



# NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

[An Institute of National Importance under Ministry of Education, Govt. of India]

Sector 1, Rourkela, Sundergarh Dist., Odisha 769 008

**SPONSORED RESEARCH INDUSTRIAL CONSULTANCY CONTINUING EDUCATION**

**NITR / SR / 2026 / Advt.- 25CR047 / L / 012**

**dt.17-Apr-2026 Ref: FTS**

**SR-R03**

## Advertisement for Recruitment of Project Position

Candidates who fulfill the below mentioned criteria may submit the application form before the last date. Engagement will be purely on temporary / contractual basis and co-terminus with the completion of the project. Candidates are advised to go through the advertisement details carefully before applying.

1. Title of the Project: Consortium of Technologies for Sustainable Agriculture, Health, Energy and Environment.

2. Project Code, Dept. with Closing Date: **SR-25-CR-047** | **13-Oct-2030** | ANRF-PAIR

3. Funding Agency Details: **4211- ANRF [3499 0201 0052 015]** | -

4. PI details: Prof. Swadesh Kumar Pratihar | skpratihar@nitrl.ac.in, **0661-246 2206**  
9437391103 | - | - @ -NA-

5. Co-PI details: Prof. Himanshu Bhushan Sahu | hbsahu@nitrl.ac.in, **0661-246 2606**  
9437245625 | - | - @ -NA-

6. Details of the Post(s): 7. Educational Qualification & Working Knowledge

Junior Research Fellow (JRF) [Name of the Post(s)] Essential Qualification (s):  
Details in Annexure - I

21 No(s) 05 Year(s), 00 Month(s) [No. of Post(s)] (Tenure of Post)

Year 1 & 2

INR 37,000.00 /- per month (+) HRA @ NA % (if applicable) Experience / Software / Skillset & Desirable Qualification:

Year 3 onwards (till complete of project)

INR 42,000.00 /- per month (+) HRA @ NA % (if applicable) Details in Annexure - I

Job Description:

Details in Annexure - I

Offline Interview details: **05-Jun-2026** | **09:00 AM** | Department as mentioned in Annexure-I

**Application link for eligible candidate(s):** [NIT Rourkela Homepage](#) ⇒ [FACULTY & STAFF](#) ⇒ [SRICCE](#) ⇒ [Career](#) ⇒ [Notices](#)  
The candidate(s) are required to send the complete filled and signed application (soft copy) with documents regarding educational qualification indicating percentage of marks / division (mark-sheets and / or certificates), research papers (if any), work experience certificate (if any) etc., This may be built as a single PDF file and sent by email with "Advertisement No." on the subject link to the above mentioned e-mail IDs. NO hard copies of application(s) are required to be sent to the Institute. **Last date for submitting the Application: 19-May-2026**

The period of experience in a discipline / area of work, wherever prescribed, shall be counted after the date of acquiring the minimum prescribed educational qualifications for that position. Mere possession of minimum qualification does not guarantee invitation to the interview. Candidates will be short listed based on merit and need of the project. Selection / Joining will be cancelled in case of any suppression of information / document submitted.

NIT Rourkela reserves the right to fix higher criteria for short-listing of eligible candidates from those satisfying advertised qualification and requirement of the project post. Only short-listed candidates will be informed for Online interview. In case, any clarification is required on eligibility regarding the above post, the candidate may contact in the above mentioned details.

**Age Guideline:** The upper age limit for applying for the award of project position shall be **30** years, which is relaxed up to 5 years in the case of candidates belonging to Schedule Castes / Schedule Tribes / PWD and Female applicants whereas 3 years in the case of OBCs (Non-creamy layer candidates). Upper age limit shall be reckoned as on the last date of receipt of applications.

**Any other terms & conditions governed as per guidelines issued by the funding agency for the engagement of above position as amended from time to time shall be in force towards this temporary recruitment.**

1. Kindly refer Annexure - I for details.

Sd/-  
**Asst. / Dy. / Jt. Registrar (SR)**

Copy to:

- PI & CO- PI: Prof. Swadesh Kumar Pratihar, CR & Prof. Himanshu Bhushan Sahu MN ➤ Chairman, DRC, Dept. of CR
- Head of the Department / Centres / Units (It is requested that the contents of the above advertisement be brought to the notice of the staff(s) / student(s) working in your Deptt. / Centre / Unit.)
- Dealing Seat (SR – Project Recruitment) ➤ Advertisement File ➔ [To publish advertisement at NITR website.](#)

Essential Qualification for all the posts is as follows:

**Junior Research Fellow (JRF)**

Post Graduate degree in basic science OR Graduate / Post Graduate Degree in Professional Course selected through a process described through any one of the following:

- Scholars who are selected through National Eligibility Tests – CSIR-UGC NET including Lectureship (Assistant Professorship) and GATE.
- The selection process through National Eligibility Examinations conducted by Central Government Departments and their Agencies and Institutions such as DBT, DST, DAE, DOS, DRDO, MoE, ICAR, ICMR, IIT, IISc, IISER, NISER, etc.

