

# विद्युत् अभियंत्रण विभाग

मोतीलाल नेहरु राष्ट्रीय प्रौद्योगिकी संस्थान इलाहाबाद  
प्रयागराज- 211004 (भारत)

## Department of Electrical Engineering MOTILAL NEHRU NATIONAL INSTITUTE OF TECHNOLOGY ALLAHABAD Prayagraj – 211004 (India)

Advertisement No-08/2020/Project Staff

Dated-19/06/2020

### 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 "Study on Cyber-physical Approach for Electric Power Grid".

This is a research project, funded by the SERB, Department of Science and Technology (DST), New Delhi. This is a collaborative project with Prof. Saikat Chakrabarti, IIT Kanpur.

The duly filled-in application (soft copy in any form) in prescribed format along with copies of supporting documents (scanned copy) must reach to email ID: [nandkishor@mnnit.ac.in](mailto:nandkishor@mnnit.ac.in) [Prof. (Dr.) Nandkishor] with subject of email as: "Application for JRF position in SERB project" on or before **11:59 PM, 10th July, 2020**. 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.

#### Project Description:

Operation of the power systems is more and more enabled by phasor measurement units (PMUs) providing a wealth of data and controlled by disparate systems. Advancements in remote signal measurement via PMUs have dramatically increased the availability of transient events for analysis. However, there is a concern from huge amount of PMUs data flow in efficiently extracting the useful information for events characterization. An accurate algorithm on event diagnosis can help to interpret amount of control action required in real-time.

The cyber-integration introduces new challenges. Most of the devices installed in the power systems/network are not designed with sufficient security features against malignant events, particularly from the cyberspace. Tremendous threats arise from the attacker's ability to launch intrigue, remote, simultaneous, and/or coordinated attacks from the cyberspace. The attack schemes can be on generation, transmission, distribution, electricity markets, etc.

#### Objectives of the Project:

The study in the project consists of work packages with specific tasks in the lines of above specified issues. Some part of study will be also carried on real time simulator (RTDS).

- Number of Position** : 1 (One)  
**Essential Qualifications** : M.Tech. with specialization in Power System having qualified GATE examination in Electrical Engineering.  
**Desirable Experience** : One year research experience in related area along with relevant publication if any.

**Additional Requirements** : The following additional requirements will be advantageous:

- Programming skills (Matlab, DigSilient).
- Strong academic skills in publication of research papers in International Journals and/or previous experience in company dedicated to smart grid products development.
- Experience in working on real-time simulators, particularly Opal-RT

**Fellowship** : ₹31,000.00 + HRA per month (Consolidated)

**Other Benefits** :

Accommodation may be available as per the availability and the Institute norms.

The candidate will be encouraged to get enrolled in the PhD programme in the Department of Electrical Engineering, MNNIT Allahabad. The applicant must qualify for admission to this PhD Programme as per existing rules. Candidates having GATE and CPI 6.5 or 60% marks in M. Tech may be eligible to register for Ph.D. program of the Institute. Facility of yearly leave, carryover leave, medical benefits etc. may be available as per applicable rules of the project staff.

**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. Qualification and experience may be relaxed by the Institute at any point of time for otherwise exceptional candidates.
3. 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 and original and attested photocopies of mark sheets/ certificates in support of their academic qualifications.
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 at MNNIT Allahabad

**Name of Principal Investigator** : Dr.NandKishor  
**Designation** : Professor  
**Department** : Electrical Engineering