

# Kaila Ronayne

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 (LinkedIn)  (Github) (Personal Website) (ADS Library)

## RESEARCH INTERESTS

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Observational astronomy, high  $z$  universe, galaxy-formation, galaxy cluster, protoclusters, star formation, star formation history, galaxy evolution, active galactic nuclei (AGN), polycyclic aromatic hydrocarbons (PAHs)

## EDUCATION

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### PhD Astronomy

*Astrostatistics Track*

Texas A&M University, College Station, TX

Advisor: Casey Papovich

Expected Graduation: Aug. 2028

### M.S. Astronomy

Texas A&M University, College Station, TX

Advisor: Casey Papovich

Graduated: May 2025

### B.S. Aerospace Engineering

*Minors in Astrophysics and Mathematics*

Texas A&M University, College Station, TX

Graduated: Dec. 2021

## RESEARCH APPOINTMENTS

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### Graduate Student

Texas A&M University

Department of Physics and Astronomy

Advisor: Casey Papovich

Jan. 2022 - Present

### Assistant Researcher

Texas A&M University

Department of Physics and Astronomy

Advisors: Casey Papovich and Guang Yang

Aug. 2020 - Dec. 2021

### Assistant Researcher

Texas A&M University

Department of Aerospace Engineering

Research Group: SpaceCRAFT

Advisor: Gregory E. Chamitoff

May 2018 - May 2019

## INTERNSHIPS

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### Airworthiness Intern

Lockheed Martin, Fort Worth, TX

- Used software skills to optimize current data analysis methods. Aim was to improve previous methods of data processing to increase efficiency of work on the airworthiness team, as well as the chief engineers office.

May 2021 – Dec. 2021

## PUBLICATIONS

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### First Author

- CEERS: 7.7  $\mu\text{m}$  PAH Star Formation Rate Calibration with JWST MIRI; Ronayne et al. 2024

### Co-Author

- CEERS: Spatially Resolved UV and mid-IR Star Formation in Galaxies at  $0.2 < z < 2.5$  The Picture from the Hubble and James Webb Space Telescopes; [Shen et al. 2023](#)
- CEERS: Increasing Scatter along the Star-Forming Main Sequence Indicates Early Galaxies Form in Bursts; [Cole et al. 2023](#)
- The HST–Hyperion Survey: Grism Observations of a  $z \sim 2.5$  Proto-Supercluster; [Forrest et al. 2025](#)
- The HST–Hyperion Survey: Companion Fraction and Overdensity in a  $z \sim 2.5$  Proto-supercluster; [Giddings et al. 2025](#)
- MEGA Mass Assembly with JWST: The MIRI EGS Galaxy and AGN Survey; [Brakhaus et al. 2025](#)

### Contributing Author

- A Long Time Ago in a Galaxy Far, Far Away: A Candidate  $z \sim 14$  Galaxy in Early JWST CEERS Imaging; [Finkelstein et al. 2022](#)
- A dusty starburst masquerading as an ultra-high redshift galaxy in JWST CEERS observations; [Zavala et al 2022](#)

### HONORS AND AWARDS

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<b>Avilés-Johnson Doctoral Fellowship</b> <i>Awarded \$184,733</i>	Jan. 2022–Aug. 2027
<b>NASA/ Texas Space Grant Consortium Fellowship</b> <i>Awarded \$5,000</i>	2022–2023
<b>Graduate Student Research and Presentation Travel Award</b> <i>Awarded \$1,000</i>	Feb. 2025

### AWARDED TIME/ARCHIVAL FUNDING

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<b>(CO-I) JWST Cy4 GO-7957</b> <i>MEGA Spectra: Black Hole Growth and ISM Conditions at Cosmic Noon</i>
<b>(CO-I) JWST Cy3 AR-5075</b> <i>Unveiling the Morphological Evolution of Galaxies in Protoclusters: Insights from JWST Imaging</i>
<b>(CO-I) JWST Cy2 GO-3794</b> <i>MEGA Mass Assembly at Cosmic Noon: MIRI EGS Galaxy and AGN Survey</i>

### CERTIFICATIONS

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<b>An Introduction to Evidence-Based Undergraduate STEM Teaching</b> <i>Certification of Completion (<a href="#">Certification Link</a>)</i>	Apr. 2024
<b>Advanced Teaching Practices: Research-Driven Approaches for Higher Education</b> <i>CIRTL Practitioner (<a href="#">Certification Link</a>)</i>	Apr. 2025
<b>Mastery Certificate in Instruction &amp; Assessment</b> <i>Certification of Completion (<a href="#">Certification Link</a>)</i>	Apr. 2025

### PRESENTATIONS

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#### Talks

- Texas A&M Astro-symposium Aug. 2022
- Astronomy on Tap - Bryan College Station (AoT BCS) Oct. 2022
- CEERS Team Meeting May 2023
- Texas A&M Astro-symposium Aug. 2023
- Astronomy on Tap - Bryan College Station (AoT BCS) Feb. 2024
- STSci Spring Symposium Apr. 2024
- CEERS Team Meeting May 2024
- Brazos Valley Astronomy Club June 2024
- Texas A&M Astro-symposium Aug. 2024
- (*Invited*) TAMU Department of Atmospheric Sciences Seminar Series Sept. 2024

• Astronomy on Tap - Bryan College Station (AoT BCS)	Apr. 2025
• The Inagural Cosmic Frontier Center Conference	May 2025
• Texas A&M Astro-symposium	Aug. 2025
<b>Posters</b>	
• Bashfest Symposium at University of Texas at Austin	Oct. 2023
• American Astronomical Society (AAS) 243rd meeting	Jan. 2024
• STSci Spring Symposium	Apr. 2024
• Crisol 2025: Galaxy Origins in the JWST Era	May 2025

## COLLABORATIONS

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Cosmic Evolution Early Release Science (**CEERS**) Survey, JWST/MIRI EGS Galaxy and AGN (MEGA) Survey, Charting Cluster Construction with VUDS and ORELSE (**C3VO**) Survey

## LEADERSHIP

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MAGIC* Coordinator	Aug. 2023–Nov. 2024
Astronomy on Tap - Bryan College Station - Treasurer	Aug. 2022–Nov. 2024

## MENTORSHIP/OUTREACH

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MAGIC* Graduate Student Mentor	Aug. 2022– Nov.2024
Adopt-a-Physicist <sup>†</sup>	Oct. 2024–

## TEACHING

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### Teaching Assistant

• INTRO GALAXIES AND COSMOLOGY	Spring 2022
• OVERVIEW OF MODERN ASTRONOMY	Fall 2022–Spring 2023
• STARS AND EXTRASOLAR PLANETS	Fall 2023

## PROGRAMMING

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**Fluent:**Python, LaTeX, Linux, Unix

**Experience:** MATLAB, Robot C, Visual Basic for Applications (VBA), bash, R, HTML, Image Reduction and Analysis Facility (IRAF)

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\*Mentoring And Advising Graduates In An Inclusive Community (MAGIC)

<sup>†</sup>See more about Adopt-a-Physicist