



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY POWAI, MUMBAI 400076.

Advertisement No.: IRCC/EXT017/2021

Job Title

Junior Research Fellow

Job Reference Number

50201723

Application End Date

17.03.2021

Type of Employment

Proj. Staff Contract

No. of Position(s)

1

IITB Project Recruitment:

Project title: Numerical investigation of magnetohydrodynamic flow in liquid metal batteries

About the project: The project involves computational fluid dynamics (CFD) simulations of the flow in liquid metal batteries (LMB) using the open source CFD code OpenFOAM. LMBs are promising options for stationary grid-scale energy storage which is affordable, safe and reliable. There is a wide variety of flow phenomena present in the LMBs such as buoyancy-driven flows, interfacial instability, electro-vortex flows. All these are influenced by the presence of currents and magnetic field (which can affect the flow due to the Lorentz force). Study of these phenomena can lead to results that will be provided as design inputs to the LMB designers. This is a promising area of inter-disciplinary research where there is a huge scope of publishing high quality papers, and will lead to diverse knowledge and skill development.

Essential Qualifications & Experience:

UG/PG degree in Mechanical/Chemical/Aerospace engg. from a reputed institute, selected through any one of the following:

a. Scholars who are selected through National Eligibility Tests - CSIR-UGC NET including lectureship (Assistant Professorship) and GATE.

b. The selection process through National level examinations conducted by Central Government Departments and their Agencies and Institutions such as DST, DBT, DAE, DOS, DRDO, MHRD, ICAR, ICMR, IIT, IISc, IISER etc.

Job Profile:

The candidate will have thorough knowledge of fluid mechanics, heat transfer and applied mathematics along with excellent knowledge of C++ programming. Knowledge of MHD and experience with OpenFOAM is desirable.

Pay Details:

Consolidated salary Rs.31000/- 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