



**CENTRE FOR INDUSTRIAL CONSULTANCY AND SPONSORED RESEARCH**  
**INDIAN INSTITUTE OF TECHNOLOGY MADRAS**  
CHENNAI – 600 036

*Advertisement No.: ICSR/PR/Advt.34/2019 Dated: 20/08/2019*

Applications are invited for the following temporary posts in the Dept. of Electrical Engineering, IIT Madras.

**Co-ordinators:** Prof. Deepa Venkitesh and Prof. Shanti Bhattacharya Dept. of Electrical Engineering.

**Duration:** Initially for a period of one year, extendable based on performance.

S.No	Post	Qualification and Experience	Pay Range
1	Project Associate	<b>Qualification:</b> Bachelors or master's degree in EE, ECE, or MSc in Physcis, Applied Optics.	<b>Rs. 21,500/-pm</b>
2	Project Officer	<b>Qualification:</b> Master degree in EE, ECE, or MSc in Physcis, Applied Optics	<b>Rs. 27,500/-pm</b>

**Note: Interview date scheduled on 07.09.2019 (Saturday), and eligible / shortlisted candidates can appear either in person or by Skype.**

For all projects:

- Candidates must submit the resume with educational background and details of any project work done
- Candidates if selected must be prepared to stay for at least one year in the project.
- They will have the opportunity to audit a course during their stay here, and will be encouraged to apply for a MS or PhD degree after 6 months.
- Projects will be experimental in nature requiring hands-on work. Simulations will also be carried out.

## **Project Details:**

### **Project 1: Microwave Photonics**

About the project: Project involves design and demonstration of optoelectronic oscillators, Photonic analog to digital converters, transport of low frequencies for phased array radars.

Required: Expertise in digital communication, optical communication

### **Project 2: Fourier Ptychography Microscopy**

About the project: The aim of the project is to generate high resolution images from a number of low resolution images.

Work to be done: Set up the optical system, capture data, learn how to process the data. Develop and test (machine) learning algorithms to process the data and arrive at high resolution images from a collection of low- resolution images.

Required: Expertise in optics, Fourier techniques, signal processing

### **Project 3: Generation of Complex Light with Diffractive Optics**

About the project: Study the properties of complex light to understand the benefits of using such light in communication or to extract information from scattering/turbid media.

Work to be done: Design and fabrication of diffractive optics. Testing and use of optics in optical communication and other experiments.

Required: Expertise in photonics/optics, optical communications

### **Project 4: Improving the optical lever of the LIGO (Gravity wave) interferometer**

About the project: The optical lever measurements angular changes of the LIGO mirror. Aim is to improve the sensitivity and range.

Work to be done: Study the use of complex light and speckle correlation techniques to improve the working of optical levers.

Required: Expertise in signal processing, photonics/optics

### **Project 5: Fabricating diffractive optics on fibre tip**

About the project: Write diffractive optics directly on fibre tip

The ability to write optics directly on the tip of a fibre, means that alignment between the fibre and the optics is removed. This is important in several applications. This project will look at adapting a Focused Ion Beam set-up to hold a fibre and write diffractive optics directly on it.

The optics will have to be designed and simulated.

Required : Expertise in photonics/optics

## **The last date for submission of online application is 30.08.2019**

### **General Instructions to the candidates**

- 1) All the positions are on purely contract basis.
- 2) The completion of the period of contract will not confer any right for further extension, regularization, permanency at the Institute.
- 3) Candidates should apply online only in the website <https://icandsr.iitm.ac.in/recruitment/> - **(Please check the advertisement number Advt.34/2019 displayed and submit the application for the relevant position).**
- 4) Separate application has to be filled for each post.
- 5) The system will accept single application only with the registered login ID (email) for an advertisement, hence the candidate is requested to select the multiple positions (In case, he/she wishes to apply for more than one position) before the submission of application.
- 6) The application cannot be edited, reverted once it is submitted.
- 7) Candidates should not attempt to apply twice for the same post. If multiple applications are received from a candidate for the same post, his/her candidature will liable to be rejected.
- 8) Candidates should follow the prescribed procedure for submission of online application.
- 9) Candidates are advised to fill their correct and active e-mail addresses in the online application as all correspondence will be made by the Institute through e-mail only.
- 10) The candidates applying for any post should ensure that they fulfil all the eligibility conditions for the post. Their admission to any stage of the selection process will be purely provisional subject to confirmation that they satisfy the prescribed eligibility conditions. Mere issue of registration certificate / call letter to the candidate will not imply that his/her candidature has been found eligible.
- 11) After successful online submission of application, a print out of the application form must be obtained and submitted when called for test. It will be required at the time of document verification/test/interview. Hard copy of the application is NOT to be sent to the Institute.
- 12) Candidates must be citizens of India. Persons who have migrated from Pakistan with the intention of permanently settling in India or subjects of Nepal are also eligible, but in their case a certificate of eligibility from the Government of India will be necessary for appointment. Such candidates should apply to the Government of India in the Ministry of Home Affairs for necessary certificate and furnish satisfactory proof of having so applied.
- 13) The prescribed qualifications are minimum and unless specified, they are required for consideration for the post, even if higher qualification has been acquired and the mere fact that a candidate possesses the same will not entitle him/her for being called for interview.
- 14) Relevant experience gained after the minimum qualifying degree will only be taken into consideration. Minimum requirements of qualifications and/or experience can be relaxed in respect of exceptionally outstanding candidates.

