

Prof. Jin Wen

Keynote talk:

Harnessing data and AI for Fault Detection and Diagnosis in Smart Buildings

The seminar discusses how faults in sensors, devices, and control strategies affect building performance and occupant well-being. While traditional rule-based FDD methods dominate current commercial tools, data-driven approaches using machine learning and AI offer greater accuracy and autonomy with less reliance on expert knowledge. The seminar presents state-of-the-art ML/AI-based FDD techniques, addresses real-world implementation challenges—such as data quality and scalability—and will provide an overview of the International Energy Agency’s ANNEX 81 (Data-driven Smart Buildings) and other ongoing projects in which the speaker is actively involved.

 **17th June 2025**

09.30 a.m. – 10.30 a.m. UTC+2

 **Location: Politecnico di Torino**

Room: [Sala CAFARO \(DENERG door 5, 3rd floor\)](#)

More information at [BAEDA Lab website](#)

Contacts

 <https://www.linkedin.com/company/baeda-lab/>

 <http://www.baeda.polito.it/>



Bio

[Prof. Jin Wen](#) is currently the Interim Vice Dean for Research, Innovation, and Faculty Advancement of the College of Engineering, and a Professor in the Department of Civil, Architectural, and Environmental Engineering at Drexel University. She will start to serve as the Department Head for Penn State University’s Architectural Engineering Department in August 2025. She is a Fellow of American Society of Heating Refrigeration and Air-conditioning Engineers (ASHRAE) and currently the Rising Chair of ASHRAE’s Research Administration Committee (RAC), which oversees and coordinates all ASHRAE research activities. She is the Task Leader for International Energy Agency (IEA)’s Energy in Buildings and Communities (EBC) Annex 81 (Data-Driven Smart Buildings) Task C (Applications). Dr. Wen was selected as the U.S. Fulbright Scholar for 2019-2020 (Sweden). Dr. Wen has more than twenty-years experiences in the smart building field, firstly as an application engineer working for Johnson Controls Inc. and later as a researcher in the areas of automated fault detection and diagnosis, building-to-grid integration, model predictive control, regional energy modeling, and occupant behavior simulation. Her work has been funded by the U.S. Department of Energy, the National Institute of Standard Technology, the National Science Foundation, the Department of Homeland Security, and ASHRAE. She has published 70+ journal papers and has 5800+ citation (Google Scholar).