

Julian Falcone

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EMPLOYMENT

University of South Carolina, Columbia, SC	Fall 2026
Postdoctoral Researcher	

EDUCATION

Georgia State University, Atlanta, GA	Fall 2020 - Spring 2026
Ph.D., Astronomy	
Advisor: Dr. D. Michael Crenshaw	
Thesis: <i>A Spatially-Resolved, Multiphase Analysis of AGN-Driven Feedback and Outflows in NGC 3227</i>	
M.S., Physics with Astronomy Concentration	Summer 2022
Case Western Reserve University, Cleveland, OH	Fall 2016 - Spring 2020
Bachelor of Science, Astronomy	
Secondary Major, Physics	

ADDITIONAL RESEARCH EXPERIENCE

American Museum of Natural History, New York City, NY	Summer 2020 - Summer 2024
Volunteer Researcher and Mentor in the Y/Dim Collaboration with Dr. Charles Liu	
Louisiana State University, Baton Rouge, LA	Summer 2017
Participant in Research Experience for Undergraduates (REU) program	

REFEREED PUBLICATIONS

★ = first-author publication

- Robinson, J., et al. including **Falcone, J.** “*On the Tully-Fisher Relation for Active Galaxies -- I: Evidence of Larger Scatter*”, 2026, [ApJ](#), 1006, 2.
- Shea, M., et al. including **Falcone, J.** “*An Analysis of Active Galactic Nucleus Feedback in the Compact Galaxy Group Stephan's Quintet*”, 2026, [ApJ](#), 997, 2.
- ★ • **Falcone, J.**, et al. “*Spatially Resolved, Multiphase Mass Outflows of the Seyfert 1 Galaxy NGC 3227*”, 2026, [ApJ](#), 997, 68.
- Tutterow, J., et al. including **Falcone, J.** “*The Shape of AGN-driven Winds in the Seyfert Galaxy NGC 3516*”, 2025, [ApJ](#), 990, 2.
- Revalski, M., et al. including **Falcone, J.** “*Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies. V. The Expanded Sample*”, 2025, [ApJ](#), 984, 1.
- ★ • **Falcone, J.**, et al. “*An Analysis of AGN-Driven Outflows in the Seyfert 1 Galaxy NGC 3227*”, 2024, [ApJ](#), 971, 17.
- Meena, B., et al. including **Falcone, J.** “*Investigating the Narrow Line Region Dynamics in Nearby Active Galaxies*”, 2023, [ApJ](#), 943, 98.
- Revalski, M., et al. including **Falcone, J.** “*Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies. IV. The Effects of Different Density Estimates on the Ionized Gas Masses and Outflow Rates*”, 2022, [ApJ](#), 930, 14.

- Bentz, M. C., et al. including **Falcone, J.** “*Broad-band Photometric Monitoring of 1226 Golia and 6349 Acapulco*”, 2022, [The Minor Planet Bulletin](#), 49, 4.

GRANTS

★ = principal investigator

- ★ • **ALMA Cycle 13**, PI 2026
“Characterizing Multiphase and Multiscale Outflows in Nearby Active Galaxies” 47.3 hours
- **JWST Cycle 5 GO**, Co-I 2026
“Following the Shocks: JWST IFU Spectroscopy of NGC 4258’s Radio Arcs” 14.2 hours
- **2025 Collaborative Call for Proposals Award**, Co-I, *Georgia Space Grant Consortium* Spring 2025
Funds to host [AsTroPalooza: The Astronomy of ATL Showcase](#) \$30,000

CONFERENCE PROCEEDINGS

- **Falcone, J.** et al. “*Spatially-Resolved Multiphase, Multi-scale NLR Outflows in the Seyfert 1 Galaxy NGC 3227*”. Accepted for publication at RMxAA.

