Advertisement
JIS University

[Department of Earth Sciences & Remote Sensing]

Junior Research Fellow (Remote Sensing of the Cryosphere): 1 Post

Salary (PM): 31,000/- + 15% HRA + Medical Allowance

ADVERTISEMENT:

Applications are invited for a 36-months (12-months' probation, extendable up to another 24-months upon successful progress) **one Junior Research Fellow (JRF) position in remote sensing of the cryosphere** to work specifically on the project ***An Integrated Approach to Understand Six Decades of Glacier Variability in the Himalaya*** funded by the *Science & Engineering Research Board, Department of Science & Technology (SERB-DST).*

The main objective of this position is to establish a remote-sensing based monitoring of annual and seasonal variations of glacier mass changes to understand the regional glacier response and their associated climate drivers in decadal time periods. Additionally, to reconcile multi-temporal geodetic mass balance with model-based glacier mass balance reconstruction to understand the annual response of glacier mass balance to ongoing climate change.

The research fellow will especially be responsible for further development of existing methods and algorithms using high resolution imagery with stereo capabilities (such as ASTER, Pléiades, WorldView, Planet CubeSat, TanDEM-X) in combination with altimetry data (such as ICESat-2, CryoSat-2). He/she is also expected to contribute to mapping seasonal snow lines on glaciers.

The main regional focus of the project will be on High Mountain Asia but the developed methods should also be applied to other glacierised mountain regions on Earth. He/she will be supported and will work closely together with remote sensing and glacier experts from the University of St Andrews and international experts. Large data sets of very high-resolution stereo imagery are already available and further satellite acquisitions are ongoing. Possibilities for field work and scientific exchange visits exists (in case the pandemic situation allows). He/she will further be responsible for publishing the findings in appropriate venues (peer-reviewed journals, conferences) and for dissemination to glaciological and remote sensing communities.

Applicants should hold a Post-graduate Degree in Remote Sensing, Geography, Geology, Geophysics, Physics or a related discipline OR Graduate/Post Graduate Degree in Professional Course selected through a process described through any one of the following

- Selected through National Eligibility Tests: CSIR-UGC NET including lectureship (Assistant Professorship and Graduate Aptitude Test in Engineering (GATE)
- Selected through National Level examinations conducted by Central Government Departments and their Agencies and Institutions

After completion of two years, an external assessment by the university where the student is enrolled for Ph,D is mandatory for upgradation from JRF to SRF. The fellow may be awarded SRF after successful assessment.

The post will commence on **1 March 2022 or shortly thereafter**

For further information, please contact
Dr Atanu Bhattacharya (atanu.bhattacharya@jisuniversity.ac.in) Ph no. **+91 8335098452**

Job Description

Job Title: Junior Research Fellow (JRF) Department: Department of Earth Sciences & Remote Sensing Reporting to: Dr Atanu Bhattacharya Duration of Post: 36-months (12-months' probation, extendable up to another 24-months upon successful progress)	Working Hours: Full time (40 Hours in a week) Grade/Salary Range: **31,000/- + 15% HRA + Medical Allowance** Start Date: 1 March 2022 or shortly thereafter

Qualification

Essential Educational Qualification: Post-graduate Degree in Remote Sensing, Geography, Geology, Geophysics, Physics or a related discipline.

Experience & Knowledge:

Essential

- Fundamental knowledge in Remote Sensing
- Research track commensurable with the career stage, demonstrating the ability to write high-quality research publications.

Desirable

- Programming knowledge in Python, handling NetCDF data.
- Knowledge in mathematical modelling

Competencies & Skills:

Essential

- Excellent written and oral communication skills in English

Desirable

- Ability to organize and manage large amount of data

Essential Criteria – requirements without which a candidate would not be able to undertake the full remit of the role. Applicants who have not clearly demonstrated in their application that they possess the essential requirements will normally be rejected at the short-listing stage.

Desirable Criteria – requirements which would be useful for the candidate to hold. When short listing, these criteria will be considered when more than one applicant meets the essential requirements.

Key Duties and Responsibilities

1. Generate DEM based on recent high-resolution stereo data (such as SPOT, Pleiades, Planet CubeSat, TanDEM-X) and declassified data (KH-4, KH-9). Estimate geodetic glacier mass budget and compare with field-based observation
2. Analyse climate reanalysis and meteorological data.
3. Reconcile multi-temporal geodetic mass balance with model-based glacier mass balance reconstruction
4. Work closely together within the mountain cryosphere and remote sensing as well as the glaciology group in national and international level.

5. Work together with international partners especially in UK and Switzerland.
6. Contribute to research and teaching activities of the department and take active part in departmental research networks.
7. Build contacts and participate in external/interdisciplinary/international networks to develop knowledge and form relationships for possible future collaborations.
8. Candidate have to visit and stay time to time in other Institution (IISER Pune) for research purpose

Please note that this job description is not exhaustive, and the role holder may be required to undertake other relevant duties commensurate with the grading of the post. Activities may be subject to amendment over time as the role develops and/or priorities and requirements evolve.

Other Information

The application must contain **1. One page motivation letter (Briefly describe how your qualification and skill will be suitable for this position), 2. Curriculum Vitae (CV) and 3. Name and contact details of two referees.**

We encourage applicants to send their application directly to the following email id (clearly mention the post code in subject matter) atanu.bhattacharya@jisuniversity.ac.in. or in person to the university.

For all applications, post code: **JRF Position in Remote Sensing (CRG/2021/002450)**

Last date of application: 10th February 2022

*** Candidate must be registered for PhD programme under JIS University**

The JIS University is committed to promoting equality of opportunity for all, which is further demonstrated through its working on the Gender and Race Equality.

To know more about the recent research activities please visit www.mountcryo.org

Obligations as an Employee

You have a duty to carry out your work in a safe manner in order not to endanger yourself or anyone else by your acts or omissions.

You are required to comply with the University health and safety policy as it relates to your work activities, and to take appropriate action in case of an emergency.

You are required to undertake the Information Security Essentials computer-based training course and adhere to its principles alongside related University Policy and Regulations.

You should be adaptable to change, and be willing to acquire new skills and knowledge as applicable to the needs of the role.

You may, with reasonable notice, be required to work within other Schools/Departments within the University

You have the responsibility to engage with the University's commitment to Environmental Sustainability in order to reduce its waste, energy consumption and carbon footprint.