

Drew Lapeer – Curriculum Vitae

(they/them/theirs)

Graduate Student

University of Massachusetts-Amherst, Department of Astronomy

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EDUCATION

- 2024 – 2026 **MSc., University of Massachusetts-Amherst** Astronomy.
Advisor: *Professor Daniela Calzetti*
- 2021 – 2024 **BSc., University of Michigan** Astronomy & Astrophysics (Honors), Interdisciplinary Physics.
Thesis: *Dynamical SMBH Detection in Compact Galaxies with NIRSpec/IFU*
Advisor: *Professor Monica Valluri*
- 2022 – 2023 **Washtenaw Community College** General Studies
- 2019 – 2021 **Macomb Community College** General Studies

RESEARCH APPOINTMENTS

- 2024 – … **Graduate Research Assistant**, Department of Astronomy, College of Natural Sciences, University of Massachusetts-Amherst.
Advisor: *Professor Daniela Calzetti*
- 2022 – 2024 **Undergraduate Research Assistant**, Department of Astronomy, College of Language, Science, and Arts, University of Michigan.
Advisor: *Professor Monica Valluri*

AWARDS & ACHIEVEMENTS

- 2025 **Graduate Travel Support Award**, College of Natural Sciences, University of Massachusetts (\$775)
- 2024 **Walter W. Wada Award for Community Engagement**, Department of Physics, University of Michigan (\$800)

PUBLICATIONS

([NASA ADS](#); Pre-prints of submitted/in preparation articles available upon request.)

Current Articles in Preparation

- 1 D. Lapeer, D. Calzetti, K. Grasha, *et al.*, “FEAST: The Relationship Between the Youngest Star Clusters and Giant Molecular Clouds,” *in preparation*, Nov. 2025.

First Author & Major Contributions

- 1 D. Lapeer, D. Calzetti, K. Grasha, *et al.*, “FEAST: Probing Hierarchical Star Formation with the Spatial Distributions of Young Star Clusters,” *submitted to ApJ*, Aug. 2025.
- 2 B. Tahmasebzadeh, A. Lapeer, E. Vasiliev, M. Valluri, M. A. Taylor, and S. Thompson, “The Lower Limit of Dynamical Black Hole Masses Detectable in Virgo Compact Stellar Systems Using the JWST/NIRSpec IFU,” *The Astrophysical Journal*, vol. 974, no. 1, 60, p. 60, Oct. 2024. DOI: [10.3847/1538-4357/ad6a1b](https://doi.org/10.3847/1538-4357/ad6a1b). arXiv: [2408.02142](https://arxiv.org/abs/2408.02142) [[astro-ph.GA](#)].

Co-Author

- 1 G. Bortolini, M. Correnti, A. Adamo, *et al.*, “FEAST: JWST/NIRCam View of the Resolved Stellar Populations of the Interacting Dwarf Galaxies NGC 4485 and NGC 4490,” *The Astrophysical Journal*, vol. 991, no. 2, 212, p. 212, Oct. 2025. DOI: [10.3847/1538-4357/adcfcf](https://doi.org/10.3847/1538-4357/adcfcf). arXiv: [2509.01740](https://arxiv.org/abs/2509.01740) [[astro-ph.GA](#)].

