

ADVERTISEMENT IN NITT WEBSITE FOR RECRUITMENT OF PROJECT STAFF

Dated: 08-09-2026

Applications are invited from Indian Nationals only for Project Positions as per the details given below, for consultancy / research projects, under the principal investigator **Dr. Shelas Sathyan, Department of Electrical and Electronics Engineering**, in National Institute of Technology, Tiruchirappalli-15, Tamil Nadu.

Title of the Project	Design and Development of High-Performance Reconfigurable Bidirectional DC-DC Converter with Advanced Modulation Strategy for Wide Load and Voltage Range Applications.
Name of the Funding Agency	ANRF - Advanced Research Grant (ARG).
Scope of the Project	This project focuses on developing a structurally reconfigurable, bidirectional Dual Active Bridge (DAB) DC-DC converter tailored for applications like electric vehicles and DC microgrids. Conventional DAB converter suffers from limited Zero Voltage Switching (ZVS) and high circulating currents under wide voltage and load variations. To overcome these limitations, the research integrates topology morphing techniques with advanced modulation strategies to minimize power losses and broaden ZVS boundaries. Deliverables include design and analysis on topologies, simulations, robust control methodologies for mode transitions, and validation through hardware prototype, demonstrating high efficiency across diverse and wide operating conditions.
Project Positions and Number	Position: Junior Research Fellow (JRF)/ Project Associate - I Vacancy: 01
Duration of Project	Initial appointment is for the period of one year, which can be extended up to three years or till the project end date solely based on the satisfactory performance.
Qualification	JRF: B.E/B.Tech. with First class in Electrical Engineering (EE) / Electrical and Electronics Engineering (EEE) / Electrical and computers Engineering/ Electrical and Instrumentation Engineering (EIE) with a valid GATE score. Preference: M.E/M.Tech. in Power Electronics / Power electronics and drives or equivalent master's degree (First class i.e. 60% or 6.5 CGPA) from recognized University/Institute. (OR) Project Associate – I: B.E/B.Tech. with First class in Electrical Engineering (EE) / Electrical and Electronics Engineering (EEE) / Electrical and computers Engineering/ Electrical and Instrumentation Engineering (EIE). Preference: M.E/M.Tech. in Power Electronics / Power electronics and drives or equivalent master's degree (First class i.e. 60% or 6.5 CGPA) from recognized University/Institute.
Emoluments	For GATE qualified Candidates: JRF: First two years Rs. 37,000 + HRA and Rs. 42,000 +HRA for 3rd year. For Non-Gate Candidates: Project Associate – I: First two years Rs. 30,000 + HRA and 33,000 + HRA for 3rd year.
Age limit and relaxation details	32 years (relaxation as per GOI norms)
Job Description	• Power electronic converter design & development. • Perform simulation and analysis on converter topologies. • Development of modulation strategies and its analysis. • Prototype development and testing through PCB fabrication, modulation strategy implementation and analysis. • Formulation of reports & publication of technical articles

Mode of Application	Interested candidates should submit their applications in the prescribed format attached below (also available online on institute website www.nitt.edu) by 30 September 2026. Eligible candidates may send the scanned copy of their duly filled applications along with the relevant supporting documents (Copies of degree certificates and other relevant documents as per instructions given below) to apclabnitt@gmail.com and shelassathyan@nitt.edu as a single PDF document. Applicants are also requested to fill the google form attached below: https://forms.gle/x2exU6pHsWQ59TXY6
Contact Details of PI	Dr. Shelas Sathyan (Principal Investigator) Assistant Professor, Department of Electrical and Electronics Engineering, National Institute of Technology, Tiruchirappalli, India – 620015. Email: shelassathyan@nitt.edu
Important Note	Only shortlisted candidates will be intimated by email and will have to appear for screening test/ interview/ both in OFFLINE MODE on the date communicated through email. All the original documents will be verified before appearing for interview and candidate has to submit one self-attested copy of all the relevant documents. Candidates failing to produce documents in original on the day of interview may submit a declaration. If selected, the candidate must produce all the original documents during physical reporting. If anything is found wrong, the applicant's selection shall stand cancelled. Fellowships / Stipends to the students shall be paid post physical verification of the documents.

Additional information:

- Upon appointment, opportunity to register for a **Ph.D. program** at **NIT, Tiruchirappalli** subject to fulfilment of institute norms, will be provided.

Age Limit:

- JRF/ PA-I: The upper age limit is 32 years as on the closing date of advertisement. The upper age limit shall be relaxed to the candidates belonging to SC/ST is 5 years and OBC is 3 years.
- Only eligible candidates will be called for interview after screening and shortlisting process by the selection committee.
- For JRF, GATE paper and subject of qualifying degree must be related to the subject/discipline against which the candidate is applying.
- Candidates serving in Govt. or in Govt. owned organization will be required to produce "NOC" from their respective Department/Employer at the time of interview failing which the candidate will not be allowed to appear for the interview or they should apply through proper channel.

