



# Indian Institute of Technology Jodhpur

## Office of Research and Development

Advt. No.: IITJ/R&D/2020-21/43

01 January 2021

### Project Recruitment

Applications are invited from the citizen of India for filling up the following temporary position in the sponsored project at this Institute. The position is purely temporary, initially for a period of 06 Months, and extendable but co-terminus with the duration of the project, on contractual basis with consolidated pay. The requisite qualification, experience and others details are given below:

1.	Project No.	S/SERB/ABB/20190043
2.	Project Title	Study of the Effects of Stress-State and Strain-Rate on Constitutive Response of Polymer Gels via Experiments and Continuum Mechanics Modeling
3.	Name of the Project Investigator	Dr. Abir Bhattacharyya
4.	Duration of Initial Appointment	06 Months
5.	Name of Post	Junior Research Fellow
6.	Number of Post	01
7.	Consolidate Pay	Rs.31,000/-
8.	Age	Below 35 Years
9.	Minimum Qualification and Experience	<p><u>Eligibility:</u> Master's Degree in Materials Engineering/Metallurgical Engineering/Mechanical Engineering or equivalent, or B. Tech/B.E. in Materials Engineering/Material Science and Engineering Metallurgical Engineering/Mechanical Engineering or equivalent with throughout first class and with valid GATE Score.</p> <p><u>Desirable :</u> The candidates should have either of the following</p> <ol style="list-style-type: none"><li>Hands on experience on mechanical testing of materials.</li><li>Knowledge of mechanical behavior of polymers.</li><li>Continuum Mechanics.</li></ol>
10	Brief description of Project	An integrated experimental and continuum modeling based approach will be used to characterize the stress state and strain-rate dependent nonlinear mechanical response of soft polymer gels. Experiments will be done under different stress states and quasi-static strain rates to determine the nonlinear mechanical response of soft polymeric hydrogels and elastomers. Hyperplastic models will be developed for

		predicting the deformation response of hydrogels under realistic loading condition.
11.	Job Description	The student is expected to design and fabricate test fixtures for conducting tension and shear experiments on soft materials and conduct the experiments. The student is expected to determine the effect to composing on mechanical properties of hydrogels and elastomers to develop material dependent hyperplastic constitutive model.

The candidates possessing the requisite qualification and experience should apply through the ONLINE process up to **15 January 2021**. The candidates are advised to send a soft copy of the application with all relevant documents to [office\\_rnd@iitj.ac.in](mailto:office_rnd@iitj.ac.in) (*Please mention the advertisement number in the subject line of the email*). *No need to send a hard copy.*

### **General Instructions to Applicant(s)**

1.	The post(s) is purely temporary and contractual for a period of 09 Months, and extension based on satisfactory performance, but co-terminus with the duration of the project
2.	Application which is incomplete, not in prescribed format, without photograph or unsigned will be summarily rejected.
3.	Certificate in support of experience should be in proper format i.e. it should be on the organizations letter head, bear the date of issue, specific period of work, name and designation of the issuing authority along with his signature.
4.	The Institute reserves the right to: (a) conduct written/trade tests for such posts wherever if the circumstances so warrant (b) not filling any of the advertised positions (c) fill consequential vacancies arising at the time of interview from available candidates. The number of positions is thus open to change.
5.	The Institute shall verify the antecedents or documents submitted by a candidate at the time of appointment or during the tenure of the service. In case, it is detected that the documents submitted by the candidates are fake or the candidate has a clandestine antecedents/background and has suppressed the said information, then his/her services shall be terminated.
6.	No TA/DA shall be paid to the candidates for attending the interview.
7.	No correspondence will be entertained from candidates regarding interview and reasons for not being called for interview.
8.	Canvassing in any form will be a disqualification.
9.	No interim correspondence will be entertained.
10.	No need to send hard copy.

Officer In-charge  
Research & Development