

Sai Krishna Teja Kanumalla

CONTACT INFORMATION

Arizona State University
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EDUCATION

Arizona State University, Tempe, AZ, USA

Ph.D., Astrophysics August 2022 - June 2027

- Thesis topic: *3-dimensional characterization of compositions of exoplanetary atmospheres using ground and spaced-based observatories*
- Advisor: Professor Michael R. Line

University of Amsterdam, Amsterdam, Netherlands

M.Sc., Physics and Astronomy September 2020 - July 2022

- joint-degree awarded along with the *Vrije Universiteit (VU) Amsterdam*
- Thesis: *Tracing the atmospheric mass-loss in exoplanets using He 1083 nm observations*
- Advisor: Professor Antonija Oklopčič

National Institute of Technology, Calicut, India

B.Tech., Engineering Physics July 2016 - June 2020

- *First-class with distinction*
- Thesis: *Correlations of X-ray and Optical properties of globular clusters in the Andromeda galaxy*
- Advisors: Professor Ravikumar C.D. , Professor Ravi Varma M.K.

RESEARCH EXPERIENCE

Modelling

- Masters thesis - Developed a 3D atmosphere model to obtain constraints of the mass loss of WASP-69b using CARMENES spectrograph observations
- Used statistical models to characterize the time variability of the X-ray data of Cygnus-X1 from *ROSAT* satellite using statistical models

Observing

- Retrofitted a slitless spectrograph to a 12cm refractor telescope at the Anton Pannekoek Observatory (APO) to search for transients in open cluster IC 4665

Data analysis

- Analyzed the *HERMES* spectrograph observations of two Wolf-Rayet binaries WR 128 and CQ Cep to estimate their orbital parameters
- Bachelor's thesis: Correlations of X-ray and Optical properties of globular clusters in the Andromeda galaxy

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| HONORS AND SCHOLARSHIPS | Bharati merit scholarship , Government of Andhra Pradesh, India • Financial assistance awarded for academic performance during bachelor's education at the National Institute of Technology, Calicut | October 2018 |
| PRESENTATIONS AND INVITED TALKS | • Atmospheric negative feedback cycles in the Archean atmosphere , Exoplanets and Disks meeting (EDM) at the University of Amsterdam, January 2022 • Retrofitting FAST as a bistatic RADAR , Radio Astronomy Mock proposals symposium at the University of Amsterdam, May 2021 • Quantisation of Maxwells field , Weekly colloquium at the University of Calicut, January 2020 • Public talk, Probing ISM with pulsars , Tathva cultural festival at the National Institute of Technology Calicut, November 2019 • Morphological distribution of Galaxies , Undergraduate symposium at the National Institute of Technology Calicut, April 2019 | |
| SKILLS | • Programming and Softwares <ul style="list-style-type: none"> • Python (Professional working proficiency) • MATLAB (Professional working proficiency) • C (Limited working proficiency) • Julia (Limited working proficiency) | |
| TEACHING EXPERIENCE | • Tutor at De Bijlsmester Amsterdam <ul style="list-style-type: none"> • Wiskunde A (Mathematics) | January 2022 - June 2022 |
| | • Teaching assistant at the National Institute of Technology, India <ul style="list-style-type: none"> • Statistical Mechanics (PH2006) • Classical Mechanics (PH2001) • Introduction to Quantum Physics (PH2005) | Spring 2020 Fall 2019 Fall 2019 |
| MEMBERSHIPS AND OUTREACH | • Outreach committee member <ul style="list-style-type: none"> • Anton Pannekoek Institute (API) for Astronomy, University of Amsterdam. | December 2020 – July 2022 |
| | • Cygnus: Physics Association <ul style="list-style-type: none"> • Student association for workshops on Physics and Astronomy at the National Institute of Technology, Calicut • Founding member, Executive committee member | January 2019 – January 2020 |
| | • Cosmic light workshop <ul style="list-style-type: none"> • Workshop on introduction Astrophotography and post-processing techniques • Public outreach event for the rural areas of Kerala state in India | December 2019 |
| AWARDS | • Pre-final round runner-up, International Astrophysics & Astronomy competition • State level runner-up, IKEN Scientifica Olympiad | 2019 2013 |