

## Special Issue

# Artificial Intelligence Applications in Smart Energy Systems

### Message from the Guest Editors

The purpose of this Special Issue is to present cutting-edge research and recent advancements that contribute to the progress of the topic under consideration, including the following:

- Model and control in renewable-powered microgrids;
- Local energy communities;
- Physics informed Machine Learning models for energy forecasting;
- Energy hubs and multi-carrier energy systems;
- Results of local energy systems pilot cases;
- Prosumers and smart buildings flexibility coordination;
- Citizen engagement strategies and socio-economic models in smart energy communities;
- P2P energy trading in local energy communities and markets;
- Buildings integration in multi-energy systems;
- Privacy and cyber security in smart local energy systems;
- Decentralized nature-inspired optimization applications in microgrid energy management systems;
- Advanced power electronic technologies for renewable energy systems;
- Electric vehicles in local energy systems;
- Agent-based modeling and simulation of local energy systems.

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### Guest Editors

Dr. Viorica Rozina Chifu

Prof. Dr. Costin Badica

Dr. Azeddine Houari

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### Deadline for manuscript submissions

closed (10 March 2025)



## Applied Sciences

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## About the Journal

### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
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