RAMAN RESEARCH INSTITUTE
BANGALORE 560080
Advt. No. 12/2022

The Raman Research Institute, funded by the Government of India, is a premier institute engaged in research in basic sciences. More information about the Institute, the fields of research, and other details can be viewed at its website www.rri.res.in

Applications are invited for THREE POSTS of RESEARCH ASSISTANT on a temporary basis for the CMB Distortion Lab in RADIO ASTRONOMY. The lab hosts a number of indigenously designed experiments to carry out precision measurements of the radio sky spectrum. This would enable the much sought after detection of spectral distortions in the cosmic radio background arising from formation and evolution of the very first stars and galaxies in the Universe.

The three appointees would work towards design and development aspects of the projects catering to antenna, analog, and digital subsystems of the telescopes. The website of the group is at https://wwws.rri.res.in/DISTORTION/ and the physicists/engineers appointed as research assistants for this activity would be part of this experimental group and participate in the research given in the website.

The appointments would be for a period of one year, extendable to a second year, subject to satisfactory performance and project status. We seek motivated individuals, with good academic background, proficiency and aptitude in experimental research, seeking 1 to 2-year internships with a research team engaged in cutting-edge research on an open problem in modern astrophysics. We prefer candidates seeking experience of observational/experimental activity in astronomy and astrophysics; with intent to pursue a research career in these fields. Ability to work with a team is essential. The details of the required qualifications and experience are given below.

Job Description:

The three successful candidates would work on the ongoing projects of CMB Distortion Lab, working in the fields of:
1. Antenna engineering,
2. Analog electronics and
3. Digital electronics.

The work would involve participating in the design, development, characterization, testing and integration of the receiver subsystems, spanning across electromagnetic simulations, radio frequency (RF) system science, digital electronics and digital signal processing.

Remuneration: A remuneration of Rs. 23,500/- per month at commencement + applicable HRA will be paid to the selected candidates. An increment of Rs. 1,000 will be provided in the second year.

Essential Qualification: (it is mandatory that the candidate fulfils everything written here)

BE/BTech degree in Electrical, Electronics, Electronics & Communication Engineering or related branches, with at least 70% marks or 7.0 CGPA in the qualifying examination, or an MSc degree with Physics specialisation with at least 70% marks or 7.0 CGPA in the qualifying examination.

The applicant is expected to provide documentary evidence of previous pursuits of interest in astronomy/astrophysics. Ability to work in teams and field stations is essential. Although the position and work will be based at the Raman Research Institute campus at Bangalore, it may be needed to make field trips with the team members for testing, validation and deployment of radio astronomy receivers and/or system tests and measurements.

Desirable: (these are expected additional qualifications and skill sets**)**

A valid JEST or CSIR-UGC NET or GATE score in respective specialisation is desirable. Domain knowledge and experience in practical night sky astronomy with telescopes, analog and digital electronics, programming in C, Python and VHDL scripts. Project experience pertaining to cubesats and/or other space-based experiments is desirable. Experience with use of electromagnetic simulation packages like CST, HFSS, WIPL-D etc, RF design software like Genesys/ADS or FPGA tools like ISE and Vivado would be an added advantage. The application may document examples of project work or experience in these domain areas.

The last date for receipt of applications is 21 October, 2022 . All applications received till the due date would be given due consideration. If no suitable candidate is subsequently selected by the screening and interview process, the position would be kept open on the Institute website till filled.

Upper Age Limit: The upper age limit is 35 years as on the last date of application**.** Applicants above 35 years may be considered if accompanied by commensurate experience and competency.

General Information:

1. Age relaxation will be applicable as per Govt. of India rules for the candidates belonging to SC/ST/OBC/PWD categories.

2. Second class train fare for attending test/interview shall be reimbursed to the candidate on provision of original tickets.
3. The Institute reserves the right to restrict the number of candidates for test/ interview to a reasonable limit, on the basis of relevant qualification and experience higher than the minimum prescribed in the advertisement.
4. Mere fulfilling the essential and desired qualifications will not entitle an applicant to be called for an interview.
5. The Institute reserves the right to relax any of the above requirements in exceptional cases.
6. The Institute reserves the right not to fill the post herein advertised.
7. Canvassing in any form shall disqualify the candidate.

How to apply:

Interested candidates can apply by filling up an online form, and uploading all the relevant documents/images, including:
1. Scanned colour copies of educational certificates and marksheets,
2. Curriculum Vitae (1-2 page),
3. Statement of purpose (1-2 page), as to what motivates the applicant to apply for the above post and why the applicant is the appropriate choice for the opening,
4. A recent passport size photograph and signature

Each applicant would need to mark the post(s) they are applying for and provide references of two individuals whom the Institute could contact for referral letters. In case of any queries/help, please contact recruitment@rri.res.in

Link to the application: http://rhino.rri.res.in:9900/forms/racmb2022.php

Incomplete applications, particularly those without a Statement of Purpose, will not be considered.
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