



# Warrier HEART Hub

National Institute of Technology Karnataka Surathkal

NITK Campus Post Srinivasnagar Surathkal-575025

Ref. No: **03/NITK/MECH/Alumni-SWM/2026-27/A9**

Date: 25/05/2026

## Advertisement for the selection of Postdoctoral Fellow (WHH-PDF)

Under

### Warrier HEART Hub, National Institute of Technology Karnataka Surathkal

Applications are invited from eligible and motivated candidates for the position of Postdoctoral Fellow (WHH-PDF) in the research project titled ‘**An AI-ML based system for Sustainable Waste Management at NITK Campus,**’ under the **Warrier HEART Hub (WHH)** at **National Institute of Technology Karnataka (NITK), Surathkal.**

#### Objective:

The **Warrier HEART Hub (WHH)** at **NITK Surathkal** aims to identify and support motivated young researchers working in frontier areas of **AI/ML applications for sustainable resource management**, at NITK, in domains such as clean water, resource management, and waste-to-energy systems. The fellowship provides an opportunity for early-career researchers to work on real-world sustainability challenges at campus-scale and beyond, particularly in the areas of AI-enabled monitoring, ML based optimization, and automation of waste-to-energy systems. The selected fellow will work under the guidance of a group of faculty members from NITK Surathkal and contribute to interdisciplinary research activities under the Warrier HEART Hub. The fellowship is expected to provide the candidate with a strong platform to develop as an independent researcher, while contributing to ongoing initiatives in waste management and resource recovery at the NITK campus. The outcomes of this work are expected to support planners and policymakers of local governments in addressing challenges related to waste management, clean energy, water management, and environmental sustainability, and may also lead to innovative solutions with societal impact, including employment generation and improved environmental management.

The duration of the fellowship is currently **six months** for the Postdoctoral Fellow (WHH-PDF) and extendable based on the availability of funding and performance of the candidate. Interested candidates should fill in their academic and personal details in the prescribed application format and send the same along with self-attested copies of relevant certificates **within 14 days** from the date of this advertisement to the contact person mentioned. Only shortlisted candidates will be informed through post/email/phone or via the institute website: [www.nitk.ac.in](http://www.nitk.ac.in).

Shortlisted candidates must report to the contact person for certificate verification, followed by a written test and/or technical interview. The interview is most likely to be held during the **second week of June 2026**. Any changes to the interview schedule will be intimated through email. The final selection will be based on educational qualifications, relevant experience, written test performance, and interview outcome. No TA/DA will be provided for attending the written test and interview. Selected candidates will be required to join immediately upon selection.

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|--|--|
| Source of Fund   | Warrier HEART Hub Research, Scholarships for Sustainability.   |
| Project Title  | An AI-ML based system for Sustainable Waste Management at NITK Campus.   |
| Funding Agency / Sponsoring Company / Implementing Centre    | <b>Warrier HEART Hub</b> , National Institute of Technology Karnataka, Surathkal.  |
| Monthly Fellowships /Research grants available               | Refer Table 01 in Page No. 04  |
| Number of Post-Doctoral Fellowship (PDF) positions available | 01 (One)   |
| Faculty/Mentors Associated from Departments/Centres          | Department of Mechanical Engineering/Information Technology/Civil Engineering/Computer Science and Engineering/ Department of Chemistry  |
| Tenure of availability of Scholarships                       | Currently, for six months, it is extendable based on the availability of funding and performance of the candidate.   |
| Qualification and Experience                                 | <p><b>Ph.D.</b> in Mechanical Engineering / Mechatronics / Instrumentation / Electrical Engineering / Chemical Engineering / Thermal or Energy Engineering / Renewable Energy / Civil Engineering / Computer Science / Information Technology / Data Science or any closely related field.</p> <p><b>Desirable Experience:</b> Preference will be given to candidates having experience in one or more of the following areas:</p> <ul style="list-style-type: none"> <li>• Waste-to-energy systems, including anaerobic digestion, biogas plants, gasification, pyrolysis, composting, or integrated solid waste management systems.</li> <li>• AI/ML-based monitoring, prediction, optimization, or decision-support systems for solid waste, biogas, bioenergy, or environmental management applications.</li> <li>• Sensors, automation, IoT-based data acquisition, real-time monitoring, control systems, instrumentation, or field deployment of pilot/demonstration-scale systems.</li> <li>• Sustainability assessment of waste-to-energy or renewable energy systems, including life cycle assessment, techno-economic analysis, environmental impact assessment, or decision-support modelling.</li> <li>• Preparation of research publications, project proposals, technical reports, intellectual property documents, and coordination of interdisciplinary research activities.</li> </ul> |
| Desirable qualities  | <p>The candidate must be able to work independently and flexibly and having the following qualities will be desirable.</p> <ol style="list-style-type: none"> <li>1. Basic knowledge about laboratory/bench scale work with a</li> </ol>   |