NON-REFEREED PUBLICATIONS

- Ludwig, E., **Falcone, J.**, et al. “*The Relation between Gas-phase Metallicity and Stellar Mass Surface Density in Post-starburst E+A and E+A+ Galaxies within the Coma Cluster Observed by the SDSS-IV MaNGA Survey*”, 2022, [RNAAS](#), 6, 12, 259.
- Quayum, R., **Falcone, J.**, Greenfield, S., and Liu, C. “*E+A Galaxy Candidates in and around the Leo Cluster*”, 2021, [RNAAS](#), 5, 3, 53.
- **Falcone, J.**, Wurmser, S., Kerrison, N., et al. “*E+A Galaxies in and Around Nearby Rich Clusters of Galaxies*”, 2021, [RNAAS](#), 5, 3, 67.

INVITED TALKS, COLLOQUIA, & SEMINARS

- “*A Detailed Study of the Kinematics and Mass Outflows of Ionized and Molecular Gas in NGC 3227*”. Department of Physics and Astronomy Colloquium, University of South Carolina, June 2026.
- “*A Spatially-Resolved, Multiphase Analysis of AGN-Driven Feedback and Outflows in NGC 3227*”. Dissertation Jamboree, NASA Active Galactic Nuclei Science Interest Group. ([Click here to watch the recording](#))
- “*Characterizing the Kinematics and Mass Outflows of Ionized and Molecular Gas in NGC 3227*”. UMBRELA Dialogue, Center for Astrophysics | Harvard & Smithsonian, March 2026.
- “*Analyzing the AGN-Driven Outflows in the Seyfert 1 Galaxy NGC 3227*”. Galaxies and AGN Journal Club, Space Telescope Science Institute, November 2024.

CONFERENCE TALKS

- “*Spatially Resolved Mass Outflow Rates for the Ionized and Molecular Gas in NGC 3227*.” Talk presented at the 247th AAS Meeting, Tucson, AZ, January 2026. ([Click here to view abstract](#))
- “*Resolving the AGN-Driven Gas Evacuation in the Seyfert 1 Galaxy NGC 3227*”. Talk presented at the 245th AAS Meeting, National Harbor, MD, January 2025. ([Click here to view abstract](#))

- “Multiwavelength Analysis of the Outflows and Feedback Processes in the Seyfert 1 Galaxy NGC 3227”. Talk presented at Galaxies at Crossroads: Outflows and IMF in the VLT/ELT/ALMA/JWST Era, Brno, Czech Republic, September 2024. ([Click here to view abstract](#))
- “Multiwavelength Analysis of the Outflows and Rotation in the Seyfert 1 Galaxy NGC 3227”. Talk presented at the 243rd AAS Meeting, New Orleans, LA, January 2024. ([Click here to view abstract](#))
- “Disentangling Outflows and Rotation in the Star-Forming Seyfert 1 Galaxy NGC 3227”. Talk presented at AGN Winds on the Chesapeake, Easton, MD, June 2023.

* Contributed as co-author to 5 additional oral presentations at major conferences.

CONFERENCE POSTERS

- **Falcone, J.**, et al. “Disentangling Outflows and Rotation in the Star-Forming Seyfert 1 Galaxy NGC 3227”. 241st AAS Meeting, Seattle, WA, January 2023. ([Click to view poster](#))
- **Falcone, J.**, et al. “An Analysis of AGN-Driven Outflows in the Seyfert 1 Galaxy NGC 3227”. 240th AAS Meeting, Pasadena, CA, June 2022. ([Click to view poster](#))
- **Falcone, J.**, et al. “E+A Galaxies In and Around Nearby Rich Clusters of Galaxies”, 237th AAS Meeting, January 2021. ([Click to view poster](#))
- **Falcone, J.**, Corbitt, T., and Cripe, J. “Improving Thermal Noise Measurements in Crystalline AlGaAs Mirrors”. 23rd Annual Summer Undergraduate Research Forum, Baton Rouge, Louisiana, July 2017.

* Contributed as co-author to 21 additional poster presentations at major conferences.

