

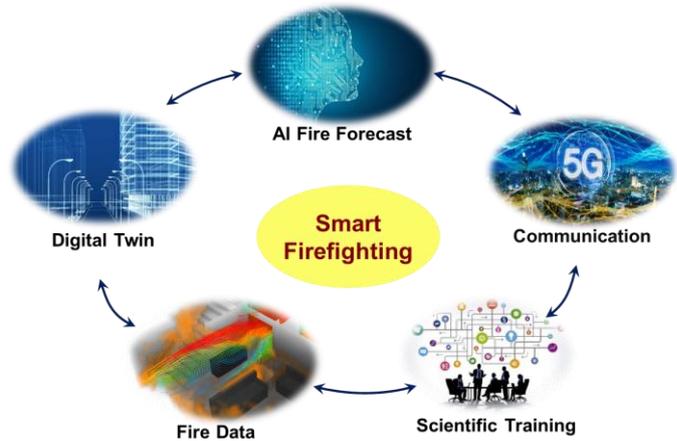
Openings for PhD Students, Research Assistants and Postdocs

@ [PolyU X Fire Lab](#) with [Dr Xinyan Huang](#)

We are currently looking for new members to join in our research team in 2023-25 to do multi-disciplinary research in the following three research areas.

1. Smart firefighting

This project applies state-of-the-art artificial intelligence (AI), Internet-of-Things (IoT), and computer vision to achieve smart building fire safety design and super real-time fire forecast to support firefighters. We will also develop intelligent fire evacuation powered by dynamic exit signs and future firefighting technologies assisted by virtual reality (VR) and autonomous robots.



2. Smouldering wildfire

The flameless burning of litter, duff and soil in wildlands is dominated by smouldering combustion. This project will conduct experiments and simulations of different scales to understand the dynamics of smouldering and forecast its fire spread. We will predict its global pollution and carbon emission and reveal the interaction between smouldering wildfires and climate change.



3. Battery Safety

This research focuses on understanding the thermal runaway behaviours of Li-ion batteries, developing advanced materials to mitigate the battery fire hazards in electric vehicles and large battery power stations, and optimizing the overall strategies in battery thermal safety management and firefighting by applying the latest AIoT and digital twin technologies.



The applicants can apply for multiple [scholarships](#), *PolyU Research Postgraduate Scholarship*, *Presidential PhD Fellowship Scheme*, and *HK PhD Fellowship Scheme*, to waive the tuition and receive a tax-free monthly stipend of HK\$19K-27K (US\$ 2.5K-3.5K).

For any inquiries of openings and research, please email [Dr Xinyan Huang](#) directly.