Desirable Qualifications are mentioned in the below table against each posts.

Project #	JRF #	Project Title	Qualification	Investigators Contact
A1.3	1	IoT based AI Optimized Real-time Monitoring System with IVR service for Remote Aquafarm	B.Tech / M.Tech in Computer Science and Engineering / Information Technology OR MCA OR MSc in Computer Science / Information Technology. Must have qualified in GATE or any National Level fellowship. BE/B.Tech/MCA/M.Sc or equivalent with a CGPA of 7.0 or 65% marks. ME/M.Tech with at least 6.5 CGPA or 60% marks.	Manmath N. Sahoo <a href="mailto:sahoom@nitrkl.ac.in">sahoom@nitrkl.ac.in</a> Santos K. Das <a href="mailto:dassk@nitrkl.ac.in">dassk@nitrkl.ac.in</a>
A3.4	1	Smart Agri-Quality Grading System: AI-Driven Assessment and Grading of Agricultural Products for Market Readiness	B.Tech / M.Tech in Computer Science and Engineering / Information Technology OR MCA OR MSc in Computer Science / Information Technology. Must have qualified in GATE or any National Level fellowship. BE/B.Tech/MCA/M.Sc or equivalent with a CGPA of 7.0 or 65% marks. ME/M.Tech with at least 6.5 CGPA or 60% marks.	Sabyasachi Mishra <a href="mailto:mishrasa@nitrkl.ac.in">mishrasa@nitrkl.ac.in</a> Pankaj K. Sa <a href="mailto:PankajKSa@nitrkl.ac.in">PankajKSa@nitrkl.ac.in</a>
A1.5	1	SMART AGRI-NET: AIoT-Enabled Integrated Platform for Crop Health Monitoring, Precision Farming, and Sustainable Millet Cultivation	BTech (with GATE) / MTech in Electronics / Electrical / Electronics & Communication / Electronics & Telecommunication / Electronics & Instrumentation / Applied Electronics & Instrumentation / Electrical & Electronics Engineering / Computer Science/Computer Science and Engg./Biomedical and allied, OR MCA/MSc (with GATE/Any National Level fellowship) in Electronics/ Computer Science/ Information Technology/Physics/Mathematics and allied. BE/B.Tech/MCA/M.Sc or equivalent with a CGPA of 7.0 or 65% marks. ME/M.Tech with at least 6.5 CGPA or 60% marks.	Umesh Chandra Pati <a href="mailto:ucpati@nitrkl.ac.in">ucpati@nitrkl.ac.in</a> , Santos K. Das <a href="mailto:dassk@nitrkl.ac.in">dassk@nitrkl.ac.in</a>

