INDIAN INSTITUTE OF TECHNOLOGY, ROORKEE
Department of Civil Engineering

Dated: January 27, 2025

ADVERTISEMENT TO FILL UP PROJECT POSITIONS*

Applications are invited from Indian nationals only for project position(s) as per the details given below for the consultancy/research project(s) under the **Principal Investigator (Name: Prof. Alok Bhardwaj)**, **Co-Principal Investigator (Name: Prof. Siddhartha Khare),** Department of Civil Engineering, Indian Institute of Technology, Roorkee (Project Number: DIA-2549-CED/24-25).

The selected candidates will work under the supervision of **Prof. Alok Bhardwaj and Prof. Siddhartha Khare**, Geospatial Engineering Section, Department of Civil Engineering

1. **Title of project:** Object Detection using Hyperspectral Remote Sensing

2. **Sponsor of the project:** DRDO, New Delhi

3. **Project position(s) and number: One** Junior Research Fellow, **One** Project Fellow

4. **Qualifications for Project Fellow:**

   PhD in Engineering or PhD in Science with 2 years of experience OR MTech with 3 years of experience OR BTech with 6 years of experience.

   Experience of working with Hyperspectral, Multispectral Satellite and Drone data, Experience with data collection and analysis with Spectro-radiometer, Big Data Technologies, Object Detection, Computer Vision, Experience of flying UAVs.

   Qualifications for Junior Research Fellow:

   BTech in Engineering with minimum CGPA of 6.5 and M.Tech. in Geospatial/Geoinformatics/Geomatics Engineering or Computer Science or Electronics Engineering with minimum CGPA of 7.0.

   Experience of working with Digital Image Processing, Hyperspectral remote sensing data analysis, competent in computer programming. WITH GATE QUALIFICATION CERTIFICATE

5. **Emoluments:**

   Emoluments for Project Fellow: Rs. 40000/- per month + HRA (with 10% increment every year)

   Emoluments for Junior Research Fellow: Rs. 37000/- per month + HRA

6. **Duration:** 3 years

7. **Job description for Project Fellow:**

   Project Fellow will undertake the overall management of the project. The candidate will be responsible for collection of field data by flying Hyperspectral drone sensor and on-ground spectro-radiometer. The candidate will prepare reports and presentations and strive towards publishing the research in reputed research journals.

Job description for Junior Research Fellow:

The JRF will be involved in the research and development activities of the project including:
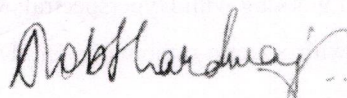
- Knowledge in large data handling (satellite data, meteorological data, etc.), with working knowledge
- of Multispectral/Hyperspectral remote sensing
- Sound knowledge of handling big data, APIs, Google Earth Engine, machine learning algorithms
- Strong programming skills in Javascript/Python are must
- Ready to carry out extensive fieldwork
- Experience in writing papers/patents/technical reports' etc'

8.   Candidates before appearing for the interview shall ensure that they are eligible for the position they intend to apply.

9.   Application is only acceptable through the following Google form LINK

10.   Please note that no TA/DA is admissible for attending the interview.

The last date for application to be submitted to through Google Form is **February 20, 2025, by 5 PM.**

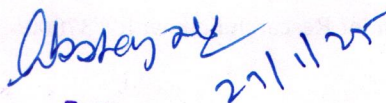**Only the shortlisted candidates will be called for an interview. The interview will be online.**

Candidate may be asked to show the original degree(s)/certificate(s), and experience certificate(s) at the time of interview/joining for verification

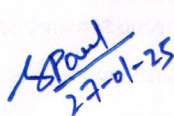**(Alok Bhardwaj)**
Name and Signature of Principal Investigator

*To be uploaded on IIT Roorkee website and copy may be sent to appropriate addresses by PI for wider circulation.
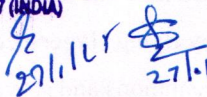
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