

## Special Issue

# Renewable Energy Conversion and Sustainable Power Systems Engineering

### Message from the Guest Editors

Renewable energy conversion is becoming increasingly important in modern power systems, offering a sustainable and cost-effective solution for distributed generation and self-consumption. As the share of renewables in the global energy mix continues to rise, Hybrid Renewable Energy Systems (HRESs) present a practical approach to balancing supply and demand, reducing transmission and distribution losses, and enhancing grid stability. This Special Issue aims to advance the field of HRESs by soliciting original, innovative research focused on improving the sustainability, efficiency, reliability, flexibility, and profitability of these systems

- Sustainable power generation from renewable sources;
- Energy management strategies (EMSs);
- Power electronics for HRESs;
- Off-grid and grid-connected HRES solutions;
- Energy prosumers and their role in HRESs;
- Algorithms applied to HRESs (e.g., ANNs, GAs, PSO, ACO, SVMs, Bio-inspired).

An environmental and economic analysis is critical for evaluating alternatives and selecting optimal solutions. By integrating various HRES components, we can achieve sustainable, efficient, and reliable energy systems.

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### Guest Editors

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### Deadline for manuscript submissions

20 August 2025



## Sustainability

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### Editor-in-Chief

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