Project #	JRF #	Project Title	Qualification	Investigators Contact
H2A	1	Development of remote patient monitoring device with 5G secured communication	<p><b>Desirable Qualifications:</b> M.E./M. Tech. in Electronics/Electrical/Instrumentation or similar with specialization in VLSI/Instrumentation/Electronics/ Electrical or similar with above 60% marks at both UG and PG levels OR B.E./B. Tech. in Electronics/Electrical/Instrumentation or similar with above 60% marks and qualified in GATE/NET OR MSc in Electronics with above 60% marks and qualified in GATE/NET.</p> <p>Previous experience in Analog IC design in Cadence and embedded system design with micro-controllers are desirable.</p>	Sougata Kumar Kar <a href="mailto:kars@nitrrkl.ac.in">kars@nitrrkl.ac.in</a>
H2A	1	Development of remote patient monitoring device with 5G secured communication	<p><b>Desirable Qualifications:</b> M.E./M. Tech. in Electronics/Electrical/Instrumentation or similar with specialization in wireless Communication Systems/ Signal Processing/ Image Processing/ Instrumentation/ AI/ML or similar with above 60% marks at both UG and PG levels OR B.E./B. Tech. in Electronics/Electrical/Instrumentation or similar with above 60% marks and qualified in GATE/NET or MCA/MSc in Electronics/Computer Science/ Information Technology.</p> <p>Proficiency in programming languages (MATLAB/Python)</p>	Suman Kumar Dey <a href="mailto:deysk@nitrrkl.ac.in">deysk@nitrrkl.ac.in</a>
H2D	1	Analysis of Real-time data from EEG, wearable devices, and medical images for disease prediction.	<p><b>Desirable Qualifications:</b> M.E./M. Tech. in Electronics/Electrical/Instrumentation or similar with specialization in wireless Communication Systems/ Signal Processing/ Image Processing/ Instrumentation/ AI/ML or similar with above 60% marks at both UG and PG levels OR B.E./B. Tech. in Electronics/Electrical/Instrumentation or similar with above 60% marks and qualified in GATE/NET or MCA/MSc in Electronics/Computer Science/ Information Technology and qualified in GATE/NET.</p> <p>Proficiency in programming languages (MATLAB/Python)</p>	Anwasha Sengupta <a href="mailto:senguptaan@nitrrkl.ac.in">senguptaan@nitrrkl.ac.in</a>
H3B	1	Development of Multi-Organ-On-Chip Models Integrated with Biosensors for Physiological, Pathophysiological, and Drug Discovery Applications.	M.Tech./ M.Sc. with First class in Biotech/Biomedical Equivalent with minimum 60% or 6.5 CGPA from a recognized university/institute. Candidates must have qualified CSIR-UGC NET or GATE Examination to apply under JRF.	Amrita Singh <a href="mailto:singham@nitrrkl.ac.in">singham@nitrrkl.ac.in</a>

Project #	JRF #	Project Title	Qualification	Investigators Contact
H3C	1	Self-powered wearable devices and drug delivery systems with biosensors for continuous healthcare monitoring	<b>Desirable Qualifications:</b> MSc in any biological sciences with NET/GATE B.Tech/M.Tech in Biotechnology/Biomedical Engineering/Electrical Engineering (Biology in 12 <sup>th</sup> ). A GATE qualification is mandatory for B.Tech applicants.	Bismita Nayak <a href="mailto:nayakb@nitrrkl.ac.in">nayakb@nitrrkl.ac.in</a>
E1.1	1	LSCF/BSCF perovskites and Gd-containing pyrochlore ceramics for electrocatalysts	BE/B.Tech/M.Sc. (with GATE) with a CGPA of 7.0 or 65% marks OR M.Tech in Ceramic Engg. /Metallurgical and Materials Engg./Chemical Engg. /Mechanical Engg. /Biomedical Engg. /Nanotechnology /Biotechnology OR MSc (with GATE) in Physics /Chemistry /Materials Science /Nano Science with at least 6.5 CGPA or 60% marks.	Swadesh K Pratihari <a href="mailto:skpratihari@nitrrkl.ac.in">skpratihari@nitrrkl.ac.in</a>
E1.3	1	MxInySz/Bi-TM-O & MxPy/Bi-TM-O nano-heterostructures and MXene supported perovskites	MSc (with GATE/NET) in Physics /Chemistry/ Applied Chemistry /Industrial Chemistry /Materials Science /Nano Science with a CGPA of 7.0 or 65% marks	Priyabrati Das <a href="mailto:dashp@nitrrkl.ac.in">dashp@nitrrkl.ac.in</a>
E2.1	1	NMC (LiNi <sub>x</sub> Co <sub>y</sub> Mn <sub>0.2</sub> O <sub>2</sub> ) cathode development for battery applications	BE/B.Tech/M.Sc. (with GATE) with a CGPA of 7.0 or 65% marks OR M.Tech in Ceramic Engg. /Metallurgical and Materials Engg./Chemical Engg. /Mechanical Engg. /Biomedical Engg. /Nanotechnology /Biotechnology OR MSc (with GATE) in Physics /Chemistry /Materials Science /Nano Science with at least 6.5 CGPA or 60% marks.	Partha Saha <a href="mailto:sahap@nitrrkl.ac.in">sahap@nitrrkl.ac.in</a>
E2.4	1	Development of hierarchically porous Si-C and Si-P-C hybrids	BE/B.Tech/M.Sc. (with GATE) with a CGPA of 7.0 or 65% marks OR M.Tech in Ceramic Engg. /Metallurgical and Materials Engg./Chemical Engg. /Mechanical Engg. /Biomedical Engg. /Nanotechnology /Biotechnology OR MSc (with GATE) in Physics /Chemistry /Materials Science /Nano Science with at least 6.5 CGPA or 60% marks.	Shantanu K Behera <a href="mailto:beherash@nitrrkl.ac.in">beherash@nitrrkl.ac.in</a>
E4.1	1	Grid Synchronization, energy management and protection strategies for microgrid:	MTech/ME/M.S. in Electrical / Control Engineering/ Energy Engg. or equivalent, relevant to the area of research OR BTech/BE in Electrical/ Control Engineering or equivalent Engineering or equivalent, and having a CGPA/CPI score of 7.00 (out of 10.0) and above with a valid GATE score can apply for admission to the PhD programme. Power Systems, Microgrid Control, Operation, and Cybersecurity, Power Electronics and Drives, Active Power Filter, Renewable Energy & EV, AI/ML-based Control Applications, Battery, Hydrogen Storage, Fuel Cells, Supercapacitors.	Pravat Kumar Ray <a href="mailto:rayp@nitrrkl.ac.in">rayp@nitrrkl.ac.in</a>