- ② D. Calzetti, R. C. Kennicutt, A. Adamo, *et al.*, “Quantification of the Age Dependence of Mid-infrared Star Formation Rate Indicators,” *The Astrophysical Journal*, vol. 991, no. 2, 198, p. 198, Oct. 2025. DOI: [10.3847/1538-4357/adfbe0](https://doi.org/10.3847/1538-4357/adfbe0). arXiv: [2508.08451 \[astro-ph.GA\]](https://arxiv.org/abs/2508.08451).
- ③ M. Correnti, G. Bortolini, F. Dell’Agli, *et al.*, “FEAST: Probing the Stellar Population of the Starburst Dwarf Galaxy NGC 4449 with JWST/NIRCam,” *The Astrophysical Journal*, vol. 990, no. 1, 72, p. 72, Sep. 2025. DOI: [10.3847/1538-4357/adec74](https://doi.org/10.3847/1538-4357/adec74). arXiv: [2507.03420 \[astro-ph.GA\]](https://arxiv.org/abs/2507.03420).
- ④ A. Knutas, A. Adamo, A. Pedrini, *et al.*, “FEAST: JWST Uncovers the Emerging Timescales of Young Star Clusters in M83,” *The Astrophysical Journal*, vol. 993, no. 1, 13, p. 13, Nov. 2025. DOI: [10.3847/1538-4357/ae018c](https://doi.org/10.3847/1538-4357/ae018c). arXiv: [2505.08874 \[astro-ph.GA\]](https://arxiv.org/abs/2505.08874).
- ⑤ A. Pedrini, A. Adamo, A. Bik, *et al.*, “The Near Infrared Spectral Energy Distribution of Young Star Clusters in the FEAST Galaxies: Missing Ingredients at 1–5 μm ,” *The Astrophysical Journal*, vol. 992, no. 1, 96, p. 96, Oct. 2025. DOI: [10.3847/1538-4357/ae0182](https://doi.org/10.3847/1538-4357/ae0182). arXiv: [2509.01670 \[astro-ph.GA\]](https://arxiv.org/abs/2509.01670).
- ⑥ M. A. Taylor, B. Tahmasebzadeh, S. Thompson, *et al.*, “A Supermassive Black Hole in a Diminutive Ultracompact Dwarf Galaxy Discovered with JWST/NIRSpec+IFU,” *Astrophysical Journal Letters*, vol. 991, no. 1, L24, p. L24, Sep. 2025. DOI: [10.3847/2041-8213/ae028e](https://doi.org/10.3847/2041-8213/ae028e). arXiv: [2503.00113 \[astro-ph.GA\]](https://arxiv.org/abs/2503.00113).

INVITED (†) AND CONTRIBUTED TALKS

- 2026 **AAS 247, Phoenix, Arizona**, *The relationship between young star clusters and giant molecular clouds in NGC 628*
- 2025 † **University of Wisconsin-Madison Friday Science Seminar**, *Hierarchical Star Formation in Local Volume Galaxies with JWST-FEAST*
 † **Tufts University Astronomy Seminar**, *Hierarchical Star Formation in Local Volume Galaxies with JWST-FEAST*
 † **University of Kansas Lunch Seminar (Virtual)**, *Hierarchical Star Formation in Local Volume Galaxies with JWST-FEAST*
- 2023 **University of Michigan Undergraduate Research Talks**, *Dynamically Detecting SMBHs in Compact Galaxies with JWST NIRSpec/IFU*

POSTERS

- ① **A. Lapeer**, B. Tahmasebzadeh, M. Valluri, E. Vasiliev, and M. Taylor, “Do Broad Background Potentials Impact Dynamical SMBH Detection?”, ser. University of Michigan Undergraduate Symposium, May 2024.
- ② **A. Lapeer**, B. Tahmasebzadeh, M. Valluri, E. Vasiliev, and M. Taylor, “Probing the Lower Limits of Detectable Central Black Hole Masses in Virgo Cluster CSS with JWST NIRSpec IFU Kinematics,” in *American Astronomical Society Meeting Abstracts #243*, ser. American Astronomical Society Meeting Abstracts, vol. 243, Feb. 2024, 110.06, p. 110.06.
- ③ **A. Lapeer**, B. Tahmasebzadeh, M. Valluri, E. Vasiliev, and M. Taylor, “How Low Can You Go? Lower Limits of Recoverable SMBH Mass in Virgo Cluster UCDs from JWST NIRSpec IFU Data,” ser. Great Lakes Clusters and Streams Conference, Aug. 2023.
- ④ **A. Lapeer**, B. Tahmasebzadeh, M. Valluri, E. Vasiliev, and M. Taylor, “How Low Can You Go? Lower Limits of Recoverable SMBH Mass in Virgo Cluster UCDs from JWST NIRSpec IFU Data,” ser. University of Michigan Undergraduate Symposium, May 2023.

