

## Research Fellow/Engineer (Blast Door Systems) - PDL3 Singapore Institute of Technology

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Posted Jul. 26, 2023, set to expire Jul. 5, 2024

**Job Title** Research Fellow/Engineer (Blast Door Systems) - PDL3  
**Department** Engineering  
**Institution** Singapore Institute of Technology  
Singapore, , Singapore

**Date Posted** Jul. 26, 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

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**Job Description**

## Research Fellow/Engineer (Blast Door Systems) - PDL3

**Job no:** 498471

**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

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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 help us develop a novel design for a blast door system as part of an industrial research project developing. The results of this project will be used in projects throughout Singapore. It is our aim to include all the door components in the analysis, making this a holistically developed solution.

The research will be conducted using numerical simulations, experiments and analytical solutions. The successful candidate will have a chance to acquire in depth experience in all these aspects of protective research and design.

### 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.
- Be responsible for these technical deliverables:
  - i. Develop models of the door system using advanced finite element software.
  - ii. Plan and conduct blast testing of the proposed solutions.
  - iii. Conduct laboratory tests of components as needed.
  - iv. Develop analytical models for fast design.
- Carry out Risk Assessments and ensure compliance with Work, Safety and Health Regulations.
- Coordinate procurement and liaise with vendors/suppliers.
- Work independently, as well as within a team, to ensure the achievement of the project objectives and proper operation and maintenance of equipment.

### Job Requirements:

- Have a basic knowledge of structural dynamics.
- Have a degree (preferably Master's or PhD) in mechanical engineering, electrical / electronics engineering or related domains.
- Knowledge of blast and shock loading theory and applications would be advantageous
- Knowledge of non linear materials modelling 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

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- Have some experience in the use of advanced FEM analysis. This could include experience in ABAQUS, LS-Dyna, Radioss or equivalent software.
- Able to support other related laboratory tasks as needed
- Willing to learn new skills as needed for the project

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**Advertised:** 25 Jul 2023 Singapore Standard Time

**Applications close:** 31 Dec 2023 Singapore Standard Time

### Contact Information

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

### Contact

Singapore