

**INDIAN INSTITUTE OF TECHNOLOGY, ROORKEE**  
(Name of Dept./Centre)

Dated: 17 Oct 2022

**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: **Dr. Nikhil Kumar Singh**), Dept. of **Mechanical and Industrial Engineering**, Indian Institute of Technology, Roorkee.

1. Title of project: Development of a moment of fluid framework integrating machine learning based curvature estimation for non-Newtonian two-phase flows in complex geometries
2. Sponsor of the project: Science and Engineering Research Board, DST
3. Project position(s) and number: Junior Research Fellow (01)
4. Qualifications: M.Tech./M.S./M.E. in Mechanical/Thermal/Chemical Engg./Fluid Mechanics/CFD/Equivalent with GATE score
5. Emoluments: Rs. 31000 per month/- + HRA (as per Institute norms)
6. Duration: 2 years
7. Job description: The main objective of this research project is to develop a computational framework for non-Newtonian two-phase flows that can accurately capture the interfacial dynamics, alleviate challenges due to rheological considerations, and lead to an efficient coupling of these phenomena even in irregular flow domains. Candidates are expected to have a strong interest in such computational work along with the following:
  - 7.1 sound knowledge of fluid mechanics/heat transfer and CFD
  - 7.2 strong interest in computational work and code development using C/C++
  - 7.3 experience with modeling and simulation of multiphase flows is desirable
  - 7.4 preparation of SERB-DST reports and any other works related to the project

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1. Candidates before appearing for the interview shall ensure that they are eligible for the position they intend to apply.
2. Candidates desiring to appear for the Interview should submit their applications with the following documents to the office of Principal Investigator through email, by post or produce at the time of Interview:
  - Application in a plain paper with detailed CV including chronological discipline of degree/certificates obtained.
  - Experience including research, industrial field and others.
  - Attested copies of degree/certificate and experience certificate.
3. Candidate shall bring along with them the original degree(s)/certificate(s) and experience certificate(s) at the time of interview for verification.
4. Preference will be given to SC/ST candidates on equal qualifications and experience.
5. Please note that no TA/DA is admissible for attending the interview.

  
20/10/22

**Note: The selected candidate may get an opportunity for PhD admission.**

The last date for application to be submitted to office of Principal Investigator (by e-mail) is **31/10/2022** by **5 PM**.

The interview will be held **online**. Shortlisted candidates will be informed through email of the interview date and time.

**Tel: 0133228 4963 (O)  
9868973864 (M)**

**Fax:**

*Nikhil*  
*17/10/22*  
(Nikhil Kumar Singh)  
**Name and signature  
of Principal Investigator**

**Email: [nikhil.singh@me.iitr.ac.in](mailto:nikhil.singh@me.iitr.ac.in)**

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

**APPROVED**

*Abhay*  
*20/10/22*  
डीन (SRIC)/(Dean SRIC)  
भा. प्रौ. सं. रुड़की/IIT Roorkee

*SP*  
*20/10/22*

*20/10/22*