Project #	JRF #	Project Title	Qualification	Investigators Contact
E4.2	1	Green Hydrogen Integration and Microgrid Stability	MTech/ME/M.S. in Electrical / Control Engineering/ Energy Engg. or equivalent, relevant to the area of research OR BTech/BE in Electrical/ Control Engineering or equivalent Engineering or equivalent, and having a CGPA/CPI score of 7.00 (out of 10.0) and above with a valid GATE score can apply for admission to the PhD programme. Power Systems, Microgrid Control, Operation, and Cybersecurity, Power Electronics and Drives, Active Power Filter, Renewable Energy & EV, AI/ML-based Control Applications, Battery, Hydrogen Storage, Fuel Cells, Supercapacitors.	Monalisa Pattnaik <a href="mailto:pattnaikm@nitrrkl.ac.in">pattnaikm@nitrrkl.ac.in</a>
E4.3	1	Power Electronics Development for DERs	MTech/ME/M.S. in Electrical / Control Engineering/ Energy Engg. or equivalent, relevant to the area of research OR BTech/BE in Electrical/ Control Engineering or equivalent Engineering or equivalent, and having a CGPA/CPI score of 7.00 (out of 10.0) and above with a valid GATE score can apply for admission to the PhD programme. Power Systems, Microgrid Control, Operation, and Cybersecurity, Power Electronics and Drives, Active Power Filter, Renewable Energy & EV, AI/ML-based Control Applications, Battery, Hydrogen Storage, Fuel Cells, Supercapacitors.	Susovon Samanta <a href="mailto:samantas@nitrrkl.ac.in">samantas@nitrrkl.ac.in</a>
E4.4	1	Grid-Interactive AC-DC Microgrid System Analysis and AI/ML-based Energy Forecasting	MTech/ME/M.S. in Electrical / Control Engineering/ Energy Engg. or equivalent, relevant to the area of research OR BTech/BE in Electrical/ Control Engineering or equivalent Engineering or equivalent, and having a CGPA/CPI score of 7.00 (out of 10.0) and above with a valid GATE score can apply for admission to the PhD programme. Power Systems, Microgrid Control, Operation, and Cybersecurity, Power Electronics and Drives, Active Power Filter, Renewable Energy & EV, AI/ML-based Control Applications, Battery, Hydrogen Storage, Fuel Cells, Supercapacitors.	Arnab Ghosh <a href="mailto:ghosha@nitrrkl.ac.in">ghosha@nitrrkl.ac.in</a>
E4.6	1	Renewable Energy Integrated Secure Network Control and Protection Strategies:	MTech/ME/M.S. in Electrical / Control Engineering/ Energy Engg. or equivalent, relevant to the area of research OR BTech/BE in Electrical/ Control Engineering or equivalent Engineering or equivalent, and having a CGPA/CPI score of 7.00 (out of 10.0) and above with a valid GATE score can apply for admission to the PhD programme. Power Systems, Microgrid Control, Operation, and Cybersecurity, Power Electronics and Drives, Active Power Filter, Renewable Energy & EV, AI/ML-based Control Applications, Battery, Hydrogen Storage, Fuel Cells, Supercapacitors.	Jatin Pradhan <a href="mailto:pradhanjk@nitrrkl.ac.in">pradhanjk@nitrrkl.ac.in</a>

