellowship (UConn)
- 2020 - 2025* NSF Graduate Research Fellowship
- 2019* 1st Prize in the University Undergraduate Research and Arts Forum (UURAF) for presenting a poster on undergraduate thesis work
- 2019* Outstanding Teaching Assistant Award from the Department of Physics and Astronomy (MSU)
- 2015 – 2019* The John F. and Edith L. Wilsterman Scholarship
- 2015 – 2019* Flint Kiwanis Educational Foundation Scholarship

INVITED TALKS AND PANELS

<i>November 2024</i>	Northwestern/CIERA Observational Group Meeting - talk
<i>October 2024</i>	Harvard ITC Luncheon - talk
<i>March 2024</i>	Kansas University Astronomy Seminar - talk
<i>November 2023</i>	Yale Gravitational Wave Symposium - talk and panelist

CONFERENCES AND WORKSHOPS

<i>July 2024</i>	Catching supermassive black holes with Rubin-LSST: Towards novel insights and discoveries into AGN science, Turin, Italy - talk given
<i>May 2024</i>	Astrocodex Hack Day Conference, Yale
<i>April 2024</i>	Time-Domain Needles in Rubin's Haystacks Hack Workshop, Harvard CfA - Hack Lead
<i>July 2023</i>	Establishing Multi-messenger astronomy Inclusive Training (EMIT) Summer School, Vanderbilt
<i>November 2022</i>	SDSS Science Festival, Toronto, ON, Canada
<i>October 2022</i>	Astro Hack Week, Heidelberg, Germany
<i>October 2022</i>	SDSS Software Coding Week, Apache Point Observatory, Sunspot, New Mexico
<i>May 2022</i>	New England Regional Quasar and AGN Meeting (NERQUAM), UConn
<i>July 2021</i>	SDSS 2021 Collaboration meeting , virtual- talk given
<i>April 2021</i>	UConn Physics Graduate Student Association annual poster session- Poster presented
<i>January 2020</i>	235th meeting of the American Astronomical Society (AAS) in Honolulu, Hawaii- poster presented
<i>May 2019</i>	JINA-CEE Frontiers and the First Frontiers Summer School at MSU
<i>April 2019</i>	University Undergraduate Research and Arts Forum (UURAF)- poster presented
<i>January 2019</i>	Conference for Undergraduate Women in Physics (CUWiP) at MSU

COMMITTEES

<i>2023 - 2024</i>	UConn Physics Space Committee <ul style="list-style-type: none"> • Handles office assignments and room allocations for the department
<i>May 2022</i>	Co-Lead of the Local Organizing Committee for NERQUAM 2022 <ul style="list-style-type: none"> • Organized the 30th annual, one-day New England Regional Quasar and AGN Meeting (NERQUAM) held in Storrs, CT in May 2022.

- 2019 – 2020* MSU Astronomy Department Reporting Task Force
- Developed the infrastructure for reporting harassment/bullying/bad behavior within the Astronomy group for students, faculty, and staff
- 2019 – 2020* Co-Lead of the Stellar Mentorship Program at MSU
- Oversaw the development and implementation of a mentor/mentee program for undergraduates, graduates, and post-doctoral researchers within the MSU Astronomy group

ADDITIONAL SKILLS

Software and Hardware:

- Competent in Python, bash scripting, C++, SQL, and HTML
- Familiar with Julia and C
- Regularly uses version control software, like GitHub
- Proficient in using AstroImageJ, MaximDL, DS9, and XSPEC
- Regularly uses DSLR and CCD cameras for astrophotography and photometry

Personal Development:

- Proficient in French and familiar with German, Dutch, and Italian
- Trained in conflict resolution and emergency trauma response

EXTRACURRICULAR ACTIVITIES

- 2021 – 2023* Physics Graduate Student Association
- 2021 – 2023* Vice President
- 2021 – 2022* Acting President
- 2021 – 2022* Acting Event Coordinator
- 2015 – 2019* MSU Astronomy Club
- 2015 – 2019* Society of Physics Students
- 2018 – 2019* President
- 2017 – 2018* Vice President
- 2016 – 2017* Treasurer