



# National Institute of Technology Goa

Institution of National Importance under MHRD, Govt. of India)

Department of Electrical and Electronics Engineering

Advt. No.: NITG/EEE/2019/OW/10, Dated: 03<sup>rd</sup> January 2019

## **Advertisement for the Position of Junior Research Fellow (JRF) under DST**

Applications are invited from interested and highly motivated candidates for the post of Junior Research Fellow (JRF) to work on the R&D project titled “**Design and Development of an Efficient Grid-Integrated Distributed Maximum Power Point Tracking to Photovoltaic system for Enhancing Power Quality under Partial Shading Conditions**”, has been sanctioned by **Science and Engineering Research Board (SERB), Dept. of Science and Technology (DST), Govt. of India**. JRF will be appointed initially for one year (on contract) and his/her services will be extended for subsequent year(s) based on the performance review. The position is co-terminus with the project.

**Name of Project Investigator** : Dr. Suresh Mikkili  
**Department** : Electrical and Electronics Engineering  
**Duration of the project** : 3 Years (2017-2020)

S No.	Position	Basic Qualification	Desirable knowledge areas	Duration	Consolidated Salary	Number of Positions
1	JRF	<b>M.Tech./M.E./</b> B.Tech./B.E. in Electrical and Electronics/ Electrical Engineering	MATLAB, Micro Controller coding, Digital Signal processor (DSP)	Initially for the period of one year which may be extended upto maximum of 3 years	Rs. 25,000/- (Per month upto 2 years)  Rs. 28,000 (Per month for 3 <sup>rd</sup> year)	01 (One)

### ***Eligibility for Project Associate/JRF:***

1. **M.Tech./M.E./**equivalent in Electrical Engineering / Electrical and Electronics Engineering with at least 6.5 CGPA or 60 percent marks in aggregate from a recognized technical institute or university as a full time program.
2. **B. Tech/B.E./** in Electrical Engineering / Electrical and Electronics Engineering with at least 6.5 CGPA or 60 percent marks in aggregate from a recognized technical institute or university as a full time program.

### ***Desirable Qualification for Project Associate/JRF:***

A strong knowledge of MATLAB-Simulink is highly desirable. Additionally knowledge in Grid-tied PV System, MPP Techniques, Multi-level Inverters, Shunt APF, UPQC and DSP Controller programming would be appreciated.



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## Objective of the Project

- ✦ To prepare a strategy for designing a 5 KW PV system and to study the impact of variations in solar irradiation, temperature and partial shading effects on the designed PV system.
- ✦ To extract the maximum available power from each PV module, with each coupled to its own DC-DC boost converter which is cascaded in series configuration by employing conventional MPPT techniques.
- ✦ To design a supervisory control along with DMPPT architecture to detect the Output Voltage Violations (OVL) and frequency due to unbalance between the output voltages and powers to meet the standard (IEEE 519) power quality requirements
- ✦ To implement a grid integrated PV system with DMPPT architecture to enhance the power quality and analyze the overall system efficiency when compared with the centralized PV system architecture under mismatching and partial shading effects.

## Important Instructions:

1. Candidate possessing the requisite qualification and experience should apply; in the attached format along with their updated CV latest by **04<sup>th</sup> February 2019**. The applicant will be responsible for the authenticity of information, other documents and photographs submitted.
2. 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.
3. 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.
4. Duly filled and signed scan copy of Application Form along with the scan copies of mark sheets/documents must be sent to Dr. Suresh Mikkili (PI), **through e-mail**, at: [mikkili.suresh@nitgoa.ac.in](mailto:mikkili.suresh@nitgoa.ac.in), with subject line “**Application for JRF in the Department of EEE for DST SERB Project**”.
5. The Shortlisted Candidates will be informed by e-mail (apart from website) along with the date and time of the written test/interview. No other letter will be sent to the correspondence address. So, the candidates are advised to check their email regularly.
6. Shortlisted candidates have to present themselves for the interview on the interview date with updated CV, application form, original and attested photocopies of mark sheets/certificates in support of their academic qualifications.
7. No TA/DA shall be paid to candidates for attending the Interview and/or joining the position.



