

OFFICE OF THE DEAN (R & C), NIT, TIRUCHI

ADVERTISEMENT IN NITT WEBSITE FOR RECRUITMENT OF PROJECT STAFF

Dated: 06-07-2026

Applications are invited from motivated and eligible candidates for the position of **Junior Research Fellow (JRF)/Project Associate-I** for the project titled “**Next-Generation Molecular Dynamics Study to Elucidate Nucleation and Crystallization Mechanisms in Gas Storage Materials,**” an **Anusandhan National Research Foundation (ANRF)** funded research project under the principal investigator **Dr. Nandlal Pingua, Chemical Engineering**, in National Institute of Technology, Tiruchirappalli-15, Tamil Nadu.

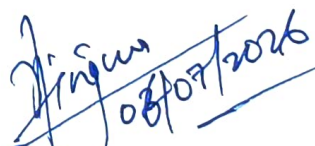
Title of the Project	Next-Generation Molecular Dynamics Study to Elucidate Nucleation and Crystallization Mechanisms in Gas Storage Materials
Name of the Funding Agency	Prime Minister Early Career Research Grant (PMECRG), ANRF
Scope of the Project	The project aims to develop a next-generation Molecular Dynamics (MD) simulation framework to elucidate the nucleation and crystallization mechanisms of gas storage materials, including Metal-Organic Frameworks (MOFs), Clathrate Hydrate, and other porous materials. The research will integrate artificial intelligence/machine learning (AI/ML) techniques with atomistic simulation to accelerate candidate discovery and enhance the understanding of structure-property relationships. The selected candidate will gain hands-on experience in molecular modeling, high-performance computing (HPC), AI/ML-driven data analysis, and the design of next-generation materials for sustainable energy and gas storage applications.
Position and Number	Position: Junior Research Fellow (JRF)/ Project Associate – 1 Number: 01
Duration of Project	The post is purely temporary in nature. Initial appointment is for the period of one (01) year , which can be extended up to THREE (03) years solely based on the satisfactory performance (maximum till project end date).
Minimum Educational Qualifications and Eligibility Criterion	<p>For JRF: B.E./B.Tech. with First Class (minimum 60% marks or 6.5 CGPA) in Chemical Engineering, Materials Science and Engineering, Mechanical Engineering, Computational Materials Science, Nanotechnology, or a closely related discipline from a recognized university/institute with a valid GATE qualification, and M.E./M.Tech. with First Class (minimum 60% marks or 6.5 CGPA) in Chemical Engineering, Materials Science and Engineering, Computational Materials Science, Nanotechnology, Mechanical Engineering, or a closely related discipline from a recognized university/institute. Preference will be given to candidates having a valid GATE qualification as per ANRF guidelines.</p> <p>For Project Associate-I: M.E./M.Tech. with First Class (minimum 60% marks or 6.5 CGPA) in Chemical Engineering, Materials Science and Engineering, Computational Materials Science, Nanotechnology, Mechanical Engineering, Physics, Chemistry, Artificial Intelligence & Machine Learning, Data Science, or a closely related discipline from a recognized university/institute. B.E./B.Tech. with First Class (minimum 60% marks or 6.5 CGPA) in relevant disciplines may also be considered, subject to the eligibility criteria prescribed by the funding agency. Candidates having a valid GATE/NET qualification will be preferred; however, it is <i>not mandatory</i> unless required by the funding agency or specific project conditions.</p> <ul style="list-style-type: none"> • Preference will be given to candidates with knowledge of computational materials research, molecular dynamics (MD) simulations, Artificial Intelligence/Machine Learning (AI/ML), Python programming, Linux, and High-Performance Computing

