

INDIAN INSTITUTE OF TECHNOLOGY, ROORKEE
Mechanical and Industrial Engineering

Dated: April 26, 2019

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. Indra Vir Singh**, Dept./Centre: **Mechanical and Industrial Engineering, Indian Institute of Technology, Roorkee**)

1. **Title of project: Development of Stochastic Multiscale Framework Based on Microstructural Features for Predicting the Bulk Response of Heterogeneous Materials**
2. **Sponsor of the project: CSIR, New Delhi**
3. **Project position(s) and number: Junior Research Fellow, One**
4. **Qualifications: M.E./M.Tech. (GATE qualified) in Mechanical/Design/CADCAM/Applied Mechanics or equivalent with exposure/interest in finite element modeling and having consistently good academic record. Candidates with B.E./B.Tech. in Mechanical or Aerospace Engineering with GATE and having good academic record can also be considered.**
5. **Age Limit: Maximum Age - 28 years. Age Relaxation upto 5 Years for SC/ST/OBC/female applicants. In case of OBC (non-creamy layer) provided age relaxation is 3 years**
6. **Emoluments: Rs. 12,000* per month (*likely to be revised)**

7. **Duration: Three Years (Upto ~~26/07/2021~~ 14.7.2021) or up to duration of the project**
8. **Job description:** The specific aim of this project is to develop a stochastic multiscale framework based on microstructural features and XFEM to accurately and efficiently predict the bulk response of the heterogeneous materials. A systematic study of the microstructural features such as pores, reinforced particles and micro-cracks will help in the design of new composite materials. A computationally efficient stochastic multiscale framework will be developed to predict the bulk behavior of the existing and designed heterogeneous materials. The role of the shape, size, clustering, volume fraction, and failure mechanism of the pores and reinforced particles on Young's modulus, tensile strength, compressive strength and flexural strength will be helpful in the design of new materials.

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.

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

The last date for application to be submitted to office of Principal Investigator isby 5 PM.
 (not applicable for walk in interview)

The interview will be held at **Committee Room, East Block, Mechanical & Industrial Engineering Department, IIT Roorkee on 24/05/2019 at 11.00 am** (to be given only for walk in interview)

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

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Approved
PKumar
 कुलपति (विकि)/Dean (SRIC)
 24.4.19