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8. The appointment is for time bound project and the candidate is required to work dedicatedly for the successful completion of the project. Selected candidate has to join immediately.
9. Incomplete application forms and forms received after due date will be summarily rejected.
10. All the Terms and Conditions for this recruitment will be as per guidelines of DST SERB, Govt. of India.

## **Application Process**

Application form (as given below) giving all the details and attested copies of certificates, supporting documents and experience should reach the undersigned latest by **04<sup>th</sup> February 2019**. Candidates who are already employed should produce relieving certificate from their employers, if selected. The written test/interview will be conducted for all the eligible candidates. The applicants need to bring all the original documents for verification during written test/interview. The list of shortlisted candidates will be posted in the NIT Goa website ([www.nitgoa.ac.in](http://www.nitgoa.ac.in)) along with the date and time of the written test/interview.

## **Address for Correspondence**

Dr. Suresh Mikkili,  
Assistant Professor,  
Dept. of Electrical and Electronics Engineering,  
National Institute of Technology Goa,  
Farmagudi, Ponda, 403401, Goa- India.  
Telephone: +917588133009, 0832-2404214  
Email: [mikkili.suresh@nitgoa.ac.in](mailto:mikkili.suresh@nitgoa.ac.in)  
Website: [www.nitgoa.ac.in](http://www.nitgoa.ac.in)

**NOTE:** The envelope containing the application should be super scribed as **Application for the position of JRF under SERB - DST Project on “Design and Development of an Efficient Grid-Integrated Distributed Maximum Power Point Tracking to Photovoltaic system for Enhancing Power Quality under Partial Shading Conditions”**.

Dr. Suresh Mikkili

Email: [mikkili.suresh@nitgoa.ac.in](mailto:mikkili.suresh@nitgoa.ac.in)



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## Application for the Position of JRF (Junior Research Fellow) under DST SERB

**Title of Project:** Design and Development of an Efficient Grid-Integrated Distributed Maximum Power Point Tracking to Photovoltaic system for Enhancing Power Quality under Partial Shading Conditions

1. Post Applied for : Project Associate

2. Name of the Candidate (BLOCK LETTER): \_\_\_\_\_

3. Father's Name (BLOCK LETTER): \_\_\_\_\_

4. Mother's Name (BLOCK LETTER): \_\_\_\_\_

5. (a) Date of Birth: (DD/MM/YYYY) \_\_\_\_\_

(b) Sex (Male/Female/Other): \_\_\_\_\_

(c) Marital Status (Married/Single): \_\_\_\_\_

(d) Category (SC/ST/OBC/PWD/GEN): \_\_\_\_\_

6. Previous Research experience: (use additional sheet if required) \_\_\_\_\_

7. Publication(s), if any: (use additional sheet if required) \_\_\_\_\_

8. GATE/ NET (if any): Qualified (Yes/No): Score: \_\_\_\_\_ Rank: \_\_\_\_\_

Specialization: \_\_\_\_\_ Year: \_\_\_\_\_

9. Academic Qualification: (Starting from Standard 10 or equivalent Examination)

Name of Exam Passed	Name of the School/College/Institute/ University	Year of Passing	Discipline/ Specialization	Percentage of Marks/ CGPA

Paste here a recent Passport size Photograph



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10. (a) Address for Communication: (BLOCK LETTER)

(b) Contact No. (Mobile)

(c) E-mail ID :

11. Contact Details of two referees:

	Referee I	Referee II
Name :		
Designation :		
Organization:		
Office Address :		
Office Phone Number:		
Email ID:		

12. Experience details:

I do here by declare that the information furnished in this application is true to the best of my knowledge and belief. If selected, I promise to abide by the rules and regulations of the Institute.

Date:

Place:

Signature of the candidate

**Note:-**Additional A4 sheets may be included if provided space is insufficient.