

## CURRICULUM VITAE

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### EMPLOYMENT

- Staff Scientist, PI, Deputy Building Technologies Department, Lead Urban Systems Group, LBNL, December 2007 to present
- Senior Engineer, VisualDOE chief developer, Architectural Energy Corporation, June 1999 – Nov. 2007
- Senior Engineer, Supersymmetry Services, Singapore, June 1998 to June 1999
- Postdoctoral Research Fellow, Mechanical Department, National University of Singapore, April 1996 to April 1998

### EDUCATION

- 09/1991--06/1994. Tsinghua University, Beijing, China  
M.Eng. & Ph.D. in Building and HVACR system modeling and energy analysis
- 09/1986--07/1991. Tsinghua University, Beijing, China  
B.Eng. in HVACR (Heating, Ventilation, Air-conditioning and Refrigeration), B.Sc. in Applied Mathematics

### PROFESSIONAL AND PUBLIC SERVICES

- Co-lead of Subtask 3 of IEA EBC Annex 79: Occupant behavior-centric building design and operations. 2018-2023
- Founding Chair of ASHRAE Multidisciplinary Task Group on occupant behavior in buildings, 2016-present
- Panel leader of the 2010, 2012 and 2016 ACEEE Summer Study on Energy Efficiency in Buildings
- Editor of Energy and Buildings journal (2016-present). Guest Editors of two special issues (2016 and 2017).
- Editorial boards – Applied Energy, Building and Environment (2014-2019), Building Simulation
- IBPSA-USA Board of Directors (2015 and 2016)
- Operating Agent of the IEA EBC Annex 66, 2013-2018. Led 100 researchers from 22 countries.

### PROFESSIONAL REGISTRATIONS AND ASSOCIATIONS

- IBPSA Fellow; Member of ASHRAE; Licensed Mechanical Engineer, State of California, M32179
- Member of AAAS, LEED Accredited Professional, U.S. Green Building Council

### AWARDS

- CBES software toolkit won the 2019 R&D 100 award
- Best review paper award, Energy and Buildings journal, 2008-2017. [link](#)

### RESEARCH EXPERIENCE

- Urban scale building energy modeling, simulation and analytics.
- Representation, modeling and simulation of occupant behavior in buildings.
- Modeling, simulation and energy analysis of buildings using EnergyPlus and other tools.
- Building energy software development.
- Building energy codes and standards (California Title 24, ASHRAE 90.1, India ECBC)
- Application of energy efficiency technologies in design and operation of low- and zero-net energy buildings

### SAMPLE PROJECTS

- 100% clean energy and heat resilience of disadvantaged communities, CEC/SGC, co-PI, 2019-2021.
- EnergyPlus 10X, DOE BTO, PI, 2018-2021
- AlphaBuilding: Machine learning based building controls, LBNL LDRD, PI, 2019-2021
- Hierarchical multi-scale model predictive control, U.S.-China CERC-BEE Program, co-PI, 2016-2021
- OpenStudio prototype models for data centers, laboratories, and tall buildings, PI, 2015-2021
- Multiscale coupled urban systems, part of the Exascale Computing Project, DOE Office of Science, PI, 2016-2019
- EnergyPlus, DOE BTO, PI (starting 2013), 2008 - present
- Urban integrated systems, LBNL LDRD, PI, 2015-2018
- Modeling and simulation of human behavior, DOE BTO, CERC-BEE, IEA EBC Annex 66 and 79, PI, 2013-2023
- VRF systems modeling and field testing to improve performance, Daikin, PI, 2013 – 2016
- CBES Toolkit for energy retrofit, CEC PIER program, a major technical task lead, 2013-2015
- EnergyPlus for California building energy efficiency standards, CEC PIER program, CO-PI, 2008-2009, 2012-2013
- A new hybrid approach to energy modeling, DOE BENEFIT FOA Award, PI, 2014-2016

### PUBLICATIONS

200+ publications (110 journal articles). <https://scholar.google.com/citations?user=x5m2zBYAAAAJ&hl=en>  
H-index (Scopus): 34; Google Scholar: h-index 41, i10-index 96, citations 6074; ResearchGate: score 46.49, 106k reads.