

Research Engineer (Marine EV Charging) - SN1 Singapore Institute of Technology

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Posted Feb. 24, 2025, set to expire Jul. 5, 2025

Job Title Research Engineer (Marine EV Charging) - SN1
Department Engineering
Institution Singapore Institute of Technology
Singapore, , Singapore

Date Posted Feb. 24, 2025

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Research Scientist/Associate

Academic Field(s) Electrical and/or Electronics

Job Website <https://careers.singaporetech.edu.sg/cw/en/job/498851/research-engineer-marine-ev-charging-sn1>

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Job Description

Research Engineer (Marine EV Charging) - SN1

Job no: 498851

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

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to industry demands while working on research projects in SIT.

The primary responsibility of this role is to deliver on an industry innovation research project, where you will be part of the research team to develop solutions for adapting CCS2 chargers for marine electrical vessels and optimizing DC fast charging technology for marine applications.

Key Responsibilities

As a Research Engineer (Electrical Engineering - Marine EV Charging & DC Fast Charging), you will be part of a dynamic team working on cutting-edge research and industry projects. You will:

- Participate in and manage the research project with the Principal Investigator (PI), and industrial partner to ensure all project deliverables are met.
- Develop and implement solutions for adapting CCS2 chargers to marine electric vessel applications.
- Design experiments for testing and analyze DC fast charging for high power marine EVs and assess communication integrity at various operating conditions.
- Test interoperability of charger with marine EVs and ensure compliance with EV charging communication protocols (e.g., ISO 15118, DIN 70121).
- Conduct EMI noise analysis and mitigation for high-power DC charging systems.
- Develop and troubleshoot embedded hardware and software for charger communication and control.
- Work on energy storage integration for marine charging infrastructure.
- Collaborate with industry partners and regulatory bodies on marine charging standards and DC fast charging protocols.
- Support knowledge transfer, prototype development, and system integration.
- Carry out Risk Assessment and ensure compliance with Work, Safety, and Health Regulations.
- Coordinate procurement and liaise with vendors/suppliers to support project needs.
- Work independently, as well as within a team, to drive research and development efforts

Job Requirements

- Degree / Master's in Electrical Engineering, Power Electronics, or related fields.
- Strong knowledge of DC fast charging, energy storage systems, charger communication standards, and power electronics.
- Experience in charger communication protocols (e.g., CAN, PLC, Modbus, IEC 61851).
- Experience in hybrid or full electrical systems design or analysis and system integration
- Experience in designing and developing experiments and associated test-set up for testing and

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troubleshooting electrical systems

- Proficiency in EMI noise analysis and power quality assessment.
- Knowledge of marine electrical systems and power electronics systems is an advantage.
- Hands-on experience with embedded systems, microcontrollers, and software development is an advantage.
- Passion for applied research, problem-solving, and industry collaboration.

Key Competencies

- Strong analytical and troubleshooting skills.
- Ability to work in a team-oriented and interdisciplinary environment.
- Effective communication and technical documentation skills.
- Adaptability to work on industry-focused projects with tight deadlines.
- Able to build and maintain strong working relationships with people within and external to the university.
- Possess strong analytical and critical thinking skills
- Show strong initiative and take ownership of work

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Advertised: 24 Feb 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