|                                      |   |
|--------------------------------------|---|
|                                      | <p>technical focus on the fundamentals to understand and optimize the process</p> <ol style="list-style-type: none"> <li>2. Implementation: Pilot/demonstration scale or the field application projects</li> <li>3. Sustainability aspects: Knowledge to conduct potential analysis on financial, social, environmental aspects of biogas plant. Familiarity with decision support tools and theoretical evaluation.</li> <li>4. Excellent analytical and writing skills</li> </ol>   |
| Additional information               | <p>At present, several critical activities are in progress under the project, including:</p> <ol style="list-style-type: none"> <li>1. Field implementation and installation of the in-house developed autonomous bio-health monitoring system at the campus biogas plant,</li> <li>2. Development of portable biodigester and automation concepts for campus deployment.</li> <li>3. Support and guidance for associated M.Tech and B.Tech student projects related to automation, AI/ML, IoT, and waste-to-energy systems.</li> <li>4. Preparation of technical documentation, publications, intellectual property, funding proposals, and deployment models for scalable waste-management and resource-recovery applications.</li> </ol> <p>Additional information may be obtained by contacting the Head/ Project Coordinator, Warriar HEART Hub, National Institute of Technology Karnataka, Surathkal directly through email.</p> |
| Last date for receipt of application | <b>08<sup>th</sup> June 2026</b>  |

Interested candidates may apply in the prescribed format along with CV, photocopies of relevant certificates, grade/mark sheets, publications etc., and should reach NITK on or before **08/06/2026** by post/email (scanned documents) at the prescribed address below:

Sd/  
Dr. Vasudeva Madav  
Project Coordinator  
Warrier HEART Hub  
National Institute of Technology Karnataka Surathkal  
Email 1: [vasu@nitk.edu.in](mailto:vasu@nitk.edu.in)

Tel: +91-824-2473670, M: +91-9008889796

Address for communication.

|   |  |
|---|--|
| <b>Dr. Vasudeva Madav</b><br>Associate Professor, Department of Mechanical Engineering and Project Coordinator, Warriar HEART Hub<br>National Institute of Technology Karnataka Surathkal<br>P.O Srinivasnagar, Mangalore, Karnataka- 575 025 | E-mail: <a href="mailto:vasu@nitk.edu.in">vasu@nitk.edu.in</a> |
|---|--|

Faculty Associated from various Departments/Centre's NITK

|  |  |   |
|--|--|---|
| <b>Dr. Navin Karanth P.</b><br>Associate Professor<br>Department of Mechanical Engineering | <b>Dr. Saumya Hegde</b><br>Assistant Professor<br>Department of Computer Science & Engineering | <b>Dr. Dinesh Naik</b><br>Assistant Professor<br>Department of Information Technology |
| <b>Dr Saikat Dutta</b><br>Associate Professor<br>Department of Chemistry                   | <b>Prof. Arun Kumar Thalla</b><br>Professor<br>Department of Civil Engineering                 | <b>Prof. Shrikanth S Rao</b><br>Professor<br>Department of Mechanical Engineering     |

