



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY POWAI, MUMBAI 400076.

Advertisement No.: IRCC/EXT106/2024

Job Title

Research Associate

Job Reference Number

50574638

Application End Date

06.05.2024

Type of Employment

Proj. Staff Contract

No. of Position(s)

1

IITB Project Recruitment:

Project title: Polymers in turbulent flows: from single-molecule dynamics to continuum models.

About the project: Applications are invited for a postdoctoral position on a project funded by the Indo-French Centre for the Promotion of Advanced Research (CEFIPRA). This project will involve using (and extending) an in-house CFD code to simulate the turbulent flow of polymer solutions. We will focus on situations that correspond to intriguing and unexplained experimental observations, especially with regard to elastic turbulence at vanishing Re , which may be applied to improve mixing in microchannels and enhance underground oil-recovery. The postdoctoral fellow hired on this project will work in close collaboration with Dr. Dario Vincenzi (Univ. Côte d'Azur, France) and Dr. Jason Picardo (IIT Bombay, India).

Essential Qualifications & Experience:

Ph.D/MD/MS/MDS or equivalent degree or having 3 years of research, teaching and design and development experience after MVSc/M.Pharm/ME/M.Tech with at least one research paper in Science Citation Indexed (SCI) journal

Job Profile:

The Research Associate will work on the theory and simulation of the turbulent flow of polymer solutions. This project will involve the development of a code in FORTRAN and its simulation, as well as data analysis and interpretation. There will also be a theoretical component involving mathematical analysis of the Oldroyd-B and FENE-P equations of viscoelastic flows. The candidate should therefore have experience with numerical analysis, coding, as well as theoretical investigation of viscoelastic flows.

Pay Details:

Consolidated salary Rs.61000/- p.m. + HRA

General information:

The position is temporary for a period of 1 year and tenable only for the duration of the project. The appointment is for time bound project and the candidate is required to work mainly for the successful completion of the project. The selection committee may offer lower or higher designation

and lower or higher salary depending upon the experience and performance of the candidate in the interview.

Candidates called for interview will be required to attend at his/ her own expenses.

For any queries/clarification please contact: recruit@ircc.iitb.ac.in