General Instructions:

- Application should be furnished only in the prescribed format.
- Candidates before appearing for the interview shall ensure that they are eligible for the position they intend to apply.
- Candidates shall attach the following certificates along with their application- B.E/ B.Tech degree certificate and consolidated grade card, M.E /M. Tech degree certificate and consolidated grade card, 12th or equivalent certificate, 10th (SSLC) certificate, GATE score card, proofs for age, category (if required) and NOC from organizations (if required).
- Incomplete applications will be rejected.
- Only those candidates who have been awarded Degree/Provisional Certificate are eligible to apply for the position.
- Copies of supporting documents should be scanned and emailed together with the application. All supporting

documents should be submitted as a single PDF file.

- Candidates need to produce Original Certificates/Testimonial for proof of Category, Age, Educational Qualifications, GATE score, B.E./B.Tech. and M.E./M.Tech. marks memos and No Objection Certificate (where applicable) at the time of interview. One self-attested photocopy of all above documents should be submitted at the time of interview.
- Please note that no TA/DA is admissible for attending the interview.
- Candidates should make their own arrangement for their stay and transport to NIT, Trichy.
- It may please be noted that offer of Fellowship will under no circumstances confer on candidates any right of absorption in NIT, Trichy. NIT reserves the right to cancel the fellowship at any point of time if the JRF/ PA-I candidate found not suitable after selection.
- Award of Fellowship shall not be claimed by any candidate as a matter of right. It shall be entirely at the discretion of the Selection Committee, which may refuse to admit any candidate without assigning any reason thereof.
- The last date and time of submission of duly filled in application **30.09.2026, 11:59 pm**.
- Applications should be submitted (only in the form of softcopy PDF form) with all necessary documents through email to apclabnitt@gmail.com and shelassathyan@nitt.edu. For any details email to apclabnitt@gmail.com.

**Signature of the Principal Investigator
(Dr. Shelas Sathyan)**

OFFICE OF THE DEAN (R & C), NIT, TIRUCHI
RECRUITMENT OF TEMPORARY PROJECT STAFF --PRESCRIBED APPLICATION FOR THE POST OF RESEARCH
ASSOCIATE / JRF / SRF / TECHNICAL STAFF – SPECIMEN TEMPLATE

(Important note: This is specimen template. Project Investigator can modify according to his requirement)

For Office Use only Serial Number allotted to the Applicant Signature of the Application Screening Committee Chairman	Paste here your recent passport size colour Photograph
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APPLICATION FOR THE POST OF RESEARCH ASSOCIATE / JRF / SRF/ TECHNICAL STAFF

1. Name of the Candidate in full					
2. Nationality					
3. Mother Tongue					
4. Date of Birth		Date	Month	Year	
5. Sex		Male / Female			
6. Marital Status		Married / Single			
7. Category SC / ST / OBC / General		Please specify			
8. Address for communication with Mobile number and E Mail ID					
9. Project Title					
10. Name of the Post applied for					
11. Advertisement Number with Date					
Academic Career : Enclose photo copies of the qualifying degree certificates and mark sheets/ grade cards showing the percentage of marks or CGPF from HSC onwards					
Name of Exam	School / University	Board/ University	Broad subjects of study	Year of Passing	% of marks / GCPA
S.S.L.C					
H.S.C					
Graduation					
Post-Graduation					
Any other					

Enclose self-attested Xerox copies

12. GATE/NET ScoreSubject
Year.....

13. Have you or your relatives associated with NIT Tiruchirappalli? (if yes, provide the details)

14. Have you already associated/associating with NIT Tiruchirappalli.(Student/Project staff, etc.,)? (if yes, provide the details)

position	Duration		Nature of Job
	From	To	

15. Work Experience, if any

Organization	Designation	Duration		Nature of Job
		From	To	

16. Previous Research work and publication, if any (enclose copies of published or unpublished work)

17. Proof of past study as a sponsored candidate, or other contractual obligation, if any:

18. Reference

Name	Address	Phone & E Mail ID

19. Declaration: I do hereby that the information furnished in the application is true to the best of my knowledge and belief. If admitted, I shall abide by the rules and regulations of the Institute and Project/consultancy associated to it. If any information furnished in this application is found to be untrue, I am liable to forfeit the seat / appointment allotted to me any time in future and legal action be taken against me.

Date:

Full signature of the Applicant

List of Enclosures: (1)
(2)
(3)
(4)