**Eligibility:**

- The applicant should be an Indian citizen
- The applicant **must have been awarded a Ph.D.** degree from a recognized university/institution.
- Candidates who are awaiting Ph.D. award or have only submitted their thesis **are not eligible to apply.**

**Nature & Duration of Support:**

- The fellowship is tenable only in India and will be implemented at NITK, Surathkal. The WHH, NITK Surathkal, and the respective department will provide necessary administrative and infrastructural support.
- The fellowship is purely a temporary assignment and is tenable for six months. Extendable based on the availability of funding and performance of the candidate.
- The fellows will be entitled to receive the grants as given in table 1 below:

Table 01: Fellowship and Research Grants

| Sl. No. | Budget Head                    | Monthly Stipend (₹)        | Duration (Months)   |
|---------|--------------------------------|----------------------------|---|
| 1       | Fellowship                     | Rs. 75,000/- + 18% HRA     | Six months (extendable based on the availability of funding and performance of the candidate) |
| 2       | Research grant for consumables | Rs.50,000/- for six months |   |

- Research grant can be used for minor equipment, consumables, contingencies, and domestic travel. There is no provision for providing manpower support under this scheme. The Fellow is expected to undertake the research objectives by himself/herself during the entire duration of the fellowship.
- The fellows are not eligible to receive any other fellowship from any Government or non-governmental source during the tenure of the fellowship.
- The fellows must seek the consent of Faculty Mentor/Project Coordinator/ Dean R&C if he/she intends to be away from NITK (except for fieldwork related to the project) continuously for a period of more than eight weeks.

## **Selection & Mode of Application**

The call for applications for WHH-PDF under Warriar HEART Hub, NITK will be notified through the website [www.nitk.ac.in](http://www.nitk.ac.in)

- The application form along with a research proposal highlighting the objectives of the research work to be undertaken should be submitted online through the email
- The selection will be based on the recommendations of an Expert Committee that will be constituted by the Warriar HEART HUB, NITK Surathkal.
- Final Selection will be made as per the procedure laid down by NITK Surathkal.
- If required, the applicants may be called for the personal interview.

## **How to apply:**

**For successful submission of the application the following points may be noted:**

- Applicants should fill the form, which includes Bio-data, Photo, Institute, Address, etc.
- Details including Project Title (max 500 characters), Project summary (max 3000 characters), Keywords (max 6), Objectives of the project (max 1500 characters), Expected output, and outcome of the proposal (max 1500 characters) should be provided at the time of submission of the application.
- Work Methodology and Research Plan must be submitted in a single PDF file, not more than 3 pages (max 10 MB).

## **Documents required (in PDF) should be in prescribed format:**

- Duly Filled Application
- Bio-data
- Age Proof Certificate
- Qualification Certificate
- Category Certificate (in case of Age Relaxation)
- Undertaking Certificate by the applicant (as per the attachment)
- Plagiarism undertaking

**NOTE:** NITK Surathkal reserves the right to reject any or all the applications without assigning any reasons thereof.

## **Termination of the Fellowship**

- If any fellow wishes to terminate the fellowship, he/she shall inform the WHH, NITK Surathkal, through the mentor immediately with one month notice.
- WHH, NITK Surathkal reserves the right to terminate the Fellowship at any stage if it is convinced that appropriate progress is not being made or the grant has not been utilized properly.

## **Leave**

WHH- PDFs are entitled to leave as per the rules of NITK. Participation in scientific workshops held in India or abroad will be treated as on duty. As per the Govt. of India instructions issued from time to time, maternity leave would be available to female candidates in all categories.

