Research Engineer (Embedded System Development With Additive Manufacturing) - HHJ1
Singapore Institute of Technology

Job Title Research Engineer (Embedded System Development With Additive Manufacturing) - HHJ1

Department Engineering

Institution Singapore Institute of Technology
Singapore, , Singapore

Date Posted May 15, 2025

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Professional Staff
Research Scientist/Associate

Academic Field(s) Mechanical Engineering

Job Website https://careers.singaporetech.edu.sg/cw/en/job/498933/research-engineer-embedded-system-development-with-additive-manufacturing-hhj1

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Job Description

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Job no: 498933
Department: Engineering
Contract type: Contract
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As a University of Applied Learning, SIT works closely with industry in our research pursuits. Our research staff will have the opportunity to be equipped with applied research skill sets that are relevant to industry demands while working on research projects in SIT.

We have an opening for a highly motivated engineer to work on a fully funded project on product development of a sensor monitoring unit for railway application using additive manufacturing. Scope of the work will include conducting vibration testing, prototyping design and development, and IoT implementation. The engineer will work closely with the project team to perform field and laboratory testing to compile and present the results to the stakeholders.

Key Responsibilities

- Design and fabricate sensor prototype for rail application, with IoT implementation for remote monitoring
- Conduct testing to understand vibrations on the railway track
- Design and fabricate fixtures to perform in-lab vibration testing of prototype
- Deploy prototype on track to evaluate performance and verification testing
- Coordinate procurement of necessary equipment or tools and liaise with vendors/suppliers
- Compile and analyse data, write reports and present findings in project meetings
- Ensure compliance with Work, Safety and Health Regulations

Required/Desired Skills:

- Embedded System Development
- Printed Circuit Board design and troubleshooting
- Experience with CAD software (e.g. Solidworks/CREO/AutoCAD, or open-source), and Design for Additive Manufacturing
- Experience with product prototyping and development using 3D printing
- Proficiency in IoT system development, including sensor integration and data communication
- An interest in, and relevant competencies in any or more of the following: finite element analysis, mechanical design and fabrication, mechanical/vibration testing, characterisation of mechanical

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behaviour of materials.
- Good to have knowledge on LoRA or relevant data communication technologies.

The candidate must be resourceful, proactive and results-oriented. A positive attitude, and the ability to present and communicate well with all types of stakeholders will be essential.

Job Requirements

- A good degree in Mechanical Engineering/Materials Science Engineering from a recognised University. Possessing a Master's degree will be advantageous.
- Demonstrated experience (3-5 years preferred) in engineering design and fabrication. Possessing practical experience in additive manufacturing projects will be advantageous.
- Willingness to work railway engineering hours when required
- Comfortable with both simulation and experimental techniques
- Able to work independently, and closely with other members of a multi-disciplinary team which includes the industry and government agencies

Apply now
Advertised: 15 May 2025 Singapore Standard Time
Applications close: 31 Dec 2025 Singapore Standard Time

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

Singapore