AKSHAY SURESH

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EDUCATION

Ph. D. (Astronomy), Cornell University 08/2017 – 08/2022 (expected)
MS (Astronomy), Cornell University 08/2017 – 12/2019
BS–MS (Physics) Dual Degree with Distinction, IISER Pune 08/2012 – 05/2017

RESEARCH EXPERIENCE

Graduate Research Assistant at Cornell University 08/2017 – Present
Advisor: James M. Cordes
Ph.D. thesis: *Radio Transient Searches from Millisecond to Hour-long Timescales*

Visiting Student Researcher at UC Berkeley 09/2021 – Present
Advisors: Vishal Gajjar & Andrew P. V. Siemion

Masters Thesis Research Student at NCRA–TIFR, Pune 05/2016 – 05/2017
Advisor: Divya Oberoi
MS thesis: *Investigation of Small Scale Weak Solar Emissions at Low Radio Frequencies*

Undergraduate Summer Internships:
DAAD−WISE internship at the Max Planck Institute for Extraterrestrial Physics 2015
NIUS−Physics fellow at NCRA–TIFR, Pune 2014

AWARDS AND SCHOLARSHIPS

IAU Symposium 363 (virtual) Grants Support: Registration Fee Waiver 2021
Cranson and Edna B. Shelley Outstanding Teaching Assistant Award (Cornell Univ.) 2019
Institute Gold Medal (IISER Pune) 2017
Outstanding Student Paper Award in Space Physics and Aeronomy (AGU Fall Meeting) 2016
DAAD−WISE Summer Scholarship 2015
National Initiative on Undergraduate Sciences − Physics Fellowship 2013
Kendriya Vaigyanik Protsahan Yojana Fellowship 2012 – 2017

REFEREED JOURNAL PUBLICATIONS

6 publications: 5 first-author, 1 co-author.

6. **Suresh, A.**, Cordes, J. M., Chatterjee, S., Gajjar, V., Perez, K. I., Siemion, A. P. V., & Price, D. C., *4–8 GHz Spectro-temporal Emission from the Galactic Center Magnetar PSR J1745−2900*, 2021 *ApJ* 921 101.

5. **Suresh, A.**, Chatterjee, S., Cordes, J. M., & Crawford, F., *An Arecibo Search for Fast Radio Transients from M87*, 2021 *ApJ* 920 16.

4. Gajjar, V., et al. (26 authors including **Suresh, A.**), *The Breakthrough Listen Search For Intelligent Life Near the Galactic Center I*, 2021 *AJ* 162 33.

3. **Suresh, A.**, Chatterjee, S., Cordes, J. M., Bastian, T. S. & Hallinan, G., *Detection of 2—4 GHz Continuum Emission from ϵ Eridani*, 2020 *ApJ* 904 138.

2. **Suresh, A.**, & Cordes, J. M., *Induced Polarization from Birefringent Pulse Splitting in Magnetoionic Media*, 2019 *ApJ* 870 29.

1. **Suresh, A.**, Sharma, R., Oberoi, D., et al. (39 authors), *Wavelet-based Characterization of Small-scale Solar Emission Features at Low Radio Frequencies*, 2017 *ApJ* 843 19.

ACADEMIC PRESENTATIONS

Contributed Conference Talks

IAU Symposium 363: Neutron Star Astrophysics at the Crossroads 2021
4–8 GHz Emission of the Galactic Center Magnetar PSR J1745−2900

The Past, Present, and Future of the VLA: Celebrating 40 Years 2021
Radio Emission from ϵ Eridani

NANOGrav Fall Meeting 2019
The Breakthrough Listen Galactic Center Survey using the Green Bank Telescope

Seminars

Caltech Radio Astronomy Lunch Talk 2021
A 4–8 GHz Search for Fast Transients at the Galactic Center

Breakthrough Listen Standing Seminar 2021
4–8 GHz Emission Morphology of the Galactic Center Magnetar

Event Horizon Telescope Pulsar Working Group 2020
Galactic Center Pulsar Searches with Breakthrough Listen Data

NCRA-TIFR Seminar 2019
Birefringent Pulse Splitting in Magnetoionic Media

UC Berkeley SETI Seminar 2018
Propagation-induced Effects on Fast Radio Bursts and Extraterrestrial Intelligence Signals

Posters

35th Meeting of the Astronomical Society of India 2017
Exploring the Spatial Distribution of Weak Non-thermal Energy Releases on the Solar Surface

American Geophysical Union Fall Meeting 2016
Wavelet Based Characterization of Low Radio Frequency Solar Emissions

34th Meeting of the Astronomical Society of India 2016
Statistical analysis of weak solar bursts seen with the Murchison Widefield Array

APPROVED ALLOCATIONS

Observing Proposals (as PI)

Very Large Array:
VLA/19A-283: Precise Localization of Flares from the ϵ Eri Exoplanetary System (12 hrs.)

Green Bank Telescope:
GBT/21A-332: A Pilot Search for Galactic Transients from VLASS-identified Sources (12 hrs.)
GBT/19A-407: A FLAG Survey of Virgo and Coma Clusters for Fast Radio Bursts (64 hrs.)

Arecibo radio telescope:
P3315: L-band Survey of M87 for Fast Radio Bursts (12 hrs.)

Super-computing Proposals (as Co-PI)

XSEDE allocations PHY200054 and PHY210038:
Searches for Bursts, Pulses, and Periodic Signals in the Time Domain Radio Sky

TEACHING EXPERIENCE

Head Teaching Assistant (Cornell University)
ASTRO 1101: From New Worlds to Black Holes Fall 2018

Teaching Assistant (Cornell University)
ASTRO 1102: Our Solar System Spring 2018
ASTRO 1101: From New Worlds to Black Holes Fall 2017

MENTORING EXPERIENCE

Supervised Ryan J. Hill & Ethan S. Bair (both Cornell undergrads) during Fall 2019 on "Radio Frequency Interference Classification using Convolutional Neural Networks."

ACTIVE MEMBER AFFILIATION

Graduate student member, American Astronomical Society 2019 – Present

TECHNICAL SKILLS

Computer Languages Python, PyTorch, LaTeX, HTML, Slurm batch scripting
Astronomy Software PRESTO, CASA, DS9
Other Software Microsoft Office

PROFESSIONAL SERVICE

Journal Referee
Monthly Notices of the Royal Astronomical Society 2020

OUTREACH

"Ask an Astronomer" team member at Cornell University 2017 – 2020
Answer astronomy-related questions submitted by the public on an online forum.

Scientific Poster-making Workshop Organizer 2020
A tutorial on scientific poster-making and presentation for Cornell Astronomy REU students.

4H Career Explorations for high school students 2018
Conducted lectures and demonstrations on blackbody radiation and spectral lines.

Museum in the Dark 2018
Organized stargazing sessions as part of a Halloween-themed night-time event at a local museum.