	<p>(HPC).</p> <ul style="list-style-type: none"> • Candidates should have a strong academic background and a keen interest in computational materials research.
Essential Skills	<ul style="list-style-type: none"> • Experience with LAMMPS, Python, Linux, and High-Performance Computing (HPC). • Knowledge of Molecular Dynamics (MD) simulations other MD simulation package, molecular modeling, and atomistic simulations. • Understanding of materials science, thermodynamics, and statistical mechanics. • Familiarity with Artificial Intelligence (AI) and Machine Learning (ML) techniques, including data driven modeling and predictive analytics. • Basic programming/scripting skills in Python, Matlab, Bash, or Fortran language, or C/C++. • Good scientific writing, analytical, and communication skills in English.
Desirable Qualifications (Preferred but Not Mandatory)	<ul style="list-style-type: none"> • Experience in molecular dynamic simulation, Monte Carlo simulation, or Density Functional Theory (DFT). • Knowledge of Materials Studio, VMD, Ovito, or similar visualization tools. • Experience in data analysis using Matlab, Python, Numpy, Pandas, and Matplotlib. • Publication in SCI-indexed journals related to computational materials science or molecular simulation.
Upper Age Limit and Relaxation	<p>As on the closing date of advertisement:</p> <p>Junior Research Fellow (JRF): Age should be less than 32 years</p> <p>Project Associate – I: Age should be less than 35 years</p> <p>Note: Relaxation as per GOI norms</p>
Ph. D. Opportunity	<p>The selected candidate will have the opportunity to register for a regular PhD program provided the candidate satisfies the eligibility criterion for the Ph.D program at NIT Tiruchirappalli (https://www.nitt.edu/home/admissions/phd/).</p>
Emoluments	<p>Candidates who are selected through GATE as JRF</p> <ul style="list-style-type: none"> • ₹ 37,000/month + HRA (First 2 years) • ₹ 42,000/month + HRA (3rd year, upon successful assessment and upgradation) <p>Candidates without GATE as Project Associate - I</p> <ul style="list-style-type: none"> • ₹ 30,000/month + HRA (First 2 years) • ₹ 33,000/month + HRA (3rd year, upon successful assessment and upgradation)
Mode of Application	<p>Interested candidates desiring to appear for the Interview should submit their applications in the prescribed format (available online on institute website www.nitt.edu) by 30 July 2026, 05:00 PM.</p> <p>Eligible candidates may send the scanned copy of their duly filled applications along with the relevant supporting documents (Attested copies of degree/ certificate) to nandlal@nitt.edu as a single PDF document and also fill the google form below:</p> <p>https://docs.google.com/forms/d/1dV8SKMX7wRnwQtTYJwcr7H92SM1sTnS-nKwn1xd4iXo/edit</p>
Contact Details of PI	<p>Dr. Nandlal Pingua (Principal Investigator) Assistant Professor, Department of Chemical Engineering, National Institute of Technology, Tiruchirappalli - 620015 (T.N.) Email: nandlal@nitt.edu</p>

Important Note	<ul style="list-style-type: none"> • Only shortlisted candidates will be intimated by email and will have to appear for interview in OFFLINE MODE on the date as communicated through email. • All the original documents will be verified before appearing for interview and candidate has to submit <i>one self-attested copy</i> 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. • Please note that no TA/DA is admissible for attending the interview.
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Additional information:

- 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.
- Candidates before appearing for the interview shall ensure that they are eligible for the position they intend to apply.
- Incomplete applications are liable to be rejected.
- Only those candidates who have been awarded Degree/Provisional Certificate are eligible to apply.
- 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 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 **26.07.2026, 05:00 pm.**


08/07/2026

Dr. Nandlal Pingua
Name and Signature of the Principal Investigator

OFFICE OF THE DEAN (R & C), NIT, TIRUCHI
**RECRUITMENT OF TEMPORARY PROJECT STAFF --PRESCRIBED APPLICATION FOR THE
 POST OF JRF/PROJECT ASSOCIATE – I**

For Office Use only Serial Number allotted to the Applicant Signature of the Application Screening Committee Chairman	Paste here your recent passport size color Photograph
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APPLICATION FOR THE POST OF JRF/ PROJECT ASSOCIATE - I

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

Enclose self-attested Xerox copies

12. GATE/NET Score Subject
 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 (enclose self-attested proofs)

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)