MENTORING

- Madeline Davis - PhD Student, Georgia State University Summer 2023, Summer 2025 - Spring 2026
- Barbara Carson - Undergraduate Student, Georgia State University Summer 2025 - Spring 2026
- Daijha Sankey - Undergraduate Student, Georgia State University Summer 2025
- Kesha Patel - REU Student, Georgia State University Summer 2024 - Spring 2025
- June Tutterow - Masters Student, Georgia State University Spring 2024 - Summer 2025
- Nicolas Ferree - REU Student, Georgia State University Summer 2022
- Eric Ludwig - Undergraduate Student, CUNY College of Staten Island Summer 2021- 2023

AWARDS AND SCHOLARSHIPS

- **Travel Support Award, ZIHUAGN: central kpc region conference** Fall 2025
- **Graduate Scholar Travel Award, Georgia State University** Fall 2025
- **Career Development Fellowship, Out to Innovate (formerly known as NOGLSTP)** Spring 2024
Support for travel to an international conference.
- **Travel Support Award, AGN Winds on the Chesapeake Conference** Summer 2023
- **Rod Nave Educator Award for Outstanding Teaching Assistantship,** Spring 2023
Dept. of Physics and Astronomy, Georgia State University
- **Georgia Space Grant Consortium Fellowship, Georgia Space Grant Consortium** 2022 - 2026
- **Chambliss Astronomy Achievement Student Award, Honorable Mention** Summer 2022
American Astronomical Society

- **Jason J. Nassau Prize**, *Dept. of Astronomy, Case Western Reserve University* Spring 2020
- **Richard L. Garwin Award**, *Dept. of Physics, Case Western Reserve University* Spring 2020

OBSERVING EXPERIENCE

Astrophysical Research Consortium (ARC) 3.5-meter Telescope Summer 2021 - Spring 2026
Apache Point Observatory, Sunspot, NM Total: 230 hours (180 remote, 50 in-person)

- Lead observing sessions by assisting in planning, and facilitating calibration and science measurements on the KOSMOS spectrograph.

Hard Labor Creek Observatory Spring 2021
Georgia State University-owned telescope located in Rutledge, GA Total: 30 hours

- Observed the photometric movements of two asteroids
- Calibrated and analyzed the raw data using IRAF

TECHNICAL SKILLS

Below lists my familiarity with various tools and software based on how often I use them.

COMFORTABLE USING EVERY DAY	FAMILIAR USING SEMI-MONTHLY	COULD LEARN AGAIN IT'S BEEN A COUPLE YEARS
Python (including standard packages like NumPy, Astropy, etc.)	Bash	FORTRAN
LaTeX	SAO DS9	MATLAB
IDL	IRAF	SQL
	GSU's high-performance computing (HPC) facilities	TOPCAT

TEACHING EXPERIENCE

Instructor of Record, ASTR1010 Georgia State University
 "Astronomy of the Solar System" Fall 2025

Teaching Assistant, ASTR1010 (Lab) Georgia State University
 "Astronomy of the Solar System" 3 classes, spread between 2020 - 2021

Teaching Assistant, ASTR1020 (Lab) Georgia State University
 "Stellar and Extragalactic Astronomy" 10 classes, spread between 2020 - 2024

Teaching Assistant, PHYS 2211 (Lab) Georgia State University
 "Principles of Physics I" 1 class, 2023

Teaching Assistant, PHYS 1122K (Lab) Georgia State University
 "Introductory Physics II" 1 class, 2023

SERVICE AND OUTREACH

..... Committees and Extended Commitments

Astronomy Peer Advising Leaders (AstroPAL)

Fall 2022 - Spring 2026

Mentor and member

Atlanta, GA

- (Fall 2022 - Spring 2026) As a **member**, I help organize and lead focus groups and workshops for junior Astronomy grad students. I also attend the monthly department faculty meetings and represent the graduate students by voicing any concerns or issues to the faculty.
- (Fall 2022 - Spring 2024) As a **mentor**, I am a peer advisor for a first or second year grad student in the Astronomy program. We have monthly one-on-one meetings to discuss navigating research, classes, and life in grad school.

