



Advt. No: 15/2024

### **Position available for Junior Research Fellowship (JRF)**

Applications are invited from highly motivated and eligible candidates for the position of Junior Research Fellow (JRF) in the project entitled “*Probing Fundamental Physics using Relativistic Many-body Methods: traditional versus quantum computing approaches*” under the Anusandhan National Research Foundation (ANRF) scheme of the Government of India at the Physical Research Laboratory (PRL), Ahmedabad.

This project will focus on developing and applying relativistic many-body methods to atomic systems to probe fundamental physics. A traditional view of atomic structure considers only electromagnetic interactions between their constituent electrons and nuclei. To explore new physics, additional interactions need to be included in the atomic calculations to combine with precise table-top observations. Under this project, we are keenly interested to probe the non-linear effects to the isotope shifts in the atoms due to exchange of a possible vector boson between electrons and atomic nucleus. Therefore, the candidate should have some basic knowledge of Quantum Mechanics, Nuclear Physics, Elementary Particle Physics, and Programming using Fortran/Python to work on the above project. Details of the position are given below:

Name of the position	No. of vacancy	Age as on last date of application	Qualification(s)/ Experience	Fellowship per month (consolidated)
*Junior Research Fellow (JRF) – under ANRF Project	1 (ONE)	Maximum 26 years	1. B.Sc and M.Sc. in Physics (60%) 2. CSIR-UGC NET in Physical Sciences including Assistant Professor / valid GATE (Physics) score / valid JEST (Physics) score.	Rs. 37,000/- + HRA or as per ANRF rules

\*Can be promoted to Senior Research Fellow (SRF) with fellowship Rs. 42000 per month after successful completion of 2 years (Duration of the project: maximum 3 years unless extended by ANRF).

Interested candidates may send a letter of motivation and latest Curriculum Vitae (should include educational qualifications from 10<sup>th</sup> standard, date of birth, details of NET/GATE/JEST qualification, research experience if any, internship details etc.) along with scanned copies of all the relevant documents through e-mail (with subject “Application for PRL-ANRF-JRF”) to the principal investigator (PI) of the project:

Prof. B. K. Sahoo, FNASc  
Head, Atomic, Molecular and Optical Physics Division  
Physical Research Laboratory (PRL)  
Navrangpura, Ahmedabad 380009  
Email: [bijaya@prl.res.in](mailto:bijaya@prl.res.in)  
Phone No: 0091 9726046778

Last date for receipt of applications: **10 December 2024.**

#### **Terms & Conditions:**

1. The above JRF position is purely temporary and coterminous with the project.
2. Initial appointment is for one year, which is extendable up to a total of three years (or until the end of project) upon successful annual evaluation of the candidate.
3. Only shortlisted candidates will be intimated for **ONLINE** interview.
4. Participation in selection process is subject to possessing relevant original documents substantiating online application submitted by the candidate.