Mechanical Engineering
Texas A&M University
Ph.D. Position Opening in
Smart and Connected Buildings, and HVAC&R Efficiency

Multiple Ph.D. positions are available in the Building Energy and HVAC&R Systems Research Group at J. Mike Walker '66 Department of Mechanical Engineering in Texas A&M University located in College Station, Texas starting from Spring 2022 or later. 12-month stipend, tuition, health insurance, and conference travel will be covered for this position.

Students with a strong background in mechanical engineering (e.g., heat transfer, thermodynamics, etc.), architectural engineering, electrical engineering, building sciences and/or building modeling, simulation, or building controls are strongly encouraged to apply. Inquiries should be sent to Dr. Zheng O'Neill at zoneill@tamu.edu with a current CV.

For this position the applicant should have:

- Background in a relevant area such as mechanical engineering, architectural engineering, HVAC&R engineering, electrical engineering, and energy management
- Documented theoretical and practical experience with relevant methods (e.g., analyzing HVAC&R equipment/system, and control systems, building simulations and experiments)
- Excellent spoken and written English language skills

The following skills are desired but not required:

- A Master's degree in engineering
- Knowledge of whole building simulation program (e.g., EnergyPlus)
- Knowledge of building controls and automation systems and/or power grid system
- Knowledge of heat pump system
- Knowledge of object oriented modeling language Modelica/Dymola
- Knowledge of statistics fundamentals, Matlab and Python
- Hands on experiences with HVAC&R equipment and building automation system

Emphasis will also be placed on:

- The candidate's motivation and personal qualifications for the position
- The ability to work in an interdisciplinary research team
- Personal creativity and innovation

The Building Energy and HVAC&R Systems Research Group (https://hvac.engr.tamu.edu) is actively conducting research in the area of building technology covering integrated building energy and control systems design, modeling and optimization, heat pump systems, occupant-centric control, grid-interactive efficient buildings, smart and connected communities, well-being in the built environment, and uncertainty qualifications in buildings. Current support is from DOE (Department of Energy), ARPA-E (Advanced Research Projects Agency – Energy), ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers), NSF (National Science Foundation), and private industry.

The Texas A&M University College of Engineering is one of the largest engineering schools in the U.S., and consistently ranks among the nation's top public undergraduate and graduate engineering programs. Mechanical Engineering is ranked **No. 3** internationally and **No. 1** nationally among mechanical engineering programs for 2021 by ShanghaiRanking. More information can be found at https://engineering.tamu.edu/mechanical/index.html.

The University is located on a beautiful residential campus in College Station, a dynamic and resilient community in the center of the region known as Texas Triangle. It is 90 miles (145 km) northwest of Houston and 87 miles (140 km) northeast of Austin. The area offers excellent climate, minimal urban congestion, and abundant outdoor recreation. The College Station community provides rich cultural, educational, and athletic activities for a broad range of lifestyles.