

Date: 08.04.2024

The Department of Civil engineering at the Indian Institute of Science, Bengaluru invites applications from Indian Nationals only for the following positions purely on temporary contract basis:

1. **Title of the project:** Studies on the Fracture and Damage Behaviour of Cold Joints and Interfaces – Application to Safety Assessment and Development of Repair Materials for Concrete Dams

- i. **Principal Investigator: Prof. J. M. Chandra Kishen**
- ii. Funding Agency: Ministry of Jal Shakti, Government of India (MoJS, GoI)
- iii. Desirable qualification/experience:
 - **For RA-III & SRF:** Experience in concrete lab including handling and operation of loading systems sensor monitoring and data acquisition (strains, loads, displacements etc). Familiarity with FE software such as ABAQUS and ATENA to simulate concrete response under various loads.

Sl. No.	Name of the Position	Number of Vacancies	Essential Qualification	Consolidated Emoluments per month
1.	Research Associate-III	1	Ph.D. in Civil Engineering with two years' experience	₹ 63000/m +27% HRA = 80,010/-
2.	Senior Research Fellow	1	M. Tech with two years' experience or Ph.D. student	₹ 42000/m +27% HRA = 53,340/-

2. **Title of the project:** Experimental and Analytical Study of Creep, Shrinkage, Thermal Effects and Alkali Silica Reactions in Mass Concrete: Impact on Dams

- i. **Principal Investigator: Prof. Ananth Ramaswamy**
- ii. Funding Agency: Ministry of Jal Shakti, Government of India (MoJS, GoI)
- iii. Desirable qualification/experience:
 - **For RA-III & SRF:** Experience in concrete lab including handling and operation of loading systems sensor monitoring and data acquisition (strains, loads, displacements etc). Familiarity with FE software such as ABAQUS and COMSOL to simulate concrete response under various loads.

Sl. No.	Name of the Position	Number of Vacancies	Essential Qualification	Consolidated Emoluments per month
1.	Research Associate-III	1	Ph.D. in Civil Engineering with two years' experience	₹ 63000/m +27% HRA = 80,010/-
2.	Senior Research Fellow	1	M. Tech with two years' experience or Ph.D. student	₹ 42000/m +27% HRA = 53,340/-

3. **Title of the project:** Development of low-carbon alternative materials for dam construction and rehabilitation in various climatic conditions

- i. **Principal Investigator: Dr. K S Nanjunda Rao, Prof. Ananth Ramaswamy, Dr. Souradeep Gupta from (Centre for Sustainable Technologies, CST)**
- ii. Funding Agency: Ministry of Jal Shakti, Government of India (MoJS, GoI)
- iii. Desirable qualification/experience:
 - **For RA-III:** Model development to address the experimental skills in the development of low-carbon cementitious materials including in-depth understanding of Portland cement hydration, micro and micro-scale behaviours (e.g. strength, durability, permeability, etc.) and experimental techniques (e.g. non-destructive tests, phase composition, micro-structural analysis etc.). Knowledge and prior experimental experience in alkali-activated binders are desired.
 - **For SRF:** Experimental skills in the development of low-carbon cementitious materials including in-depth understanding of Portland cement hydration, micro and micro-scale behaviours (e.g. strength, durability, permeability, etc.) and experimental techniques (e.g. non-destructive tests, phase composition, micro-structural analysis etc.). Knowledge and prior experimental experience in alkali-activated binders are desired.

Sl. No.	Name of the Position	Number of Vacancies	Essential Qualification	Consolidated Emoluments per month
1.	Research Associate-III	1	Ph.D. in Civil Engineering with two years' experience	₹ 63000/m +27% HRA = 80,010/-
2.	Senior Research Fellow	3	M. Tech with two years' experience or Ph.D. student	₹ 42000/m +27% HRA = 53,340/-

4. Title of the project: Dam material characterization and development of innovative construction materials from dam wastes

- i. **Principal Investigator: Prof. Madhavi Latha G**
- ii. Funding Agency: Ministry of Jal Shakti, Government of India (MoJS, GoI)
- iii. Desirable qualification/experience: Hands-on experience in geotechnical testing, geosynthetic testing, micro-CT scanning of sand, MATLAB coding, 3D printing and Discrete Element Modelling (DEM)

Sl. No.	Name of the Position	Number of Vacancies	Essential Qualification	Consolidated Emoluments per month
1.	Research Associate-III	1	Ph.D. in Civil Engineering with two years' experience	₹ 63000/m +27% HRA = 80,010/-
2.	Senior Research Fellow	1	M. Tech with two years' experience or Ph.D. student	₹ 42000/m +27% HRA = 53,340/-

5. Title of the project: Internal Erosion in Earth Dams – Strategies for Remediation and Assessment of Existing Infrastructure