## Application for Warrior HEART Hub Postdoctoral Fellowship

|   |  |
|---|--|
| <b>For Office Use:</b>                        | Paste your recent<br>Passport size photo |
| Serial Number: .....                          |  |
| Eligible for Written exam/Interview: Yes / No |  |
| Verified the Certificates: .....              |  |

|                             |  |                           |
|-----------------------------|--|---------------------------|
| <b>1. Name:</b>             |  |                           |
| <b>2. Father's Name:</b>    |  |                           |
| <b>3(a). Date of Birth:</b> |  | <b>3(b). Nationality:</b> |

#### 4. Contact information:

|                                       |  |
|---------------------------------------|--|
| <b>(i) Address for communication:</b> |  |
| <b>(ii) Mobile No:</b>                |  |
| <b>(iii) Email ID:</b>                |  |

#### 5. Educational Qualifications\*

| Class                   | Subject/<br>Stream | Board/<br>University | Name of<br>Institute | Marks/<br>CGPA | Year of<br>Passing |
|-------------------------|--------------------|----------------------|----------------------|----------------|--------------------|
| X                       |                    |                      |                      |                |                    |
| XII                     |                    |                      |                      |                |                    |
| UG Degree               |                    |                      |                      |                |                    |
| PG Degree               |                    |                      |                      |                |                    |
| MPhil                   |                    |                      |                      |                |                    |
| PhD                     |                    |                      |                      |                |                    |
| <b>Competitive Exam</b> | <b>Qualified</b>   | <b>Marks / Rank</b>  |                      | <b>Year</b>    |                    |
| CSIR-UGC NET            | Yes / No           |                      |                      |                |                    |
| GATE                    | Yes / No           |                      |                      |                |                    |

\*Attach self-attested copies of all certificates.

**6. Work Experience, if any (in years) .....**

| Organization | Designation | Duration | Responsibilities |
|--------------|-------------|----------|------------------|
|              |             |          |                  |
|              |             |          |                  |
|              |             |          |                  |

**7. Number of Publications: (Attach a separate list of publications with full details)**

| National | International |
|----------|---------------|
|          |               |

**8. Workshop/Training programs attended\*:**

| S. No. | Details |
|--------|---------|
|        |         |
|        |         |
|        |         |

**\*Attach separate sheet (if required)**

**9. Technical Skills**

| S. No. | Details |
|--------|---------|
|        |         |
|        |         |
|        |         |

**10. Other Achievements\*:**

| S. No. | Details |
|--------|---------|
|        |         |
|        |         |
|        |         |

**\*Attach separate sheet (if required)**

**11. Declaration:** All the above information provided by me is accurate to the best of my knowledge and I understand that, if found incorrect, I may be disallowed to appear in the interview/test or terminated at any stage.

**Date:**

**Place:**

**Signature of the Candidate**

**Note:** Attach the list of enclosures along with the application.

Undertaking by the Fellow

I,....., Son/Daughter/Wife of Shri....., resident of  
..... agree to undertake the following, If I am offered the PDF/Project  
Associate funding by Warriar HEART Hub,

1. I shall abide by the rules and regulations of NITK during the entire tenure of the fellowship.
2. I shall also abide by the rules, discipline of the institution.
3. I shall devote full time to research work during the tenure of the fellowship.
4. I shall prepare the progress report on the 25<sup>th</sup> day of every month and communicate the same to Warriar HEART Hub through the mentor and Project Coordinators.
5. I shall send two copies of the consolidated progress report at the end of the fellowship period.
6. I further state that I shall have no claim whatsoever for regular/permanent absorption on the expiry of the fellowship.

Date:

Signature

Plagiarism undertaking by the Fellow

To

Sir I \_\_\_\_\_  
hereby certify that the research report titled \_\_\_\_\_

\_\_\_\_\_ submitted for as a part of PDF  
/Project Associate funding by Warriar HEART Hub is my original idea and has not been  
copied/taken verbatim from anyone or from any other sources. I further certify that this  
proposal has been checked for plagiarism through a plagiarism detection tool i.e.  
\_\_\_\_\_ approved by the Institute and the contents are  
original and not copied/taken from any one or many other sources.

I am aware of the UGCs Regulations on prevention of Plagiarism i.e. University Grants  
Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher  
Educational Institutions) Regulation, 2018.

I also declare that there are no plagiarism charges established or pending against me in  
the last five years. If the funding agency notices any plagiarism or any other discrepancies  
in the above proposal of mine, I would abide by whatsoever action taken against me by  
NITK, as deemed necessary.

Name & Signature of Fellow with date