

Centre for Advances in Reliability and Safety Limited (CAiRS), initiated by The Hong Kong Polytechnic University, is established in 2020 with its operation located in the Hong Kong Science Park, New Territories, Hong Kong. The mission of CAiRS is to bridge academic and industrial counterparts to introduce and implement artificial intelligence methods and prognostic techniques to advance reliability and safety. The goal of the Centre is to improve reliability and safety of critical components and devices, products, systems and sub-systems designed, commissioned and/or manufactured by Hong Kong companies and enterprises. More information about the company can be found at <http://www.cairs.hk>.

**(1) Postdoctoral Fellow** (Ref. No.: CAiRS-R11/P3.3 - Forecasting maintenance)  
**[Appointment period: thirty-six months]**

**(2) Research Associate** (Ref. No.: CAiRS- R12/P3.3 - Forecasting maintenance)  
**[Appointment period: thirty-six months]**

### **Duties**

The appointees will assist the Project Leader and Programme Manager in the development of AI-based prognostic techniques to assess the extent of degradation from normal condition and enable the condition monitoring and predictive maintenance actions for electrical systems/devices.

The **Postdoctoral Fellow** appointee will be required to:

- a. conduct AI research to address industrial reliability and safety issue of product, process, and system;
- b. conceptualize, plan and conduct research activities to achieve project deliverables;
- c. develop innovative methodology based on sensors, machine/deep learning models for industrial application;
- d. work with team of researchers and lead junior researchers to conduct research, experiment, and report;
- e. write and publish articles in high-tier peer-reviewed journals; and
- f. perform any other duties as assigned by the Centre Director or his delegates.

The **Research Associate** appointee will be required to:

- a. conduct AI research to address industrial reliability and safety issue of product, process, and system;
- b. develop innovative methodology based on sensors, machine/deep learning models for industrial application;
- c. conduct research, experiments, and report/paper publications; and
- d. perform any other duties as assigned by the Centre Director or his delegates.

### **Qualifications**

- **Postdoctoral Fellow:** Doctoral degree holder in Computer Science, Electronic/Electrical Engineering, Information Engineering, Mechanical Engineering, Material Science, Physics, Mathematics, or relevant disciplines.
- **Research Associate:** Master's degree holder in Computer Science, Electronic/Electrical Engineering, Information Engineering, Mechanical Engineering, Material Science, Physics, Mathematics, or relevant disciplines.
- Professional background or experience with least one of the following areas:
  - I. Machine-learning/ data sciences related projects

- II. Software: Python, Labview, Matlab, COMSOL etc. Familiar with open-source libraries including Tensorflow is a plus
- III. Familiar with motor design and testing
- IV. Modelling and simulation
- V. Product reliability

- Team player with good analytical and communication skills
- Good command of written and spoken English

Fresh graduates are also welcome.

Applicants are invited to contact Dr Siqi Bu at tel no. 2766 6163 or email [siqi.bu@polyu.edu.hk](mailto:siqi.bu@polyu.edu.hk) for further information.

### **Remuneration**

A highly competitive remuneration package will be offered. Applicants should state their current and expected salary in the application.

### **Application**

Please send a completed application form, together with a detailed curriculum vitae via email to [careers@cairs.hk](mailto:careers@cairs.hk)

Feb 2022

**Deadline for application: Recruitment will continue until the positions are filled.**