Sakhee Bhure

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Florida Institute of Technology
BS Astronomy and Astrophysics — August 2014 - May 2017

RESEARCH

Dr J. Christiansen Caltech/IPAC-NExScI <christia@ipac.caltech.edu> — October 2020 - February 2022

Statistical Validation of Exoplanet Candidates from the *K2* Mission Detected via a Fully Automated Pipeline

The Scaling K2 team has been working towards creating a uniform and unbiased sample of K2 candidates for further demographics studies. From the 800+ candidates autonomously detected and vetted from K2 data, I statistically validated those candidates which had high resolution imaging and reconnaissance spectra (~100) using VESPA, a statistical validation package developed by Dr. Timothy Morton. A paper describing our work and results has been accepted for publication in February 2022.

Working on this project developed my fluency in a new programming language, Python, and helped me better understand statistical analysis methods.

Dr. D. Ragozzine Brigham Young University <darin_ragozzine@byu.edu> — March - August 2020

Photodynamical Modeling Project

DEPARTMENT OF PHYSICS AND SPACE SCIENCES, FLORIDA INSTITUTE OF TECHNOLOGY

Dr. Cs. Palotai <cpalotai@fit.edu> — August - December 2017

Simulations of the Great White Spot on Neptune using the EPIC Model

Dr. D. Ragozzine <darin_ragozzine@byu.edu> — March 2015 - August 2018

Understanding Architectures of Exoplanet Systems with Normalized Planet Radii and Orbital Periods

Dr. C. Neish <cneish@uwo.ca> — August 2014 - May 2015

Processing of S- and P-band Radar Images obtained by the Lunar Reconnaissance Orbiter

INTERNSHIP National Center for Radio Astrophysics (NCRA), India — May - June 2016

Searching for redshifted $H21$ cm Absorption by Measuring the Spin Temperatures of two Damped Lyman-α Absorbers using GMRT data

COMPUTATIONAL SKILLS Python (5 years), Julia (2 years), C++ (1 year), and LaTeX (6 years)

OBSERVING EXPERIENCE

Palomar PHARO PI: Dr. J. Christiansen — 1 night

SOAR Goodman Spectrograph PI: Dr. K. Hardegree-Ullman — 1 night

PUBLICATIONS ADS ORCID

Christiansen, J. L., **Bhure S.**, Zink, J. K., Hardegree-Ullman, K. K. et al. (2022) Scaling K2. V. Statistical Validation of 60 New Exoplanets From K2 Campaigns 2–18. The Astronomical Journal, 163.

Zink, J.K., Hardegree-Ullman, K.K., Christiansen, J.L., **Bhure, S.**, Adkins, B.D., Petigura, E.A., Dressing, C.D., Crossfield, I.J., & Schlieder, J.E. (2021). Scaling K2. IV. A Uniform Planet Sample for Campaigns 1–8 and 10–18. The Astronomical Journal, 162.

CONFERENCES AND WORKSHOPS

AAS 238 238th Meeting of the American Astronomical Society — June 2021

Oral Presentation: Scaling K2: Validating Kepler/K2 Candidates using vespa

Press Presentation: **Exoplanets and Brown Dwarfs II**: Scaling K2: Validating Kepler/K2 Candidates using VESPA

49th Meeting of the Division of Planetary Sciences (**DPS 49**), Provo, Utah — October 2017

Poster Presentation: Studies of Dark Spots and Their Companion Clouds on the Ice Giant Planets

48th Meeting of the Division of Planetary Sciences (**DPS 48**), Pasadena, California — October 2016

Oral Presentation: Investigating Normalized Architectures of Multi-Transiting Exoplanetary Systems

National Radio Astronomy Observatory (**NRAO**) **Community Day Workshop** — March 2015

Florida Institute of Technology

CUWIP 2015 American Physical Society's 10th Annual Conference for Undergraduate Women in Physics — January 2015

University of Mississippi

TEACHING

Instructor

Education Initiatives, India — December 2018 - June 2019

I developed and taught a three-week, hands-on Astronomy course to 22 grade 6–10 students at the ASSET Summer Program in May 2019.

Graduate Teaching Assistant

Department of Physics and Space Sciences, Florida Institute of Technology — August - December 2017

I taught two sections of PHY 2091: Physics Laboratory I (Mechanics) (43 students).

TEACHING (VOLUNTEER WORK)

Volunteer Educator Akanksha Foundation, Pune — July 2019 - March 2020

I assisted with differentiated learning in grade 8 science and mathematics courses and developed community-building and waste-management projects at the Pujya Kasturba Gandhi English Medium School, Pune.

AWARDS

Dean's List every semester from Fall 2014 - Spring 2017
Outstanding Junior of the Year in Physics and Space Sciences 2015-2016
Distinguished Student Scholar 2015-2016
Outstanding Sophomore of the Year in Physics and Space Sciences 2014-2015

WORK

Science Writer (Freelance)

Office for Climate Education Sorbonne Université - Institut Pierre Simon Laplace April 2022 - May 2022
proofreading and editing the entire MOOC Climate and Ocean

The Wire, India writing science articles for a general audience June - July 2019, February 2020

Intern Science Activity Center (SAC) Indian Institute for Science Education and Research (IISER), Pune Feb 2020 - July 2021
Science Writing, Pedagogy and Curriculum Development
Science Writing: *I wrote scientific explanations for the activities to be published on the SAC website and in an illustrated activity handbook.*
Pedagogy: *I assisted on a project funded by Tata Technologies to train local teachers to incorporate hands-on activities in their classrooms.*

FLORIDA INSTITUTE OF TECHNOLOGY

Resident Assistant Department of Residence Life August 2015 - May 2018
I worked as a peer leader in the on-campus residence halls at Florida Institute of Technology aiming to foster a living-learning environment conducive to studying as well as social interaction and individual development for all students; was responsible for safety, security, and discipline in my residence area; organized and promoted socially, culturally, and educationally enriching programs and events for students, evaluated and interviewed candidates applying to be RAs; and worked towards maximizing sustainability on campus.
*I was awarded the **Resident Assistant of the Year Award** for the year 2017-2018.*

Student Blogger Office of Marketing & Communications August 2015 - December 2016

PUBLIC OUTREACH AND AMBASSADOR ACTIVITIES

United States India Education Foundation (USIEF), EducationUSA, Mumbai summer 2015, 2016, 2017, 2019
Panelist: Pre-Departure Orientation
I talked to students who would be studying in the United States about life as an undergraduate student in the US, socio-cultural issues, the F1 visa and other documents, adjusting to a new environment, academic opportunities, orientation week, and answered their questions about living and studying in the United States.

US Visa Day, US Consulate, Mumbai June 9, 2016
Panelist at press interaction and Student Representative for Student Visa Day

227TH Meeting of the American Astronomical Society, Kissimmee, Florida January 2016
Volunteer

FLORIDA INSTITUTE OF TECHNOLOGY

Society of Physics Students (SPS), Member Fall 2014 - Spring 2017
Student Astronomical Society (SAS), Member Fall 2014 - Spring 2017
Student Astronomical Society Secretary October 2014 - March 2015
Residence Hall Association Roberts Hall Sep 2014 - May 2015

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