



सूक्ष्म कणिका एवं संचार अभियंत्रण विभाग  
**Department Of Electronics & Communication Engineering**  
मोतीलाल नेहरू राष्ट्रीय प्रौद्योगिकी संस्थान इलाहाबाद  
MOTILAL NEHRU NATIONAL INSTITUTE OF TECHNOLOGY ALLAHABAD  
इलाहाबाद- 211004  
ALLAHABAD-211004

Advertisement No-**ECBK**/2022/Project Staff

Date: 02/08/2022

**Advertisement for the Post of Junior Research Fellow (On Contract)**

Applications are invited from Indian nationals for the post of Junior Research Fellow (on contract) in research project entitled "Development and Hardware Implementation of Deep Learning Based Pre-processing Techniques for Thermal Imaging Applications", Sanction letter no. / 12091TS2122R613, dated 31.03.2022, sponsored by IRDE (Instrument Research and Development Establishment) DRDO, Dehradun.

The duly completed application (soft copy in any form) on prescribed format along with scanned copies of supporting documents must reach to email id: [singhasant@mnnit.ac.in](mailto:singhasant@mnnit.ac.in) (email id of Dr Basant Kumar, Electronics and Communication Engineering Department) with the subject of the email as "Application for JRF (on contract) in "IRDE-CARS Project" on or before **23/08/2022, 5.00 PM (IST)**.

**Description and Objectives of the Project:** Pre-processing of the acquired thermal image is needed due to presence of non-uniform illumination, noise, bad pixels and poor contrast. Development and implementation of low-delay pre-processing/ enhancement techniques on acquired thermal images is the pre-requisite for the accuracy of the object detection, boundary detection and other techniques needed for real-time identification and track of targets. Proposed research work aims to study and implement low-delay, and accurate Image processing as well as Deep Learning based algorithms for the pre-processing of the acquired thermal images. Subsequently, attempts will be made for implementation of these algorithms on FPGA boards.

The position is purely temporary and will be governed by the funding agency rules & service conditions of Office of the Dean (Research & Consultancy), MNNIT Allahabad.

**Number of Position** : 2 (One)

**Essential Qualifications** :

1. M. Tech. / M.E. in Electronics Engineering/ Electronics and Instrumentation Engineering / Signal Processing / Embedded Systems / VLSI  
or
2. B. Tech. in Electronics Engineering / Electronics & Communication Engg. with minimum 75 % ( Minimum Grade 8.00 on the scale of 10) with GATE Score card

**Fellowship** : Rs. 25,000.00 per month (Consolidated)



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**Desirable Experience** : One year research experience in the area of image/ video processing, Machine Learning, Digital hardware design on FPGA.

**Age Limit** : 28 years on the last date of application (The upper age limit is relaxable up to 5 years in the case of candidates belonging to SC/ST/OBC/PH and women candidates)

**Tenure of Appointment** : Appointment will be made on contract basis for a period of one year initially, which may be extended depending on the performance evaluation on yearly basis till the end of project.

**Note:**

1. The applicant will be responsible for the authenticity of information, other documents and photographs submitted.
2. The Institute reserves the right to accept application at any time, and consider candidates of exceptional credentials without applications.
3. Qualification and experience may be relaxed by the Institute at any point of time for otherwise exceptional candidates. Mere, possessing the prescribed qualification does not ensure that the candidate would be called for Interview. The Candidates will be shortlisted on the basis of merit and need of the project.
4. Shortlisted Candidates will be informed by e-mail about the interview date. So, the candidate must provide valid E -mail IDs in their applications.
5. Shortlisted candidates have to present themselves for the interview on the interview date with updated CV, publications if any, and original and attested photocopies of mark sheets/ certificates in support of their academic qualifications. **The mode of interview (physical/ online) will be informed to the shortlisted candidates via the email id provided in the application form.**
6. Applicants in employment (private, government or any other organization) are required to submit a “**No Objection Certificate**” from the employer at the time of interview.
7. No TA/DA will be paid for appearing in the interview (In case of interview in physical mode)

Name of Principal Investigator : Dr. Basant Kumar

Designation : Associate Professor

Department : Electronics and Communication Engineering



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**For office use only**

Application No.....

**APPLICATION FORM**

Advt.No.....

Dated.....

**Research Project Entitled** Development and Hardware Implementation of Deep Learning Based Pre-processing Techniques for Thermal Imaging Applications

**Sanction letter & Date** Sanction letter no. / 12091TS2122R613 , dated 31.03.2022

**Self Attested  
recent passport  
size Photograph**

**Funding Agency** IRDE (Instrument Research and Development Establishment)  
DRDO, Dehradun

**Name of P.I.** Dr. Basant Kumar

**Name of Position** Junior Research Fellow (on contract)

**Department/Section** Electronics & Communication Engineering

1.	Name of the Candidate (In Capital letter)	
2.	Sex (Male/Female)	
3.	Marital Status (Married/Unmarried)	
4.	Date of Birth	
5.	Age as on last date of application	_____ Years _____ Months _____ Days
6.	Father's/Husband's Name	
7.	Present/Contact Address	
8.	Permanent Address	
9.	Mobile No.	
10.	E-mail	
11.	Nationality	
12.	Category	Gen/SC/ST/OBC/PH _____ (enclosed attested copy of certificate) and women
13.	GATE	Valid up to _____ Score/Rank _____



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14.	Educational Qualification					
	<b>Qualification</b>	<b>Subject/Discipline</b>	<b>Board/Institute/Univ.</b>	<b>Year</b>	<b>% of marks</b>	<b>Division</b>
	10th or equivalent					
	12th or equivalent					
	Diploma, if any					
	BA/B.Sc./B.E./B.Tech.					
	M.A./M.Sc.					
	M.Phil./M.E./M.Tech*					
	Ph.D*					

**\*Title of M.E./M.Tech. Thesis:** .....

**Note:-** \*Those candidates who wish to be admitted as student for higher degree ( Ph.D.) must fulfill at least the minimum eligibility for the respective admission as available on the Institute website.

15.	Details of Experience in chronological order. Enclose a separate sheet duly authenticated under your signature if necessary							
	<b>Organization</b>	<b>Position</b>	<b>Salary/Emoluments</b>	<b>Nature of Duties</b>	<b>Nature of appointment</b>	<b>Period of Experience</b>		
						<b>Year</b>	<b>Month</b>	<b>Days</b>
16.	Research Publications (Attach list):-				Numbers :			
	SCI Journals :							
	Non SCI Journals :							
	International Conference/Seminar ./ Symposium Proceeding :							
	National Conference/Seminar ./Symposium Proceeding :							
17.	Any other information							
18.	Indicated whether you propose to register for higher degree* at MNNIT, Allahabad. Yes/No (Name of degree is Ph.D)							



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**DECLARATION**

I hereby declare that all the statements made in this application are true and complete and nothing has been concealed/ distorted. I am aware that, if at any time I am found to have concealed/distorted any material information, my engagement is liable to be summarily terminated without notice.

Place:  
Date:

(Signature of the Applicant)

**Enclosure-** Self attested copy of documents

1. Proof of Date of Birth
2. Mark sheets & certificates of all the examination passed
3. Category Certificate, if applicable
4. GATE score card, if passed
5. Experience certificate, if any