

# Annual Conference of the IEEE Industrial Electronics Society (IECON 2022)

## Special Session on

## “Artificial Intelligence Techniques for Cyber-Physical Microgrids: Applications, Challenges and Trends”

### Organized by

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### Call for Papers

**Theme:** In recent years, cyber-physical microgrids bring a promising solution with high efficiency, strong flexibility, great scalability and improved reliability to accommodate the new shift from traditional power networks, 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 microgrids to develop new methods by taking into account underlying and advanced techniques such as multi-agent systems, artificial intelligence-based control, big data cloud computing and management, and so on. Thus, this special session is targeted at researchers and industrialists to present and discuss research work related to innovative control approaches, optimization theory and energy management for cyber-physical microgrids.

#### Topics of interest include, but are not limited to:

1	Multi-agent systems-based coordination control and optimization of microgrid clusters
2	Artificial intelligence-based control schemes in microgrids
3	Neural network-based cross-layer optimization of energy management in microgrids
4	Swarm intelligence control and stability analysis in islanded microgrids
5	Distributed intelligence theories and technologies for microgrid
6	Experimental prototypes, test-laboratories and field trial experiences of artificial intelligence techniques in microgrids security

Good quality papers may be considered for publication in the IEEE Trans. on Industrial Electronics, subject to further rounds of review.

Sponsoring IES Technical Committee(s):

The IES Technical Committee on Industrial Informatics <https://tcii.ieee-ies.org/>

**Submissions Procedure:**

All the instructions for paper submission are included in the conference website: <https://iecon2022.org/>

**Deadlines:**

Full paper submission:	April 15, 2022
Paper acceptance notification:	June 17, 2022
Camera-ready paper submission:	July 29, 2022