- 15) The experience required is relaxable at the discretion of the Institute in the case of candidates belonging to the Scheduled Caste / Scheduled Tribe, if at any stage of selection the competent authority is of the opinion that sufficient number of candidates from these communities possessing the requisite experience are not likely to be available to fill up the vacancy reserved for them.
- 16) The Institute reserves the right to restrict the number of candidates for written / skill test / interview to a reasonable limit on the basis of qualifications, level and relevance of experience higher than the minimum prescribed in the advertisement and other academic achievements. The Institute also reserves the right of rejecting any or all the applications without assigning any reasons therefore.
- 17) Calling a candidate for test/interview merely indicates that it is felt that he/she with others may be suitable for the post and conveys no assurance whatsoever that he/she will be recommended or selected or his/her conditions specified in the application will be accepted.
- 18) Candidates will be short-listed for Test/Interview on the basis of the information provided by them in their online applications. They must ensure that such information is true. If at any subsequent stage or at the time of Test/Interview any information given by them or any claim made by them in their online applications is found to be false, their candidature will be liable to be rejected.
- 19) The Institute shall verify the antecedents or documents submitted by a candidate at any time 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 clandestine antecedents/background and has suppressed the said information, then his services shall be liable to be terminated.
- 20) In case of any inadvertent mistake in the process of selection which may be detected at any stage even after the issue of appointment letter, the Institute reserves the right to modify/ withdraw/ cancel any communication made to the candidates.
- 21) Applicants who are working in **any one of the Project at IIT Madras**, must apply through proper channel otherwise they will be required to produce No-Objection Certificate at the time of document verification/Test/Interview. Candidates without NOC will not be permitted to appear for Test/Interview.
- 22) Candidates may send testimonials from persons intimately acquainted with their work and character. If the applicant is in employment, he/she should submit testimonials from the most recent employer or immediate superior as a referee.
- 23) The Institute has a right to decide the mode of screening and testing the applicant for short listing and selection.
- 24) The Institute solely reserves the right not to fill any advertised position without assigning any reason
- 25) Only shortlisted applicants will be contacted.
- 26) No correspondence whatsoever will be entertained from candidates regarding conduct and result of test/interview and reasons for not being called for interview. Canvassing in any form will be a disqualification.
- 27) The crucial date for determining the eligibility criteria for all candidates in every respect shall be the prescribed closing date for submission of online application.

- 28) The Institute strives to have a workforce which reflects gender balance and women candidates are encouraged to apply.
- 29) Any corrigendum/clarifications on this advertisement, if necessary, shall be uploaded on website and no separate communication will be sent for this purpose.
- 30) **The last date for submission of online application is 30.08.2019**
- 31) If there is any issue to submit the application please send E-mail to : [recruitment@iitm.ac.in](mailto:recruitment@iitm.ac.in) / [icsrrecruitment@iitm.ac.in](mailto:icsrrecruitment@iitm.ac.in) **Contact: 044- 2257 9778 / 9796** on all working days from **9.00 AM to 05.30 PM (Monday to Friday – except National Holidays)**. (Please note, only technical issues will be accepted – No interim correspondence with reference to the selection process will be considered).
- 32) **Instructions to apply online:-**Eligible applicants would require to register and apply online through <https://icandsr.iitm.ac.in/recruitment/> and submit the application.

**Sd/-**

Senior Manager –HR  
Centre for IC&SR  
IIT Madras