GSU Graduate Council for the College of Arts and Sciences

Fall 2022 - Fall 2025

Graduate Representative

Atlanta, GA

- Provide a graduate student perspective on issues related to topics such as graduate stipends and graduate student benefits.
- Advocate for better conditions for graduate students by dialoguing with the graduate directors and deans about the hardships that many graduate students face at GSU.

Georgia Outreach Team for Space (GOT Space)

Summer 2021 - Fall 2025

Graduate Outreach Lead

Atlanta, GA

- Coordinate and participate in astronomy-based outreach events with educators in the Atlanta area.
- Collaborate with graduate students and educators at Georgia Institute of Technology to develop presentations and activities for outreach events.

GSU Physics and Astronomy Dept. Publicity & Outreach Committee

Fall 2021 - Spring 2024

Co-representative

Atlanta, GA

- Coordinate outreach requests received through faculty or the university.
- Contribute updates on outreach initiatives to the yearly department newsletter.

CWRU Women in Physics and Astronomy Club

Fall 2018 - Spring 2020

Cofounder and President

Cleveland, OH

- Organize events such as workshops and lectures by female professors centering around women interested in careers in physics and astronomy.
- Encourage participation in physics and astronomy among undergraduate students by attending off-campus lectures and events by women in physics and astronomy.
- Foster an environment of support for women studying physics and astronomy to help overcome the challenges of working in a male-dominated field.

Cleveland Museum of Natural History

Fall 2016 - Spring 2019

Volunteer at the Educator Resource Center

Cleveland, OH

- Organized and stored the various educational kits being sent to and from Cleveland's schools.
- Collaborated with the museum's astronomers to improve outdated astronomy kits by designing supplemental activities.

..... Individual Service/Outreach Events

- “What Sort of Light Do We Get From the Sun?” Talk presented to elementary school students at Indian Creek Elementary School, Atlanta, Georgia, May 2025.
- “The Physics of Time Travel: An Introduction to Einstein’s Theory of Special Relativity”. Public outreach talk given for Astronomy on Tap Atlanta, Atlanta, Georgia, January 2025.

- Executive secretary for a NASA Astrophysics Data Analysis Program (ADAP) review panel. Took notes of the discussion and helped facilitate voting processes. August 2024.
- *“Starts With a Bang #109 - Launching a galactic cone”*. Guest appearance on the Starts With a Bang podcast, September 2024. ([Click to listen](#))
- *“AGN Feedback and Outflows”*. Talk presented at “From Galaxies to Gluons” lunch talk series, Atlanta, Georgia, June 2024.
- *“Supermassive Black Holes and Their Feedback Processes: Understanding the Universe’s Rowdiest Partiers”*. Public outreach talk given for the Three Taverns Lecture Series, Atlanta, Georgia, May 2024.
- *“Georgia Outreach Team for Space”*. Talk presented at the Georgia Space Grant Affiliates meeting, Atlanta, Georgia, April 2024.
- *“Star of Our World”*. Talk presented to elementary school students at Usher-Collier Elementary School, Atlanta, Georgia, September 2023.
- *“AGN Feedback in NGC 3227”*. Talk presented at “From Galaxies to Gluons” lunch talk series, Atlanta, Georgia, August 2023.
- *“From Cosmic Rays to Food: How Does Nuclear Physics Affect My Life?”* Volunteer at the nuclear physics booth at the Atlanta Science Festival, Atlanta, Georgia, April 2023.
- *“What Aliens Might Exist in Our Solar System?”* Talk presented to elementary school students at M. Agnes Jones Elementary School, Atlanta, Georgia, September 2022.
- *“From Cosmic Rays to Food: How Does Nuclear Physics Affect My Life?”* Volunteer at the nuclear physics booth at the Atlanta Science Festival, Atlanta, Georgia, April 2022.
- *“How Do Galaxies Change Over Time?”* Virtual talk presented to elementary school students at the International School of Brooklyn, December 2021.
- *“Fly to Planets and Build a Solar System with GOT Space!”* Volunteer and coordinator of GOT Space’s booth for Space Day Atlanta, Atlanta, Georgia, September 2021.