Project #	JRF #	Project Title	Qualification	Investigators Contact
N1.4	1 JRF/ PA*	Development of sustainable adsorbents from industrial wastes to remove heavy metals and other chemical pollutants in polluted water streams and water bodies around mining areas of Odisha	<p><b>Desirable Qualifications:</b> B.E. or B.Tech. in Mining/Civil/Environmental/Chemical or allied Engg. with GATE score or M.E./ M. Tech. Mining/Civil/Environmental/Chemical or allied Engg. with a GATE score with minimum 65% marks (7 CGPA), or an MSc in Geology / Geo-Physics / Environmental Science / Remote Sensing / Mathematics / Statistics / Chemistry / Physics/ allied disciplines (with GATE/NET/National level eligibility test) with minimum 65% marks or 7.0 CGPA. Applicants with a valid GATE/NET/GPAT score or its equivalent may have the requirement relaxed by a maximum of 0.5 CGPA or 5% marks.</p> <p>Preference to candidates with Experience in fabrication, chemical testing, and field work in the environmental domain</p> <p>Candidates with lower qualifications may be considered for the Project Associate Post</p>	Himanshu B. Sahu <a href="mailto:hbsahu@nitrl.ac.in">hbsahu@nitrl.ac.in</a>
N 2.4	1 JRF/ PA*	Developing an AI-based intelligent dust control system for the mitigation of fugitive dust generated in coal mines of Odisha	<p><b>Desirable Qualifications:</b> B.Tech/M.Tech in Mining / Civil / Environmental / Chemical / Electronics / Electrical / Instrumentation / Computer Science / IT / Mechanical / Metallurgical, Materials Engineering, any other relevant field. or MSc in Geology / Geo-Physics / Environmental Science / Remote Sensing / Mathematics / Statistics / Chemistry / Physics/allied disciplines. Minimum 60% marks or 6.50 CGPA with GATE/NET/other state/national level recognised exam Score.</p> <p>More preference to candidates with Experience in IoT, circuit designs, communication protocols, coding, and mine field work</p> <p>Candidates with lower qualifications may be considered for the Project Associate Post</p>	Tushar Gupta <a href="mailto:guptat@nitrl.ac.in">guptat@nitrl.ac.in</a>
N3.1	1	Environmentally Degradable Supramolecular Plastics for Sustainable Solutions	<p><b>Desirable Qualifications:</b> M.Sc. in Chemistry (or Industrial / Applied / Environmental / Polymer / Materials Chemistry) with 65% marks or 7.00 CGPA with a valid GATE/NET score</p>	Bimalendu Adhikari <a href="mailto:adhikarib@nitrl.ac.in">adhikarib@nitrl.ac.in</a>

Project #	JRF #	Project Title	Qualification	Investigators Contact
N3.4	1	Development of Sustainable Geopolymer Concrete	<b>Desirable Qualifications:</b> B.Tech/B.E. in Civil Engineering with a minimum CGPA of 6.5 (60%)/1st class with valid GATE/NET score, and M.E./M.Tech in Structural Engineering/Construction Technology and Management/Construction Management/Construction Technology with a minimum CGPA of 6.5/Percentage 60% /1st class from a recognized Technological University Good Background in Concrete Technology with a valid GATE/NET Score	Subhajit Mondal <a href="mailto:mondalsubhajit@nitrrkl.ac.in">mondalsubhajit@nitrrkl.ac.in</a>

- (\*) PA-I may be considered for any one post.
- Application / Inquiry may kindly be sent to the relevant Investigator as mentioned at the column (Investigators Contact) project wise.
- Qualification and other requirements are as per the ANRF notification attached.

Fellowship:

1 <sup>st</sup> and 2 <sup>nd</sup> year	:	₹ 37,000 per month
3 <sup>rd</sup> to 5 <sup>th</sup> year	:	₹ 42,000 per month

- Shared accommodation shall be provided in the hostel
- Candidates appearing for their final examination are also eligible to apply. However, the qualifying degree result is required to be submitted by 30th September, 2026.
- Selected candidates are required to register for the Ph.D. programme.

#### ACTIVITY SCHEDULE

Sl#	Event	Date
1	Last date of submission of application by email	19 <sup>th</sup> May, 2026 (Tuesday)
2	Intimation of scrutiny result by email	25 <sup>th</sup> May, 2026 (Monday)
3	Test / Interview (Venue – NIT Rourkela) <b>(in-person)</b>	05 <sup>th</sup> June, 2026 (Friday)
4	Intimation of selection by email	by 18 <sup>th</sup> June, 2026 (Thursday)
5	Date of Joining	by 29 <sup>th</sup> June, 2026 (Monday)

The candidates are advised to visit department webpage and contact respective investigators for further details