



# Indian Institute of Technology Jodhpur

## Office of Research and Development

Advt. No.: IITJ/R&D/2021-22/52

15 January 2022

### Project Recruitment

Applications are invited from the citizen of India for filling up the following temporary position in the Sponsored Research 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/IHFC/AMB/20210057
2.	Project Title	Telepresence and Teleaction System for Robot Assisted Dentistry
3.	Name of the Project Investigator	Dr. Amit Bhardwaj
4.	Duration for initial appointment	06 Months
5.	Name of the Post	Senior Research Fellow
6.	Post	01
7.	Consolidate Pay	Rs. 35,000/-+ HRA (As per institute norms)
8.	Minimum Qualification and Experience	<p><u>Essential Qualification:</u> B.E./B.Tech with specialization in Electrical Engineering/ Electronics Engineering/Mechanical Engineering/ Aerospace engineering or equivalent with first class or equivalent with 2 years relevant experience. <b>GATE qualification in relevant disciplines is Mandatory from Non-CFTI institute.</b></p> <p><u>Desired Qualification:</u> Sound knowledge of fundamentals of signal processing and control theory. Proficiency in C,C++,MATLAB/Python simulations, and prior hands-on experience with robots and stability control schemes will be preferred. The candidate is expected to have good communication skill and ability to cooperate with team.</p>
09.	Brief description of Project	<p>In recent times, telepresence and teleaction (TPTA) systems have gained a lot of attention in the research community because of their many applications in various fields. TPTA systems allow a user to be present and active in a remote environment. Telemedicine (i.e., tele-diagnostics as well as tele-surgery) is one of its main applications.</p> <p>This project focuses on employing the TPTA system for robot assisted dentistry. The goal of the project is to treat/diagnose a patient by a distance. The experimental setup will involve a</p>

		high-end robotic arm, 6- DoF force feedback haptic interface and various kinds of sensors. The doctor will be controlling the robot and getting a sense of touch feedback through a haptic interface. In the proposed TPTA system, all-three modalities (audio-haptic-visuo) will be transmitted to the operator (doctor) in real time for efficient interaction between the operator and teleoperator. Note that the design of haptic data reduction algorithms and implementation of stability control schemes are among the main tasks of the project.
10.	Job Description	The selected candidate is expected to implement/design haptic data reduction algorithms along with stability control schemes for efficient implementation of the teledentistry system and perform other tasks for the successful completion of the project..
11.	Maximum Age	Below 35 Years

The candidates possessing the requisite qualification and experience should apply through the ONLINE process up to **17 February 2022**. The candidates are advised to send a soft copy of the application with all relevant documents to [recruitment\\_rnd@iitj.ac.in](mailto:recruitment_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 06 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.	Institute reserves the right to: a. Fix, modify or revise the eligibility conditions, age and selection criteria as per its requirements, at any time. b. Fill up the post, not to fill up the post or cancel the advertisement in whole or partly without assigning any reason. c. Place a reasonable limit on the total number of candidates to be called for the Written Test and/or Skill Test, Interview.
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.	Higher initial pay may be given to exceptionally qualified/deserving candidate.
7.	No TA/DA shall be paid to the candidates for attending the interview.
8.	No correspondence will be entertained from candidates regarding interview and reasons for not being called for interview.
9.	Canvassing in any form will be a disqualification.
10.	No interim correspondence will be entertained.

11.	No need to send hard copy.
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Officer In-charge  
Research & Development