JOB DESCRIPTION

Joining date: September 2024

Salary: 42,000/- per month.

Duration: Upto March 2026

Application Deadline: September 16ᵗʰ 2024 (see process below), till the position is filled up**.**

Position Title: Project Associate

Reporting to: Professor Samyaday Choudhury

School of Arts and Sciences, Ahmedabad University, Commerce Six Roads, Navrangpura, Ahmedabad, 380009, Gujarat

About the University/School/Centre: Ahmedabad University is a private, non-profit research university that offers students a liberal education focused on interdisciplinary learning and research thinking.

Role Summary: The Astronomy & Astrophysics group at Ahmedabad University is accepting applications for the position of a Project Associate to work on a project titled **"Study of Interstellar medium filaments detection algorithms and application on the Galactic plane TeraHertz surveys".** The Project Associate would work towards the identification of suitable data products in our Galaxy, carry out a comparison of existing algorithms for identifying Interstellar medium (ISM) filamentary structures, and apply them to relevant data products (Thz and multi-wavelength data sets). The project is crucial for answering fundamental astrophysical processes related to star formation and for developing future data analysis tools. The Project Associate will work with Professor Samyaday Choudhury, scientists at the Space Applications Centre (SAC-ISRO, Ahmedabad), and their collaborators. Strongly motivated candidates from all genders and diverse backgrounds are encouraged to apply for this position.

Responsibilities:
1. Employ and explore various algorithms to identify ISM filamentary structure.
2. Conduct a comprehensive survey of THz and complementary data from various instruments, data compilation and preprocessing.
3. Carry out statistical comparisons of different identification methods.
4. Present results in conferences/meetings.
5. Compile Report.

Key Skills:
1. Proficient coding skills in Python and other languages (e.g., C).
2. Knowledge of statistical and numerical methods.
3. Knowledge of Linux OS.
4. Good communication skills in English.

Qualification:
- 4-year BS (Honours) OR Master's degree (M.Sc) OR Integrated BS-MS degree in Physics/Applied Physics/Applied Mathematics/Statistics.
- Bachelor's in Engineering/Bachelor's in Technology OR Masters in Engineering/Masters in Technology.
- Candidate must have credited courses on Introductory Astronomy & Astrophysics and/or done data-related or computational projects in Astronomy & Astrophysics.

Candidates with the following Experience will be given preference: Has carried out projects on Thz data sets; Has familiarity with high-performance computers; Has familiarity with Image analysis techniques and machine learning algorithms.

How to Apply:

1. **Deadline: September 16ᵗʰ 2024,** till the position is filled up.
2. The candidates must express their interest by writing a "Cover Letter", which **must not exceed 1 page.** The

letter must highlight the relevant skills and experiences from past projects/courses **[NOTE: AI-generated applications shall be rejected].**

3. CV – must include **Two Referees**' names, phone numbers, email addresses and designation.
4. Marksheet of Undergraduate and Postgraduate degrees (as applicable).
5. All the above documents must be **combined as a single PDF in the order mentioned (10 MB max)** and mailed to samyaday.choudhury@ahduni.edu.in, with the email subject as: **"Appl: SAC-AhdUni Thz project - CANDIDATE's NAME".**
6. Shortlisted candidates will be contacted, and further information will be provided.
7. Any questions regarding the project should be directed to
samyaday.choudhury@ahduni.edu.in