Job Description: We are seeking a highly motivated and technically competent post-doctoral research fellow to join an interdisciplinary research project on occupant-centric building controls. This project aims to develop and implement cost-effective occupant centric sensing and control strategies that dynamically optimize building HVAC and lighting systems to real time predictions of actual occupant counts.

The successful candidate will have the opportunity to test and validate advanced control strategies in a full-scale operational building. The building will be equipped with a comprehensive sensor network, including access to real-time camera-based occupant count data, offering a rare opportunity for applied research and experimentation.

Job title: Post-doctoral Research Fellow
Monthly Salary Range: SGD 6000 – SGD 7500 per month
Closing Date: Open Until Filled

Key Responsibilities

- Develop and implement control strategies for energy-efficient operation of building systems
- Translate predictive control models into deployable algorithms for live building operation
- Lead and support the full-scale deployment and testing of control strategies in an operational building
- Analyze field data and contribute to high-quality publications and project reports

Qualifications and Skills

- PhD in Mechanical or Electrical Engineering, Control Systems, or a related field.
- Strong background in building automation and HVAC controls.
- Demonstrated proficiency in programming, including experience with edge devices.
- Familiarity with reinforcement learning and more generally machine learning.
- Experience with communication protocols such as LoRaWAN, Zigbee, BACnet, Modbus, and IoT integration using MQTT and RESTful APIs.
- Experience in deploying control algorithms in actual buildings is highly valued.

Application Instructions

Interested candidates should submit the following to Associate Professor Adrian Chong at adrian.chong@nus.edu.sg

- CV
- Cover letter highlighting how your background and experience with our project, specifically experience with advanced control algorithms and actual deployment
- Contact information for three academic or professional referees