

Research Fellow/Engineer (Kingpost High Performance Steel) - PDL3
Singapore Institute of Technology

Direct Link: <https://www.AcademicKeys.com/r?job=223529>

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Posted Oct. 13, 2023, set to expire Jul. 5, 2024

Job Title Research Fellow/Engineer (Kingpost High Performance Steel) - PDL3

Department Engineering

Institution Singapore Institute of Technology
Singapore, , Singapore

Date Posted Oct. 13, 2023

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Research Scientist/Associate

Academic Field(s) Mechanical Engineering
Electrical and/or Electronics

Job Website <https://careers.singaporetech.edu.sg/cw/en/job/498529/research-fellowengineer-kingpost-high-performance-steel-pdl3>

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Job Description

Research Fellow/Engineer (Kingpost High Performance Steel) - PDL3

Job no: 498529

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 are looking for a research engineer / fellow to join a cross disciplinary team on an industrial research project developing an electronic smart location and installation system for plunge-in kingpost columns. This will be employed in top-down construction projects, implementing a modern design for manufacture and assembly (DfMA) approach. The device will consist of an efficient positioning and verticality control system deploying micro-electromechanical systems (MEMS) technology or other alternatives and will aim to automate the construction process. The controls will be based on PC or tablets for easy implementation on site.

The project will also develop kingposts using high performance steel (HPS) sections to reduce the structural weight and improve productivity further. These will be developed by other team members.

Key Responsibilities:

- Participate in and manage the research project with Principal Investigator (PI), Co-PI and the research team members to ensure all project deliverables are met.
- Undertake these responsibilities in the project:
 - i Develop a locating device to partially automate the kingpost installation process using MEMS technology or other alternatives.
 - ii Develop the interface between the locating device and the automated installation system.
- Carry out Risk Assessments and ensure compliance with Work, Safety and Health Regulations.
- If needed, help conducting tests and simulations to develop a safe and efficient specification for factory and site welding of high strength steel sections as part of the team.
- Coordinate procurement and liaise with vendors/suppliers.
- Work independently, as well as within a team, to ensure proper operation and maintenance of equipment.
- If the selected candidate does not hold a Masters degree yet, it will be possible for them to pursue a Master of Engineering by research degree at SIT during their employment.

Job Requirements:

- Have relevant knowledge and experience in electronic circuit design and embedded system design.
- Have experience in microcontroller programming (Assembly language or C).

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- Have a basic understanding of sensors and actuators technologies (e.g. GPS, gyroscope, accelerometer, hall sensors, servo motors, etc.)
- Have a degree (preferably Master's or PhD) in mechanical engineering, electrical / electronics engineering or related domains.
- Knowledge of app development would be advantageous
- Knowledge of robotic/cyber-physical systems would be advantageous

Key Competencies

- Proficient in technical writing and presentation
- Possess strong analytical and critical thinking skills
- Show strong initiative and take ownership of work
- Able to conduct an electronic circuit- and embedded system- based project (including requirements analysis, conceptual design, implementation, testing and verification)
- Able to support other related laboratory tasks as needed
- Willing to learn new skills as needed for the project

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Advertised: 13 Oct 2023 Singapore Standard Time

Applications close: 29 Feb 2024 Singapore Standard Time

Contact Information

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

Contact

Singapore