

इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी दिल्ली
हौज खास, नई दिल्ली -110016
(औद्योगिक अनुसंधान एवं विकास इकाई)
INDIAN INSTITUTE OF TECHNOLOGY DELHI
Hauz Khas, New Delhi-110016
(Industrial Research & Development Unit)

No. IITD/IRD/RP04223G/ 235798

Dated: 18/01/2024

Advertisement No.: IITD/IRD/025/2024

Applications from Indian nationals are invited for Project Appointment under the following project. Appointment shall be on contractual basis with consolidated pay, renewable yearly or upto the duration of the project, whichever is earlier. निम्नलिखित परियोजना के तहत भारतीय नागरिकों से आवेदन आमंत्रित किए जाते हैं। अपॉइंटमेंट, अनुबंधित आधार पर समेकित वेतन, नवीकरणीय वार्षिक या परियोजना की अवधि तक, जो भी पहले हो, के साथ होगा।

Brief description: This project entails the development of a soft wearable real-time neuromuscular joint torque sensor that can be integrated with soft robotic assistive devices. The main vision of the original research is to develop and test a wearable neuromuscular joint torque sensor in real-time using EMG and EEG signals from the user to control a wearable soft robotic assistive device. The sensor will be developed using EEG, EMG and joint position data and tested in real-time with an assistive robotic device. To achieve this step, the focus will be on creating the computational model of human and mechanical body parts, which is a function of highly human-specific internal parameters such as maximal isometric force, tendon slack length, optimal fibre length, and EMG-to-activation shape factor.

Title of the Project	Design and development of lower-limb exosuit with wearable sensors for real-time estimation of joint torque from physiological signals(IHFC) (RP04223G)	
Funding Agency	I-Hub Foundationfor Cobotics (IHFC)	
Name of the Project Investigator	Prof. Sitikantha Roy [emai of PI:sroy@am.iitd.ac.in]	
Deptt./Centre	Department of Applied Mechanics	
Duration of the Project	Upto:21/12/2024	
Post (s)	Consolidated fellowship / Pay-slab	Qualifications
Principal Project Scientist (1)	Rs.56,000-60,000-64,000-69,000-74,000-79,000/- p.m. plus HRA @ 24%	Ph.D. / M.D. or equivalent degree in Mechanical Engineering/Biomedical Engineering/ Applied Mechanics/Aerospace Engineering/ Instrumentation Engineering with first class (60%) or equivalent at all the preceding degrees and certificates along with good publication record in Science Citation Indexed (SCI) Journal. OR ME/MS/MTech in Mechanical/Biomedical/Aerospace/Applied Mechanics/ Instrumentation Engineering with first class (60%) or equivalent at all the preceding degrees and certificates, and having three years of research, teaching, and soft tissue mechanical characterization experience along with at least one good publication in Science Citation Indexed (SCI) Journal. Essential: A strong background in solid mechanics, knowledge of CAD software like SOLIDWORKS, MATLAB/Python, Mathematica. Desirable skills: Experience in robotics, FEA software like ABAQUS and assistive device design is desirable. Responsibilities: Optimization of routing of a tendon-sheath actuator, Design, and modelling of a twisted-and-coiled actuator (TCA). Implementation of TCA in exoskeleton augmenting shoulder movement.

The post may be downgraded as per discretion of the Selection Committee if none of the candidate is found suitable for the post.

The candidates who are interested to apply for the above post should download Form No. IRD/REC-4 from the IRD Website (<http://ird.iitd.ac.in/rec>) of IIT Delhi and submit the duly filled form with complete information regarding educational qualifications indicating percentage of marks/division, details of work experience etc. by e-mail with advertisement No. on the subject line "Application for Principal Project Scientist in IHFC project" to Prof. Sitikantha Roy at email id: recruitment.jatc@gmail.com and cc it to sroy@am.iitd.ac.in.

IIT Delhi reserves the right to fix higher criteria for short-listing of eligible candidates from those satisfying advertised qualification and requirement of the project post and their name will be displayed on web link (<http://ird.iitd.ac.in/shortlisted>) alongwith the online interview details. Only short-listed candidates will be informed for online interview. In case any clarification is required on eligibility regarding the above post, the candidate may contact Prof. Sitikantha Roy at email id: sroy@am.iitd.ac.in 5% relaxation of marks may be granted to the SC/ST Candidates. In case of selection of a retired/superannuated government employee, his/her salary will be fixed as per prevailing IRD norms. अनुसूचित जाति / अनुसूचित जनजाति के उम्मीदवारों को अंकों की 5% छूट दी जा सकती है। एक सेवानिवृत्त सरकारी कर्मचारी के चयन के मामले में उसका वेतन वर्तमान आईआरडी मानदंडों के अनुसार तय किया जाएगा। The last date for submitting the completed applications by e-mail is 01/02/2024 by 5.00 p.m.

सहायक कुलसचिव, आईआरडी

वितरण

- Head of the Deptt./Centres/Units : It is requested that the contents of the Above Advt. be brought to the notice of the staff working in your Deptt./Centre/Unit
- Webmaster, IRD : To put advertisement at IITD website.
- Notice Boards
- Advertisement file
- Prof. Sitikantha Roy, PI, Department of Applied Mechanics
- Copy to Chairperson, DRC/CRC