

SAHIL JHAWAR

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INTRODUCTION

A postgraduate student with scientific training and temperament. Gained valuable experience while working on research projects that demand sound analytical and problem solving skills, adaptability and sound understanding of programming, Physics and Mathematics. I look at things scientifically and make sure that I learn everything about it. I like to know about new technologies and the way they function.

EDUCATION

Universität Potsdam, Potsdam

October 2021 - Present

Master of Science in Astrophysics

Coursework:

- Gravitational Wave Astrophysics
- Atomic Spectroscopy
- Computational Astrophysics
- General Relativity
- Stellar Evolution
- Bayesian Inference
- Multi-messenger astronomy
- Galactic Dynamics
- Statistics

Christ (Deemed to be University), Bengaluru

2018-2021

Bachelor of Science (Physics, Maths and Electronics)

GPA: 3.68/4.0

Final Year Project: Gesture Controlled System based on Raspberry Pi Pico

WORK

Theoretical Astrophysics Group

March 2023 - Present

Master's Thesis

Universität Potsdam, Potsdam

Master's thesis student under **Prof. Dr. Tim Dietrich**.

- Working on using Bayesian techniques for Multi Messenger Astronomy using *NMMA*.
- Characterizing the systematic uncertainties that arise in the modeling of electromagnetic counterparts of multi-messenger sources.

4-MOST

December 2022 - Present

Student Assistant

Leibniz-Institut für Astrophysik Potsdam (AIP), Potsdam

Student Assistant in the Project Management team for building (integration, installation and maintenance) the 4-metre Multi-Object Spectroscopic Telescope (4MOST).

- Utilized technical skills in troubleshooting and problem-solving within the specialized environment of an astronomical integration hall.
- Proactively managed procurement activities, liaising with vendors to procure essential large-scale items for the integration hall, ensuring timely delivery while adhering to budget constraints.
- Engaged in data analysis, providing insights to the telescope detectors

PROJECTS

Research workshop on evolved stars

August 2022 - September 2022

Participant

University of Potsdam & Astronomical Institute of CAS, Prague

Created a target list of handful of stars from a catalogue of few hundred thousand stars and obtained spectras using Perek 2m telescope at Ondřejov Observatory. Data reduction and analysis was done using IRAF and visualised through Python.

Radio Astronomy Winter School 2020

Winter Student

December 2020 - January 2021

IUCAA & NCRA-TIFR, Pune

Learned basics of radio astronomy and its instrumentation and computational field. Also worked on few physical experiments and worked on GMRT and ORT data using Python.

Detailed reports can be found here

Krittika

Summer Project Intern

May 2020 - August 2020

IIT Bombay, India

Developed a Python package to analyse various types of binary star system.

EXPERIENCE

Let's Talk Astronomy, Christ

Student coordinator

November 2019 - January 2021

Bengaluru, India

Acted as a liaison between students and faculty. Conducted 15+ talks.

LIGO-India, Vigyan Samagam (DAE-DST-NCSM, G.O.I)

Scientific Communicator

September - December 2019

Bengaluru and Kolkata

Successfully played a role of science communicator by explaining GW Science and GW Exhibits to the audience of all ages. Catered to nearly 500 visitors

Astronomical Society of India

Volunteer

February 2019

Bengaluru, India

Worked with hospitality committee to cater to all needs of guests and help in the smooth running of the conference during the 37th Annual Meeting of ASI at Christ (Deemed to be University).

SKILLS

| | |
|---------------------------|---|
| Technical | Python, C/C++, TOPCAT, L ^A T _E X, Git, Unix based OS and Windows, MS Office |
| Packages and tools | NumPy, SciPy, Pandas, Matplotlib, Astropy |
| Personal | Critical thinking, Problem solving, Leadership, Research and Analysis |
| Language | English and Hindi |

CERTIFICATIONS/MOOCs

Light and Beyond (2020)

ICTS, Bengaluru

Astronomy and Astrophysics (2019)

MPBIFR, Bengaluru

CO-CURRICULAR ACTIVITIES

POSITIONS OF RESPONSIBILITY

Student Coordinator of Mathematics Association, Christ

Student Coordinator of Sequence 2021, Christ

Student Coordinator of Event Horizon 2021, Christ

Head of Events Core Committee for Sequence 2020, Christ

Event Head in Eureka 2019, Christ