CURRICULUM VITAE

TIANZHEN HONG, (510)4867082, thong@lbl.gov

EMPLOYMENT

- Staff Scientist, PI, Deputy Head, Building Technology Department, LBNL, September 2014 to present
- Research Scientist, PI, Simulation Research Group, LBNL, December 2007 to August 2014
- Senior Engineer, VisualDOE chief developer, Architectural Energy Corporation, San Francisco, 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
- Lecturer, Department of Thermal Engineering, Tsinghua University, Beijing, China. August 1994 to March 1996

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
- ASHRAE voting members – SPC 205, former SPC 140
- Panel leader of the 2010, 2012 and 2016 ACEEE Summer Study on Energy Efficiency in Buildings
- Editor of Energy and Buildings journal
- Editorial boards – Applied Energy, Building and Environment, Building Simulation
- Guest Editors, two special issues (2016 and 2017), Energy and Buildings
- 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
- LEED Accredited Professional, U.S. Green Building Council

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

- Deep reinforcement 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
- Multiscale coupled urban systems, under 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, PI, 2013-2015
- Building energy monitoring and analysis, DOE BTO, CERC-BEE, PI, 2011-2012
- VRF systems modeling and field testing to improve performance, Daikin, PI, 2013 – 2016
- SMB 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

180+ publications (100 journal articles). https://scholar.google.com/citations?user=x5m2zBYAAAAJ&hl=en
H-index (Scopus): 30; Google Scholar: h-index 38, i10-index 85, citations 4865; ResearchGate: score 45.67, 83k reads.
Best Review Paper Award, one of four selected review papers from 1998-2017, Energy and Buildings, link