

# Special Session on Advances in Cyber-Physical-Energy Systems

## Session Theme and Scope

The energy industry is the engine of the world's economy. It is being transformed nowadays at unprecedented breadth and depth towards the consistent provision of clean, affordable, and sustainable energy. This trend is evidenced by the rapid growths of electrified transportation, renewable energy, ultra-efficient combustion engines, smart buildings, and microgrids/smart grid. An enabler for this new landscape in formation is the paradigm of cyber-physical systems, which advocates seamless integration of cyber and physical domains of a system toward high intelligence and automation. This emerging interdisciplinary field has attracted increasing research but still witnesses many open challenges in theory and applications. This special session thus aims to gather researchers from both academia and industry to share up-to-date research advances and perspectives. Topics of interest include, but are not limited to:

- Modeling and simulation of cyber-physical energy systems
- Distributed optimization and control of complex energy systems
- Machine learning and data analytics for energy systems
- Attack-resilient energy system operation
- Control of electric vehicles, smart grid, buildings, energy storage, and solar energy systems
- Novel methods, technologies, and tools that improve the efficiency, reliability, and durability of energy systems

#### **Important Dates**

Full paper submission: Dec. 22, 2020 (tentative)

• Acceptance notification: Feb. 15, 2020

• Final paper submission: Mar. 15, 2021

## **Organizers**

- Dr. Xianke Lin (Ontario Tech University, xiankelin@ieee.org)
- Dr. Xiaosong Hu (Chongqing University, xiaosonghu@ieee.org)
- Dr. Liang Du (Temple University, Idu@temple.edu)
- Dr. Ziang Zhang (Binghamton University, ziang.zhang@binghamton.edu)
- Dr. Huazhen Fang (University of Kansas, fang@ku.edu)

#### **Conference Information**

Information about the conference and paper submission is available at http://ieee-icps2021.org.