

# AKSHAY SURESH

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## EDUCATION

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Ph. D. (Astronomy), Cornell University	08/2017 – 06/2022 (expected)
MS (Astronomy), Cornell University	08/2017 – 12/2019
BS–MS (Physics) Dual Degree with Distinction, IISER Pune	08/2012 – 05/2017

## RESEARCH EXPERIENCE

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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

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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

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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*, [Accepted to ApJ, 2021](#).
5. **Suresh, A.**, Chatterjee, S., Cordes, J. M., & Crawford, F., *An Arecibo Search for Fast Radio Transients from M87*, [Accepted to ApJ, 2021](#).

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  $\epsilon$  Eridani*, 2020 *ApJ* 904 138.
2. **Suresh, A.**, & Cordes, J. M., *Induced Polarization from Birefringent Pulse Splitting in Magneto-ionic 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.

## TEACHING EXPERIENCE

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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

## ACADEMIC PRESENTATIONS

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### Contributed Conference Talks

The Past, Present, and Future of the VLA: Celebrating 40 Years <i>Radio Emission from <math>\epsilon</math> Eridani</i>	2021
NANOGrav Fall Meeting <i>The Breakthrough Listen Galactic Center Survey using the Green Bank Telescope</i>	2019

### Seminars

Breakthrough Listen Standing Seminar <i>4–8 GHz Emission Morphology of the Galactic Center Magnetar</i>	2021
Event Horizon Telescope Pulsar Working Group <i>Galactic Center Pulsar Searches with Breakthrough Listen Data</i>	2020
NCRA-TIFR Seminar <i>Birefringent Pulse Splitting in Magnetoionic Media</i>	2019
UC Berkeley SETI Seminar <i>Propagation-induced Effects on Fast Radio Bursts and Extraterrestrial Intelligence Signals</i>	2018

### Posters

35th Meeting of the Astronomical Society of India <i>Exploring the Spatial Distribution of Weak Non-thermal Energy Releases on the Solar Surface</i>	2017
American Geophysical Union Fall Meeting <i>Wavelet Based Characterization of Low Radio Frequency Solar Emissions</i>	2016

**APPROVED ALLOCATIONS**

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Observing Proposals (as PI)

Very Large Array:

VLA/19A-283: Precise Localization of Flares from the  $\epsilon$  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

**MENTORING EXPERIENCE**

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

**ACTIVE MEMBER AFFILIATION**

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Graduate student member, American Astronomical Society 2019 – Present

**TECHNICAL SKILLS**

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**Computer Languages** Python, C, C++, L<sup>A</sup>T<sub>E</sub>X, HTML**Astronomy Software** PRESTO, CASA, DS9**PROFESSIONAL SERVICE**

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Journal Referee

Monthly Notices of the Royal Astronomical Society 2020

**OUTREACH**

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“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.*