- i. **Principal Investigator: Prof. Tejas Gorur Murthy**
- ii. Funding Agency: Ministry of Jal Shakti, Government of India (MoJS, GoI)
- iii. Desirable qualification/experience:
 - **For RA -III:** PhD in civil, mechanical, chemical or physics with experience in x-ray computed microtomography, image analysis and flow through porous media. Familiarity with DEM, or other particle techniques is a plus.
 - **For SRF:** B Tech or MTech in Civil, mechanical, or earth sciences with experience in flow through porous media, experimental techniques in geomechanics

Sl. No.	Name of the Position	Number of Vacancies	Essential Qualification	Consolidated Emoluments per month
1.	Research Associate-III	1	Ph.D. in Civil Engineering with two years' experience	₹ 63000/m +27% HRA = 80,010/-
2.	Senior Research Fellow	1	M. Tech with two years' experience or Ph.D. student	₹ 42000/m +27% HRA = 53,340/-

6. Title of the project: Fuzzy framework for multi-hazard dam break risk assessment considering floods and other natural hazards in climate change and land use/ land cover change scenarios

- i. **Principal Investigator: Prof. V. V. Srinivas**
- ii. Funding Agency: Ministry of Jal Shakti, Government of India (MoJS, GoI)
- iii. Desirable qualification/experience:
 - The candidates opting for RA-3, RA-1 and SRF positions are expected to have experience of stochastic modeling with hydrometeorological variables (such as extreme precipitation, design flood estimation, dam break analysis, flood routing). He/she should also have a good knowledge of working with software such as ArcGIS, HEC-RAS, HEC-HMS, and computer programming languages (MATLAB/Python/R etc).
 - The candidate applying for Field Assistant position should have about 12 years of work experience in a hydraulics lab with experimental set-ups and must be familiar working with computers and provide assistance in gathering data during field visits.

Sl. No.	Name of the Position	Number of Vacancies	Essential Qualification	Consolidated Emoluments per month
1.	Research Associate-III	1	Ph.D. in Civil Engineering with two years' experience	₹ 63000/m +27% HRA = 80,010/-
2.	Research Associate-I	1	Ph.D. in Civil Engineering	₹ 58000/m +27% HRA = 73,660/-
3.	Senior Research Fellow	1	(M.Tech in Hydraulics/ Hydrology/Water Resources Engineering and related areas with two years' experience or Ph.D. student	₹ 42000/m +27% HRA = 53,340/-
4.	Field Assistant	1	Diploma in Engineering with 12 years' experience	₹ 34980 + 27% HRA = Rs. 44,424.6/-

7. Title of the project: Development of computational methods for risk assessment of dams using high performance computing

- i. **Principal Investigator: Prof Debraj Ghosh**
- ii. Funding Agency: Ministry of Jal Shakti, Government of India (MoJS, GoI)
- iii. Desirable qualification/experience: Experience in using ABAQUS, MATLAB or Python. Exposure to probabilistic mechanics/ risk and reliability analysis.

Sl. No.	Name of the Position	Number of Vacancies	Essential Qualification	Consolidated Emoluments per month
1.	Senior Research Fellow	1	M. Tech with two years' experience or Ph.D. student	₹ 42000/m +27% HRA = 53,340/-

8. Title of the project: Novel approaches to Integrated flood risk management in multi-purpose multi-reservoir systems and flood inundation mapping

- i. **Principal Investigator: Prof. D. Nagesh Kumar**
- ii. Funding Agency: Ministry of Jal Shakti, Government of India (MoJS, Gol)
- iii. Desirable qualification/experience:
 - **For RA-III:** PhD in Water Resources Engineering with experience in developing optimal multi-reservoir operation for flood control and/or flood inundation modeling using geomatic tools. Desirable: experience in using Python, ERDAS Imagine & Arc GIS
 - **For SRF:** MTech in Hydrology/ Water Resources Engineering/ Remote Sensing with experience in flood inundation modeling using geomatic tools and/ or optimal reservoir operation. Desirable: experience in using Python, ERDAS Imagine & Arc GIS.

Sl. No.	Name of the Position	Number of Vacancies	Essential Qualification	Consolidated Emoluments per month
1.	Research Associate-III	1	Ph.D. in Civil Engineering with two years' experience	₹ 63000/m +27% HRA = 80,010/-
2.	Senior Research Fellow	1	M. Tech with two years' experience or Ph.D. student	₹ 42000/m +27% HRA = 53,340/-

9. Title of the project: Integrated Investigation for Risk Assessment of the Dam

- i. **Principal Investigator: Prof. P Anbazhagan, Dr. P Raghuveer Rao and Prof. Muthuvel Arigovindan**
- ii. Funding Agency: Ministry of Jal Shakti, Government of India (MoJS, Gol)
- iii. Desirable qualification/experience: Experience and exposure in handling geotechnical and geophysical lab and field equipment and Data processing

