

## Special Issue

# Control and Optimization Technologies in Renewable Energy and Integrated Energy Systems

### Message from the Guest Editors

With increasing penetration of renewable energy resources, there has been growing concern over their impacts on the stability, reliability, and resiliency of the grid, especially during extreme events. Consequently, there is a growing need to develop novel control and optimization techniques to address these issues. This could involve leveraging the flexibility and the controllability of several renewable energy resources as well as developing hybrid power sources, such as solar PVs, energy storage, hydro power plants, nuclear power plants, fuel cells, amongst others. This Special Issue aims to inform the community about recent advancements in these and other areas. Topics of interest include but are not limited to:

- Power electronics controls for renewable energy systems
- Integrated energy system optimal dispatch
- Optimal power flow in smart grids
- Hydrogen generation in integrated energy systems
- Thermal energy systems
- Grid integration of electric vehicles
- Inverter-based resource controls and optimization
- Hybrid energy storage systems
- Machine learning applications in smart grids

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### Guest Editors

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### Deadline for manuscript submissions

closed (15 March 2025)



## Electronics

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## About the Journal

### Message from the Editor-in-Chief

*Electronics* is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guestedited by leading experts in selected topics of interest.

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### Editor-in-Chief

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