

# Anika Kumar

 |  website |  ak8532@rit.edu

## EDUCATION

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- 2024 - present MS (Astrophysical Sciences and Technology) at **Rochester Institute of Technology**  
2021 - 2024 B.S. (Physics & Astronomy, Computer Science Minor) at **University of Pittsburgh**  
(Cum Laude, Departmental Honors)

## RESEARCH

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My research interests lie in studying the evolution of galaxies through cosmic time. I combine SPS modeling codes with photometric and spectroscopic observations to derive the star-formation histories of galaxies.

### 1. POPPIES Survey

The Public Observation Pure Parallel Infrared Emission-Line Survey, is a large area NIRCam wide-field slitless spectroscopy (WFSS) program (POPPIES) designed to study the distance Universe. As the lead data reduction scientist for this survey, I am reducing  $\sim 150$  different fields (each with 3-8 filters), creating mosaics, and producing photometric catalogs.

### 2. SQuIGGLE Survey

the Studying QUenching in Intermediate-redshift Galaxies: Gas, angular Momentum, and Evolution (SQuIGGLE) survey is a multi-wavelength study of post-starburst galaxies (PSBs) at  $z \sim 0.7$ . My work focuses on studying the environments of these PSBs, specifically targeting the gas-rich "buddy galaxies" that live within the dark matter halos of the massive PSBs.

## TEACHING AND OUTREACH

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### Graduate Teaching Assistant, RIT

Aug 2024 - Present

- Galactic Astrophysics TA Fall 2025
- College Physics 1 TA Spring 2025
- College Physics 1 TA Fall 2024

### ImagineRIT Coordinator, RIT

Jan 2025-Present

- ImagineRIT is an annual and university wide public outreach event targeting all ages. As coordinator, I plan and organize RIT's Astrophysics exhibit.

### Research Group Leader for STEPUP, University of Pittsburgh

Sep 2021-July 2024

- STEPUP (Survey of Transiting Extrasolar Planets at the University of Pittsburgh) is an undergraduate led research group at the University of Pittsburgh.
- Recruit and mentor students to join undergraduate research.
- Teach students how to use telescopes at Allegheny Observatory, collect data, process images, create light curves, make sense of their findings, and explore other areas of exoplanet research.

## Allegheny Observatory Outreach

Aug 2023-April 2024

- Astrophysicist for a Day: Panelist and guest lecturer for high school students interested in pursuing a career in astrophysics
- Allegheny Observatory Open House: Ran exhibit for STEPUP

## PUBLICATIONS

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**Kumar, Anika** et al. (Sept. 2025). “Meet the Neighbors: Gas Rich “Buddy Galaxies” are Common around Recently Quenched Massive Galaxies in the SQuIGGLE Survey”. In: *Research Notes of the American Astronomical Society* 9.9, 243, p. 243. DOI: [10.3847/2515-5172/ae0469](https://doi.org/10.3847/2515-5172/ae0469).

Setton, David J. et. al (incl **Kumar, Anika**) (Aug. 2025). “SQuIGGLE: Buried star formation cannot explain the rapidly fading CO(2-1) luminosity in massive,  $z \sim 0.7$  post-starburst galaxies”. In: *arXiv e-prints*, arXiv:2509.00148, arXiv:2509.00148. DOI: [10.48550/arXiv.2509.00148](https://doi.org/10.48550/arXiv.2509.00148). arXiv: [2509.00148 \[astro-ph.GA\]](https://arxiv.org/abs/2509.00148).

## PRESENTATIONS

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1. *Characterizing the Star-Forming Main Sequence of Low-Mass, High-Redshift Galaxies in the POPPIES Survey* Anika Kumar, Jeyhan Kartaltepe, Marc Rafelski, POPPIES Collaboration, Talk, Infrared Spectroscopy from Space Symposium, Fall 2025, Caltech, Pasadena, CA
2. *Gas Rich “Buddy Galaxies” Found Near Recently Quenched Galaxies at  $z \sim .6$*  Anika Kumar, Rachel Bezanson, David Setton, Poster, CUWiP, Spring 2024, Undergraduate Poster Session Fall 2023, University of Pittsburgh, Pittsburgh, PA.
3. *Gas Rich “Buddy Galaxies” Found Near Recently Quenched Galaxies at  $z \sim .6$*  Anika Kumar, Rachel Bezanson, David Setton, Poster, CUWiP, Spring 2024, West Point Academy, West Point, NY.
4. *Gas Rich Neighbors are Common Around Recently Quenched Galaxies in the SQuIGGLE survey* Anika Kumar, Rachel Bezanson, David Setton, iPoster, 243th AAS meeting, New Orleans, LA
5. *Gas Rich “Buddy Galaxies” Found Near Recently Quenched Galaxies at  $z \sim .6$*  Anika Kumar, Rachel Bezanson, David Setton, Poster, Undergraduate Poster Session Fall 2023, University of Pittsburgh, Pittsburgh, PA.
6. *Gas Abundances in Post-Starburst Galaxies* Anika Kumar, Rachel Bezanson, David Setton, Justin Spilker, Poster, Undergraduate Poster Session Spring 2023, University of Pittsburgh, Pittsburgh, PA.
7. *Incidence Rate of Neighboring Gas-Rich Galaxies* Anika Kumar, Rachel Bezanson, David Setton, Justin Spilker, Poster, CUWiP, Spring 2023, Penn State University, State College PA.
8. *Gas Abundances in Post-Starburst Galaxies* Anika Kumar, Rachel Bezanson, David Setton, Justin Spilker, Poster, Duquesne Summer Research Symposium, Summer 2022, Duquesne University, Pittsburgh PA.

## SCHOLARSHIPS AND AWARDS

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### AST New York Space Grant

awarded: Spring 2026 ( \$5000 total)

### NASA Pennsylvania Space Grant Consortium

awarded: Fall 2023, Spring 2023, Fall 2022, Summer 2022, Spring 2022 ( \$15000 total)

Last updated: October 27, 2025