SELECTED SCIENCE COMMUNICATION WRITING

- 2025 **Outflows, Shocks, and Star Formation in Messier 82**, *AstroBites, AAS Nova*
 Discovering a Stunted Giant: An Intermediate Mass Black Hole Hiding in the Milky Way, *AstroBites*
 Detection of a Fast Radio Burst at Cosmic Noon, *AstroBites*

SELECTED SCIENCE POLICY WRITING

- 2025 **Big Changes to the NSF’s Graduate Fellowship Mean Big Problems**, *AstroBites, Lead Author*

SELECTED SCIENCE POLICY WRITING (continued)

NASA Needs Your Help!, *Astrobites*, Contributing Author

TEACHING

- 2025 **Graduate Instructor, Research Experience in Astronomy for Teachers**
Lead graduate instructor and lab lead for a summer course designed to assist K-12 public school teachers from Springfield, MA in incorporating astronomy into science lectures.
- 2022-2024 **Math, Physics, CS Tutor , Washtenaw Community College**
Tutored a wide range of students in math (arithmetic through differential equations, linear algebra), physics (intro physics I, II) and computer science (unix, Python, C++).
- 2023-2024 **Undergraduate Lab Assistant, Department of Astronomy, University of Michigan**
Ran observing labs and assisted students in introductory astronomy (ASTRO 101, 102) and astrophysics (ASTRO 201) labs throughout several semesters. This included operating several telescopes, motorized dome operation, question answering, and worksheet help.
- Undergraduate Instructor, Michigan Math and Science Scholars Program, University of Michigan**
Was the sole undergraduate instructor for a 2-week, intensive astronomy course for high school students from around the world focused on dark matter and black holes. Designed course materials, ran 4-hour, daily programming labs, ran observing nights, chaperoned field trips, and more.

MENTORSHIP

(† = research mentor)

- 2024 - † **Jeremy Sun**, University of Massachusetts Undergraduate
- 2024 - 2025 **Emma Davis**, Smith College Undergraduate, now PhD at University of Rochester
- 2023 - 2024 † **Callum Bloom**, University of Michigan Undergraduate

SELECTED OUTREACH & SERVICE

- 2025 - **Astronomy on Tap – Western Mass. Organizing Committee**
Member of the organizing committee for the western Massachusetts branch of Astronomy on Tap
- 2024 - **Astrobites Author**
Author for popular science communication platform Astrobites, which aims to provide summaries of new research aimed at undergraduates. **Co-chair of Education committee. Chair of Website committee.**
- GRAD Mentor**
Graduate mentor through the GRAD program, aimed at helping undergraduates apply to graduate programs in astronomy and physics. Mentored several students and assisted them in their applications.
- 2025 **Astronomy Day Northampton Organizer**
Organizer and volunteer for national astronomy day event in Northampton, MA. Worked with local astronomy educators to facilitate educational activities for children throughout the day.
- 2024 **Astronomy Graduate School Application Guide**
Lead author of a comprehensive, 20 page guide and collection of resources aimed at de-mystifying graduate school applications in astronomy. Specifically aimed towards non-traditional students like myself.
- 2023 - 2024 **Astronomy Monthly at Washtenaw Community College**
Founded and maintained a monthly astronomy group at WCC aimed at involving community college students in the field. Ran observing nights, hosted science talks, ran python labs, and more.
- Telescope Operator and Outreach Coordinator**
Helped run public observing nights as the primary telescope and dome operator of the 0.4m telescope at the University of Michigan. Engaged with the public, ran telescopes, answered questions, and more.
- Not Rich @ UMich Board Member**
Founding board member of Not Rich @ UMich, a student organizing aimed at combating poverty related issues in the undergraduate population at the University of Michigan. Facilitated group grocery trips, ran pay-as-you-can dinner events, and educated the broader community on wealth disparity at the university.

SCIENCE COLLABORATIONS & PROFESSIONAL MEMBERSHIPS

2024 - **FEAST-JWST Science Collaboration** (feast-survey.github.io)

2023 - **American Astronomical Society**

AAS Division on Dynamical Astronomy

SKILLS

Languages English (Native), Spanish (Conversational/Basic).

Programming Python, C++, Html, css, \LaTeX

Packages Numpy, Astropy, Matplotlib, SciPy, Photutils, AGAMA, astroML, Lmfit, emcee.

Tools DS9, GALFIT, MAST, Git, FORSTAND, APT, JWST ETC.

Misc. Data analysis, Data visualization, Microsoft Office, Graphic Design, Science communication, Scientific writing (journalistic + academic)