



# राष्ट्रीय विज्ञान शिक्षा एवं अनुसंधान संस्थान भुवनेश्वर

परमाणु ऊर्जा विभाग, भारत सरकार का एक स्वयं शासित संस्थान

(अनुसंधान और विकास अनुभाग)

**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH BHUBANESWAR**

(An autonomous research institution under Department of Atomic Energy, Govt. of India)

Jatni, Khurda, Odisha - 752050

**Research & Development Section**

**Advertisement No.: NISER / EPS2001 / R&D-198 / 04 / 2023-24**

## **Research opportunity in interdisciplinary Planetary Science project from Max Planck Society**

**Max Planck India Partner Group** led by Dr. Thangjam at NISER Bhubaneswar (funded by Max Planck Society/Germany) is inviting highly motivated Indian nationals for a **Junior Research Fellow** position. The project (up to 2026) is in collaboration with Max Planck Institute for Solar System Research, Göttingen/Germany and others (University of Winnipeg/Canada, Planetary Science Institute, Arizona/USA). The work is interdisciplinary in nature (processing & analyzing NASA Dawn VIR/Visual & Infrared Imaging Spectrometer data) and the science objective is to investigate the formation of dwarf planet Ceres either in the main asteroid belt or migrated from the outer solar system. The **heart of the project** is VIR data processing in two major steps: (I) Thermal correction- inverse modelling of reflectance to decouple emissivity considering surface roughness, (II) Photometric correction- inverse modeling to a standard illumination geometry considering the wavelength dependent scattered light in heterogeneous natural surface conditions. Then, the **spectral data analysis** will focus mainly on  $\sim 3.1 \mu\text{m}$  feature attributed to  $\text{NH}_4^+$ -(Ca,Na,H)(Al,Mg,Fe,Zn)<sub>2</sub>(Si,Al)<sub>4</sub>O<sub>10</sub>(OH)<sub>2</sub>.xH<sub>2</sub>O/OH/H<sub>2</sub>O-ice/Mg<sub>2</sub>(OH)<sub>4</sub>?. Further study and model is required assessing the thermodynamic/kinetic conditions within or far beyond the water-snowline.

**QUALIFICATION:** 1. Minimum of 60% marks or equivalent GPA in Masters or M.Tech. or M.E in Physics/ Astronomy and Astrophysics / Geology/ Geophysics/ Earth Science/ Chemistry/ Space/Engineering Physics/ Mechanical engineering/Civil engineering/Computer engineering; 4 year / 8 semester Bachelor's degree program in Mechanical engineering/ Civil engineering/ Engineering physics/Computer engineering with a minimum of 75% marks in aggregate or equivalent

2. Valid National Level Examination, i.e., CSIR-UGC-NET (LS or JRF) /GATE/JEST/equivalent

**DESIRABLE:** Proficiency in python coding, and strong basics in physical chemistry / spectroscopy

**FELLOWSHIP:** ₹31,000/- pm plus HRA (as per rules)

**MAXIMUM AGE:** 28 years as on 18<sup>th</sup> May, 2023, age relaxation to entitled categories as per rules.

**Mode of selection:** Online interview (Google Meet) on **22<sup>nd</sup> May, 2023**

The position is purely temporary and initially offered for a period of 6 months but extendable on satisfactory performance (to allow monitoring the progress constructively) or completion of project whichever is earlier and strictly co-terminus with the project. It would, therefore, not confer any right/ claim, implicit, or explicit for consideration/ absorption against any NISER post.

Interested candidates may send the **application (page 2-3 of this advt.)**, CV, SOP indicating the **scientific interest and programming proficiency and knowledge in physical chemistry & spectroscopy**, scanned copies of relevant educational certificates, 2 recommendation letters (thesis/project/course supervisor) by email to [thangjam@niser.ac.in](mailto:thangjam@niser.ac.in), by 18<sup>th</sup> May, 2023. Please see details in <https://www.niser.ac.in/users/thangjam> or contact by email.

**Dean (R&D)**



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**भर्ती के लिए आवेदन पत्र**

Application for recruitment to the post of **Junior Research Fellow**

Paste your recent  
colour passport  
photograph

1. पूरा नाम (स्पष्ट अक्षरों में) | Full Name (In Block Letters):

\_\_\_\_\_

2. पिता / पति का नाम | Father's / Husband's Name: \_\_\_\_\_

3. जन्मतिथि | Date of Birth : \_\_\_\_\_

4. उम्र | Age as on (दिनांक 18.05.2023) : \_\_\_\_\_

5. पत्राचार के लिए डाक का पता : \_\_\_\_\_

Postal Address for Correspondence

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. स्थाई पता | Permanent Address : \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7. (a) कॉन्टैक्ट नं | Contact No. : \_\_\_\_\_

(b) ई-मेल | E-mail : \_\_\_\_\_

8. क्या अ.जा./ अ.ज.जा./अ.पि.व./ शा.वि. में आते हैं? : \_\_\_\_\_

Whether belongs to SC/ST/OBC/PWD

(जाति प्रमाण-पत्र का नकल संलग्न किया जावे | Copy of Caste Certificate to be enclosed)

9. क्या CSIR-UGC NET / GATE में योग्य हैं? : \_\_\_\_\_

Whether CSIR-UGC NET / GATE qualified?

(प्रमाण-पत्र का नकल संलग्न किया जावे | Copy of the Certificate to be enclosed)

10. शैक्षणिक योग्यताएँ (स्नातक से) | Educational Qualifications (Starting from Graduation):

परीक्षा का नाम   Name of the Examination	बोर्ड/ विश्वविद्यालय/ संस्थान Board/ Univ./ Institute	उत्तीर्ण होने का वर्ष   Year of Passing	विषय   Subjects	अंको का प्रतिशत Percentage of Marks

11. अनुभव, यदि कोई हो | Experience, if any:

संगठन/ नियोक्ताका नाम Name of Organisation/ Employer	सेवा अवधि वर्ष तथा माह Period of Service in Year & Months	पदनाम Designation	वेतनमान तथा मूल/ सकल वेतन Scale of Pay & Basic/ Gross Emoluments	कार्य की प्रकृति Nature of duties

मैं सत्यनिष्ठा से पुष्ट करता / करती हूँ कि उपर्युक्त जानकारी मेरी अधिकतम जानकारी और विश्वास के अनुसार सही है। यदि मेरे द्वारा दी गयी कोई जानकारी किसी भी चरण पर गलत पायी जाती है, तो मेरा आवेदन रद्द किया जा सकता है।

I do solemnly affirm that the above information given by me is true to the best of my knowledge and belief. If any information given by me is found to be incorrect at any stage, my candidature may be cancelled.

दिनांक | Date :

स्थान | Place :

आवेदक का हस्ताक्षर | Signature of Applicant