

**Call for Papers for the Special Session on**

**Artificial Intelligence Enhanced Microgrid Clusters on Optimized Operation Control:**

**A Cyber-Physical-Social Perspective**

**Organized and co-chaired by**

**Prof. Jingang Lai**, Huazhong University of Science and  
Technology, China

e-mail: [kklai@hust.edu.cn](mailto:kklai@hust.edu.cn)

**Prof. Xiaoqing Lu**, Wuhan University, China

e-mail: [luxq@whu.edu.cn](mailto:luxq@whu.edu.cn)

**Ass. Prof. Shichao Liu**, Carleton University, Canada

e-mail: [shichaoliu@cunet.  
carleton.ca](mailto:shichaoliu@cunet.carleton.ca)

**Technical Outline of the Session and Topics**

Recent years witnessed the emerging and fast development of cyber-physical-social microgrid clusters. Benefiting from the latest Artificial Intelligence (AI) and advanced information and communication technology (ICT), cyber-physical-social microgrid clusters enable seamless and direct connection between devices such as renewable energy, smart meters, flexible loads, energy storage systems. However, it inevitably poses some technical and theoretical challenges in architecture design, control operation and energy management. In order to address these challenges, it is essential for cyber-physical-social microgrid clusters to develop new methods by taking into account underlying and advanced techniques such as multi-agent systems, machine learning, deep learning, big data, cloud computing and management, and so on. Thus, this special session focuses on seeking state-of-art advances and original contributions in design and implementation of advanced control and optimization algorithms for cyber-physical-social microgrid clusters.

**Topics of the session include, but are not limited to:**

- Machine learning and deep learning for microgrid cluster automation and control
- Multi-agent systems-based coordination control of microgrid clusters
- Neural network and fuzzy logic for control and optimization in microgrid clusters
- Event-triggered network communication mechanisms of microgrid clusters
- Data-driven process monitoring and control for microgrid clusters
- Experimental prototypes, test-laboratories and field trial experiences of artificial intelligence techniques in cyber-physical-social microgrid clusters

**Timeline for Authors**

All the instructions for paper submission are available on the conference website. Please visit [www.iecon2026.org](http://www.iecon2026.org) or scan the QR code for the timeline.

