

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-R9/P3.1 - Development of canaries for catastrophic failure prevention)

[Appointment period: thirty-six months]

(2) **Research Associate** (Ref. No.: CAiRS- R10/P3.1 - Development of canaries for catastrophic failure prevention)

[Appointment period: thirty-six months]

Duties

The appointees will assist the Project Leader and Programme Manager to explore novel strategies for improving the safety and reliability of electrochemical energy storage devices and systems. Particular focus will be on monitoring the state-of-health and estimations of their failure in advance.

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

- a) conduct studies of related literature and applied research;
- b) supervise junior researchers to conduct studies of related literature and applied research;
- c) report research progress and results regularly to project team;
- d) write and publish articles in high-tier peer-reviewed journals; and
- e) perform any other duties as assigned by the Centre Director or his delegates.

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

- a) conduct studies of related literature and applied research;
- b) report research progress and results regularly to project team;
- c) support writing and publish articles in high-tier peer-reviewed journals; and
- d) perform any other duties as assigned by the Centre Director or his delegates.

Qualifications

Applicants for the post of **Postdoctoral Fellow** should have a doctoral degree in Physical Sciences, Engineering, or an equivalent qualification in a related field. They should also have a strong analytical skill with interests in big data and artificial intelligence.

Applicants for the post of **Research Associate** should have a master's degree in Physical Sciences, Engineering, or a related field. Knowledge in a programming language (e.g. C, Python, etc.) will be an advantage.

For both posts, applicants should also have:

- (a) research experience in battery/electrochemistry related experiments;
- (b) knowledge of product reliability methods and principles;
- (c) good interpersonal and communication skills; and
- (d) good command of written and spoken English.

Fresh graduates are also welcome.

Preference will be given to those with research experience in lithium-ion battery development.

Applicants are invited to contact Dr Steven T. Boles at steven.t.boles@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

Feb 2022

Deadline for application: Recruitment will continue until the position is filled.