Modeling Urban Buildings for Improvement of Efficiency and Resiliency

Date and Time: Thursday, November 7, 2019, 4-5pm

ABSTRACT

U.S. cities consume 70% of primary energy, produces 80% of GDP, and are facing challenges of aging infrastructure, impact of climate change and extreme weather events. Urban systems are interconnected systems of buildings, microclimate, transportation, power and water supply. This talk will introduce urban systems research at the Building Technology and Urban Systems Division, focusing on modeling and simulation of urban buildings to improve their energy efficiency and resiliency, leveraging emerging opportunities in big data, artificial intelligence, and exascale computing.

SPEAKER

Dr. Tianzhen Hong is a Staff Scientist and Deputy Head of the Building Technologies Department of Lawrence Berkeley National Laboratory. He leads the Urban Systems Group and a research team working on data analytics, modeling, simulation, and policy for design and operation of low energy buildings and sustainable urban systems. He is an IBPSA Fellow and an editor of the Energy and Buildings journal. He has more than 200 publications. He received B.Eng. and Ph.D. from Tsinghua University, China.