# Special Issue

# Artificial Intelligence-Based Approaches for Power Energy System Modelling

## Message from the Guest Editors

In recent years, the integration of Artificial Intelligence (AI) techniques into power and energy systems has revolutionized how these are modelled, optimized, and managed. This Special Issue aims to gather cutting-edge research that addresses key challenges and proposes novel AI-driven solutions for the power energy sector. Contributions may include theoretical advancements, innovative applications, case studies, or hybrid methodologies that combine AI with classical modelling techniques. The topics of interest include, but are not limited to, AI-based grid management, predictive maintenance, energy storage optimization, smart metering analysis, and the integration of distributed energy resources. This Special Issue aims to advance research in the following areas:

- Modelling complex systems.
- Diagnosis and Fault Identification.
- Updating conventional systems.
- The development of novel intelligent control topologies and methodologies.
- Process and method improvement.
- The applications of intelligent systems to industrial operations.
- Optimizing and increasing system performance.
- The uses of intelligent systems.
- Applications for intelligent controls.
- Applications for smart grids and micro-grids.

## Guest Editors

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Dr. Francisco Zayas-Gato
Dr. Esteban Pérez

## Deadline for manuscript submissions

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# About the Journal

## Message from the Editor-in-Chief

*Energies* is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

## Editor-in-Chief

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