Sl. No.	Name of the Position	Number of Vacancies	Essential Qualification	Consolidated Emoluments per month
1.	Research Associate-III	1	Ph.D. in Engineering/ Geoscience with two years' experience	₹ 63000/m +27% HRA = 80,010/-
2.	Research Associate-I	1	Ph.D. in Engineering/ Geoscience	₹ 58000/m +27% HRA = 73,660/-
3.	Senior Research Fellow	3	M. Tech with two years' experience/ B.Tech. with longer experience or Ph.D. student	₹ 42000/m +27% HRA = 53,340/-
4.	Lab Technician	1	Diploma in Engineering/ Geoscience with 12 years' experience	₹ 34980 + 27% HRA = Rs. 44,424.6/-

10. Title of the project: Assessing Seismic Safety of Dams Under Near-Fault Seismic Wavefields and Methods to Shield Dams from Seismic Waves

- i. **Principal Investigator: Dr. Swetha Veeraraghavan**
- ii. Funding Agency: Ministry of Jal Shakti, Government of India (MoJS, GoI)
- iii. Research Topic: Seismic safety assessment of dams through numerical analysis using open-source finite element software.
- iv. Skills required: Good understanding of computational mechanics and basic geomechanics, basic coding in MATLAB/python.
- v. Optional skills: Knowledge about field data collection and geotechnical lab investigations

Sl. No.	Name of the Position	Number of Vacancies	Essential Qualification	Consolidated Emoluments per month
1.	Research Associate-III	1	Ph.D. in Civil Engineering with two years' experience	₹ 63000/m +27% HRA = 80,010/-

11. Applications are also invited for the following posts:

Sl. No.	Name of the Position	Number of Vacancies	Essential Qualification	Consolidated Emoluments per month
1.	Technical Assistant	1	Diploma in Engineering with 12 years' experience	₹ 34980 + 27% HRA = 44,424.6/m
2.	Secretary for Centre of Excellence	1	B. A/B. Com/B.Sc./Any Graduate	₹ 37,500/m

INSTRUCTIONS FOR APPLICANTS:

1. Candidates shall ensure that they are eligible for the position they intend to appear/apply for before appearing for the Interview.
2. Interested candidates should submit their applications (in PDF format) by email to **iced.civil@iisc.ac.in** with the subject as "Sl. No. of the project; Name of the Position applying for & candidate's name" on or before the **last date i.e. 29.04.2024, 11:59 PM** with the following documents:
 - Cover letter mentioning the Advt. No. with the name of the position applying for, curriculum vitae, academic qualifications and the supporting details of industrial experience, publications, patents, prizes, the past research (only for RA, SRF) and plans for the future research (only for RA, SRF), Proof of age (e.g. Matriculation certificate) etc.
 - Candidate shall bring along with them the original degree(s)/certificate(s) and experience certificate(s), Proof of age (e.g. Matriculation certificate) at the time of interview for verification and ONE copy of each for submission.
3. No other mode of application/hardcopy submission of the online submitted application is accepted. However, candidates are advised to keep a printout of the online application form for future reference.
4. The details provided by the applicants in the resume will be duly verified before publishing the results. If the candidates fail to provide the authentic proof for the details filled-in by them, their candidature will be summarily forfeited.
5. The prescribed qualifications are the minimum requirement and the mere fact that a candidate possesses the same will not entitle them for being called for Interview.
6. Candidates working in Government / PSU / Autonomous Bodies should obtain NOC from the present employer and present it at the time of interview.
7. The Institute reserves the right to reject any application without assigning any reason. The Institute also reserves the right to cancel the recruitment for the particular post at any stage due to any administrative reason. No correspondence will be entertained in this regard.

8. Please note that no TA/DA is admissible for attending the interview. Candidates will have to appear for Interview at their own cost.
9. No in-campus accommodation will be provided in the Institute campus during the course of stay of the selected candidate/s.
10. Duration of appointment: Initial period of 1 Year, extendable on yearly basis for the project duration.
11. In the case of non-availability of suitable candidates with desired qualification for a designation, we would look for candidates with relative lower qualifications (e.g., RA-2 or RA-1 for RA-3; or SRF for RA-1; or JRF for SRF; Lab Assistant for Lab Technician/Technical Assistant), as per DST guidelines.
12. In the case of non-availability of suitable candidates with desired qualification for a designation, the PI reserves the right to keep the position vacant.
13. IISc is a premier research institute of international repute. Successful candidates are likely to get lucrative job offers from Govt. research establishments and private companies after the end of the projects. The projects also have publication potential, which will help in career building and higher studies. The project works also have the potential of being considered towards the candidate's thesis work, should he/she be selected as a student of the department (which is an independent selection process).
14. The **Interview is tentatively scheduled for the first week of May 2024** at the department of Civil Engineering, IISc-Bengaluru. The interview date and exact venue will be communicated to the shortlisted candidates separately via email. Therefore, please mention active E-mail ID and primary contact number in the application form.
15. Selected candidates will have to join duty immediately on receipt of the offer.