

Research Fellow/Engineer (Coastal dynamics and  
Sediment Transportation) - TZY2  
Singapore Institute of Technology

Direct Link: <https://www.AcademicKeys.com/r?job=228296>

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Posted Jan. 3, 2024, set to expire Jul. 5, 2024

**Job Title** Research Fellow/Engineer (Coastal dynamics and Sediment  
Transportation) - TZY2

**Department**

**Institution** Singapore Institute of Technology  
Singapore, , Singapore

**Date Posted** Jan. 3, 2024

**Application Deadline** Open until filled

**Position Start Date** Available immediately

**Job Categories** Research Scientist/Associate

**Academic Field(s)** Water Resources Engineering  
Ecological and Environmental

**Job Website** <https://careers.singaporetech.edu.sg/cw/en/job/498585/research-fellowengineer-coastal-dynamics-and-sediment-transportation-tzy2>

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**Job Description**

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**Job no:** 498585

**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.

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 lead the wave and hydrodynamic modelling to study the impact of mangroves and seagrass on coastal dynamics and sediment transportation. As a specialist in wave modelling software, the successful candidate will work on cutting-edge projects related to coastal and ocean wave modelling using DHI MIKE software. The role of the researcher is to contribute to the understanding of mangroves and seagrass on the environment which includes wave attenuation and sediment transportation.

### 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. DHI Mike Modelling: Utilize DHI Mike software to develop and validate numerical models for wave propagation and hydrodynamic modelling and sediment transportation.
  - ii. Model Validation: Validation of DHI Mike Model with past historical data
  - iii. Data Analysis: Process and analyze coastal and ocean wave data to improve model accuracy.
  - iv. Research: Conduct research to enhance wave and hydrodynamic modelling and investigate the effect of mangroves and seagrass on wave attenuation and sediment transportation
  - v. Impact Assessment: Evaluating the potential impacts of mangroves and seagrass on coastal regions, coastal dynamics and sediment transportation.
  - vi. Collaboration: Collaborate with interdisciplinary teams, including hydrodynamic researchers, coastal engineers, marine scientists and experimentalists.
- Reporting: Prepare research findings for publication in scientific journals and present results at conferences. Carry out Risk Assessment, and ensure compliance with Work, Safety and Health Regulations.
- Coordinate procurement and liaison with vendors/suppliers.

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- Work independently, as well as within a team, to ensure proper operation and maintenance of equipment.
- Assists in co-supervision of Final Year Projects (FYP) or capstone projects students together with the project PI
- Any other duties assigned

### Job Requirements

- PhD or Master degree in a related field with a focus on coastal engineering, oceanography, or hydrodynamics.
- Proficiency in wave modeling software, particularly DHI Mike Software.
- Strong analytical and problem-solving skills.
- Research experience in coastal and ocean waves is preferred.
- Excellent communication (verbal and written) and teamwork abilities
- Proficiency in machine learning will be an advantage

### Key Competencies

- Able to build and maintain strong working relationships with people within and external to the university.
- Self-directed learner who believes in continuous learning and development
- Proficient in technical writing and presentation
- Possess strong analytical and critical thinking skills
- Show strong initiative and take ownership of work

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**Advertised:** 03 Jan 2024 Singapore Standard Time

**Applications close:** 31 Dec 2024 Singapore Standard Time

### Contact Information

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

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**Contact**

Singapore