



Advertisement for the Post of a Project Associate-I (JRF) in a DST Funded Indo-Sweden Joint Project in Physics

Online applications are invited for the post of a Project Associate-I (JRF) in a DST funded research project. Selected **JRF will have the opportunity to work 2 months every year in Sweden.**

Title of the project: *Optical Control of Valleytronics Materials*

Short description of the research project: Many device experts believe Moore's Law (the number of transistors in chips have doubled every two years) to end soon by slowing down the growth in computational power of computers. One promising solution to this problem could be *Valleytronics*, a new field beyond that of electronics and spintronics. Two-dimensional (2D) materials like metal mono- and di-chalcogenides exhibit properties relevant for valleytronics applications. The objectives of this project are to prepare bulk as well as 2D group-IV metal monochalcogenides (MMs) and investigate their valley properties by ultrafast laser spectroscopy. A thorough study of the dynamic processes of the valley excitations will be carried out to find the key valleytronic properties like valley lifetime and decoherence time.

Investigator: Dr. Suman Kalyan Pal (**PI**) (*to know more about the group, visit <http://faculty.iitmandi.ac.in/~suman/USOLab/>*)

Professor, School of Basic Sciences (Physics)

IIT Mandi, Kamand, Mandi -175 005 (H.P.)

Fellowship : Rs. 31,000/- p.m. (subject to fulfilling eligibility criteria)

Minimum Qualifications: M.Sc. (Physics) with 55% marks or equivalent CGPA. Candidates with NET/GATE qualification and/or experience in working in experimental condensed matter physics laboratory will be given preference in shortlisting for interview.

Duration: Till 4th March, 2024. The selected candidate has to join immediately. **The selected candidate may be provided with an opportunity to pursue Ph. D. degree subject to fulfilling the eligibility criteria and satisfying the academic selection norms.**

Age Limit: Maximum 28 years as on the date of advertisement. (SC/ST/OBC and physically handicapped candidates will be entitled for the relaxation in age limit as per the government norms)

How to apply: Interested and eligible candidates may apply with an updated resume (in DOC or PDF file) mentioning personal details and academic qualifications with the file name “DST_first name_last name” and email to the ID suman@iitmandi.ac.in (The subject line of the email should be ‘Application for the post of project associate’). The candidate should clearly mention the details about NET/GATE qualification (Year, rank etc.) and work experience, if they have, in the resume.

Important Dates:

1. Last date of resume submission: **15th February 2022**

2. Merely fulfilling the eligibility requirement does not guarantee shortlisting for interview; additional criteria may be imposed for shortlisting. The shortlisted candidates will only be informed about the date and time of the online interview.

(No information or communication will be made with candidates who are not shortlisted.)

3. Tentative date of online interview: **19th February 2022**

(Students should have all documents in original to support their resume and the same will be verified at the time of joining, if the candidate is selected).

Note: Project investigator will not be responsible for any miss communication/connectivity issue during online-interview session. Schedule of such session once decided will not be changes. It will be responsibility of the candidate to ensure all that he/she is well connected and present during allotted slot. The online interview committee will call the student during their allotted slot.

• For any further information, contact to PI at suman@iitmandi.ac.in.