

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/RP03981G/ 256) 56

Advertisement No.: IITD/IRD/163/2021

Dated: 24/09/2021

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 plans to develop a physics based surgical simulation platform that will incorporate a digital brain model with anatomical details and realistic material properties/physics, to study the real-time deformation of the brain during interventional neurosurgery inside the operation theatre. There are two steps to it: Material property characterization of Brain tissue from MRI image processing, called elastography techniques and computational mechanics and AI/ML based simulation platform development for virtual surgery and tissue-device interaction.

Why you would like to join:

1. This is an one of its kind of project 1st time in the country. You will have an opportunity to interact with an interdisciplinary team of scientists having background as diverse as in computational bio-mechanics, soft robotics, scientific computation, medical doctors, radiologists and physicists.
2. Two of the premier institutes in India, IIT Delhi and AIIMS are involved in the project.
3. This is a cutting edge project where applications of AI/Machine learning and Imaging Physics/Image processing/material physics gets combined.
4. This is one of the highest funded project in DHR's history.

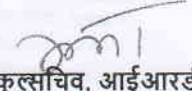
Title of the Project	Material characterization of brain tissue and development of tissue-device interaction based neurosurgical simulation tool (RP03981G)	
Funding Agency	Department of Health Research, Ministry of Health & Family Welfare, Indian Council for Medical Research (ICMR)	
Name of the Project Investigator	Prof. Sitikantha Roy (IITD) & Dr. Ashis Suri (AIIMS, New Delhi) [email of PI: brainmech6@gmail.com]	
Deptt./ Centre	School of Artificial Intelligence, IIT Delhi and Department of Applied Mechanics	
Duration of the Project	Upto 30/09/2023	
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./ MD or equivalent degree in the area of Computer science/Electrical Engineering/Mechanical Engineering/Physics (computational) /Biomedical Engineering/Radiology/Biomedical Signal and Image Processing/Medical Imaging/Applied Computational Mechanics/Computer Science Engineering/Mathematics 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 MSc/ME/MS/MTech in Mechanical/Biomedical/Radiology/Applied Mechanics having atleast 6 years of research, teaching and algorithm development experience in digital image processing related field with at least one good publication in Science Citation Indexed (SCI) Journal. Essential: Prior knowledge of Image Processing, MRI/CT etc quantitative analysis is required for shortlisting. 2. Experience in scientific computation, numerical methods and Computational Mechanics will be given weightage. Desirable skills: Candidate with hands-on knowledge of algorithm development using Python, C++ or MATLAB. Prior experience in Magnetic Resonance Elastography, neuro radiology, Computational Mechanics.

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 to Prof. Sitikantha Roy at email id: brainmech6@gmail.com and cc it to sitiroy@gmail.com

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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: sitiroy@gmail.com

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. The last date for submitting the completed applications by e-mail is 08/10/2021 by 5.00 p.m.


सहायक कुलसचिव, आईआरडी

वितरण

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- Prof. Sitikantha Roy, PI, School of Artificial Intelligence, IIT Delhi and Department of Applied Mechanics
- Copy to Chairperson, DRC/CRC
- Dr. Harshita Bhatnagar, RD Coordinator, (R&D) Wing

It is requested that the contents of the Above Advt. be brought to the notice of the staff working in your Deptt./Centre/Unit To put advertisement at IITD website.