

**RAMAN RESEARCH INSTITUTE  
BANGALORE 560080**

**Advt., No.2./2020**

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](http://www.rri.res.in).

Applications are invited for **ONE POST of RESEARCH ASSISTANT on a temporary basis for QUANTUM OPTICAL experiments** in the Light and Matter Physics (LAMP) Group of the Institute for a period of one year / extendable to second year depending upon the candidate's performance. The candidate will be associated with the **Quantum Optics lab of the Institute**. We seek motivated individuals with an excellent academic background with an aptitude to master the functioning and use of scientific equipment and eagerness to learn new experimental techniques. The details of the required qualifications and experience are given below:

**Job Description:**

**Title:** Quantum Optics experiments with alkali atoms inside a microwave cavity

**Brief Summary of the Project.**

The interaction between coherent optical and microwave fields in linear as well as nonlinear light and matter interacting medium such as atomic vapor, optical fibre and circuit QED is a strong emerging field of research. These studies explore phenomena like Electromagnetically Induced Transparency (EIT), superluminal and subluminal light, nonlinear wave mixing, pulse on demand, coherent classical and quantum signal communication.

The specific goal of this project is to study some of above phenomena in room temperature Rubidium atoms placed inside a microwave cavity and interacting with microwave and optical fields.

**Remuneration:** A consolidated remuneration of Rs.23,500/- per month at commencement + HRA (24% of consolidated remuneration) will be paid to the selected candidates. An increment of Rs.1000/- will be provided in the second year.

**Essential Qualification:**

We are looking for a student who has completed a post -graduate degree in physics or a B.Tech degree in Engineering Physics. She / He should have scored above 75% or a CGPA of 7.5 and above in his qualifying degree. They should have at least 6-month experience in doing experimental projects in an atomic molecular and optical physics laboratory.

**Desirable:** It will be very useful if the candidate is already familiar in experiments involving coherent interaction of electromagnetic waves with Rubidium atoms. They should have good computing and programming skills and should be adept at numerical techniques with proven implementation using Mathematica, Matlab or in any other high-level computing language.

**Upper Age Limit:** The upper limit is 35 years as on the last date for closing of applications. The last date for receipt of applications is **17/12/2020** . Applications received after the last date will not be considered.

**General Information:**

- (i) Age relaxation will be applicable as per Govt., of India rules for the candidates belonging to SC/ST/OBC/PWD categories.
- (ii) 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.
- (iii) Mere fulfilling the essential and desired qualifications will not entitle an applicant to be called for interview.
- (iv) The institute reserves the right to relax any of the above requirements in exceptional cases.
- (v) The Institute reserves the right, not to fill the post herein advertised.
- (vi) Canvassing in any form shall disqualify the candidate.

**How to apply:**

Applications are to be sent in a sealed cover super-scribing the post on the envelop to the **Co-Ordinator, Light And Matter Physics Group, Raman Research Institute, C.V Raman Avenue, Sadashivanagar, Bangalore – 560080 OR by email to savithamd@rri.res.in with Advertisement No. in the subject line.**

**Application format** (1) Name of the applicant; (2) Date of Birth; (3) Nationality; (4) Whether belonging to SC/ST/OBC; (5) Permanent Address; (6) Address for correspondence (Please provide your mobile number and email-id; (7) Qualifications starting from SSC/X Std. upwards (please attach copies of certificates and marks cards); (8) Experience with details of organization, post held, duration of service, and emoluments drawn (attach certificates), (9) References of individuals who are familiar with you and your work, whom the Institute could contact for referral letters: and (10) Brief - not more than a page typed in double line spacing-as to what motivates you to apply for the above post.