

Advertisement for the Junior Research Fellow

Applicants are invited for the post of the Junior Research Fellow (JRF) at the Indian Institute of Technology, Gandhinagar (IITGN) on a research project funded by the Science and Engineering Research Board (SERB) of the Government of India. The title of the project is **Theoretical and computational investigation of the role of transverse correlations in the thermal response of liquid-on-solid wetting behaviour.**

The project will involve the development of Markov Chain Monte Carlo methods to perform molecular simulations of solid-liquid interfaces. We are interested in calculating properties associated with density-fluctuations near the solid-liquid interface. The calculated properties will be used to study the thermal response of liquid-on-solid wetting behaviour. The Fellow will be provided suitable amount of intellectual freedom while pursuing the above topics. Subject to the performance, and the interest of the Fellow, they may get an opportunity to pursue Ph.D. at IIT Gandhinagar. Other details about the position are listed below:

Qualification: B.E./B.Tech./M.Sc. (graduated or in the final semester) with a qualified NET/GATE score and minimum 60% marks, or M.E./M.Tech. (graduated or in the final semester) in any of the following or related branches: Chemical Engineering, Chemistry, Industrial Chemistry, Physics, Engineering Physics, Mechanical Engineering, Material Science, Polymer Science. It is desirable that the candidate has some exposure to statistical mechanics, molecular simulations and computer programming.

Consolidated Monthly Pay: ₹ 25,000 (NET/GATE qualification required for B.E., B.Tech. or MSc)

Term: One year (extendable up to 3 years)

Documentation: Interested candidates are requested to send by email a single PDF file containing the following: 1) Resume containing all qualifications, experience and contact details, 2) Grade-sheets from the completed semesters, 3) NET/GATE scorecard for B.E./B.Tech./M.Sc. candidates, and 4) A minimum 1 page summary of the manuscript titled “Monte Carlo Sampling Methods Using Markov Chains and Their Applications,” by W. K. Hastings. Deadline for submission of application is **15th May at 5 PM (IST)**. The candidates will be informed about their selection for interview by 20th May. The selected candidates may be called for an interview at IIT Gandhinagar. These candidates will be requested to make their own travel arrangements and the travel expenses for the interview will not be reimbursed.

Contact: Kaustubh Rane, Academic block 5/321, [Indian Institute of Technology, Gandhinagar](https://www.iitgn.ac.in), Palaj, Gujarat – 382355. Email: kaustubhrane@iitgn.ac.in Website: www.kaustubhrane.com