

Advertisement for Project Associate (JRF)/ Project Scientist in DST Project

Online Interview for the post of Project Associate (JRF) in the DST funded project at IIT Mandi.

Title of Research Project: *A low-cost MEMS-based and video-based monitoring and early warning system for rainfall-induced landslides.*

Detail regarding project: Landslide Hazard Mitigation is an interdisciplinary and multi-institutional research program being coordinated by the DST under Innovation, Technology Development and Deployment. During the Indian Science Congress, the honorable Prime Minister emphasized the need to develop Early warning system for Landslides particularly in Sikkim and other parts of the North-Eastern region, Himachal Pradesh, Uttarakhand, Jammu Kashmir and Western Ghats. Keeping this in view, a proposal has been developed based on earlier experience on MEMS based low-cost landslide monitoring system, with emphasis on image/video-based monitoring system.

The project aims to employ site-specific measurements of rainfall, moisture, and movement to create ensemble machine-learning (ML) models that generate accurate real-time landslide advisories for every 10-15 minutes at the monitored site. While one side of the project is to develop low-cost mobile / web-based Early Warning Systems (EWSs), using video cameras and IoT. The JRF with geotechnical engineering background is expected to contribute in conceptualize, develop and calibrate sensors to ascertain soil parameters in relation to soil stability, development of physical or working experimental models on soil slope stability, lab-field-site level experimentation, data analysis leading to geotechnical assessments. Innovation being a primary component, the project delivers development of technology oriented patents apart from research papers and other developments.

Minimum Qualification:

B. Tech (Civil Engineering) + M. Tech (Geotechnical Engineering or related areas), Candidate must have qualified GATE at least once in academic career.

Desirables: Multi-disciplinary interest, Statistical Analysis, Good programming skills, Good command over English language and technical writing in English.

Age Limit: The upper age limit for JRF shall be 28 years.

Age relaxation: upper age limit is relaxed up to 5 years for SC/ST/OBC/Women and physically handicapped candidates.

Joining date: As Soon As Possible

Principal Investigator(s): Dr K V Uday (PI), School of Engineering, IIT Mandi
Dr Varun Dutt & Dr Arnav Bhavsar, School of Computing and Electrical Engineering, IIT Mandi

Position: Project Associate-I/(JRF)

Salary: Max. up to INR 31,000/-

Duration: 6 months, extendable to maximum of 3 years based on performance

**Indian Institute of Technology Mandi
Mandi, Himachal Pradesh-175005**



**भारतीय प्रौद्योगिकी संस्थान मंडी,
मंडी, गिमाचल प्रदेश-175005**

Last Date of sending interest and CV:
via online on following google link:

4th Jan. 2021

<https://forms.gle/4n8wLAsQL23vMqen9>

Note: Merely fulfilling the eligibility requirement does not guarantee shortlisting for interview; additional criteria may be imposed for shortlisting.

Date and time of the interview along with the meeting link will be shared by email to the shortlisted candidates

In future, JRF may get PhD admission in fulfilling admission criteria of IIT Mandi. However, PhD position is not guaranteed.