

Job Description

We are looking for a highly motivated and passionate post-doctoral research fellow to perform research aligned with SinBerBEST's (<https://sinberbest.berkeley.edu>) scope with a focus on building energy modeling and simulation. The research fellow will be supervised by Dr. Adrian Chong from the National University of Singapore (NUS) and Dr. Zuraimi Sultan from the Berkeley Education Alliance for Research in Singapore (BEARS).

Qualifications and Skills

- P.h.D. in Architecture, Engineering, Computer science or a related field
- Proficiency (with a demonstrated track record) in energy simulation software EnergyPlus and/or Modelica
- Proficiency in programming languages Python and/or R
- Good communication skills, and an ability to present research in both academic and non-academic venues.
- Good scientific writing, communication and learning skills

Key Duties and Responsibilities

- Experimental design, measurements and data acquisition for the calibration and validation of building energy models.
- Calibrate at least 2 whole building energy models using actual measured data.
- Evaluate the calibrated model's performance in terms of how representative they are of the actual physical building components and systems.
- Conduct experiments to create an open calibration dataset that can be used for energy modeling.
- Document models on GitHub so that they are reproducible.
- Organize, analyze and publish research in peer-reviewed scientific journals.
- Perform other duties as assigned.

SinBerBEST Program

SinBerBEST aims to deliver energy efficient building technologies for the tropical built environment, while optimising human comfort, safety, security, and productivity within the building.

The theme of SinBerBEST is use-inspired basic research for novel demand-side energy and carbon footprint reduction in buildings. This area addresses demand-side solutions for the world's growing energy needs to reduce the per capita carbon footprint of consumers. It was determined that this research area is the most promising as an Interdisciplinary Research Program (IRP) within BEARS due to shared expertise between UCB and Singapore, revolutionary potential, leverage of ongoing and new research support, and, most of all, impact in the form of creating new industry sectors in Singapore and California.

SinBerBEST collaborators include Nanyang Technological University (NTU), the National University of Singapore (NUS), and other agencies and groups in Singapore. The vision of the SinBerBEST program is to generate societal scale impact in the area of efficient and sustainable tropical buildings.

The success of SinBerBEST will be judged on its impact in the form of creation of new industry sectors, the development of societal scale systems, and the creation of new knowledge.

Interested candidates apply by sending their CV and supporting documents to

Adrian Chong (Dr.)

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