

Keywords Artificial neural networks (ANN), Machine learning (ML), Microgrid control, Reinforcement learning (RL), Renewable energy sources (RES), Total harmonic distortion (THD)

Efficient energy-storage management is critical for enhancing the reliability and sustainability of hybrid microgrid systems. This study examines the influence of neuron number in a ...

The study notes growing interest in graph-based neural networks that explicitly encode microgrid topology, enabling controllers to account for network structure when making decisions.

This paper introduces a novel control strategy to optimise the load frequency model in a microgrid (MG) with vehicle-to-grid interactions using Particle Swarm Optimisation - deep Artificial ...

Neural networks provide a data-centric method for predicting renewable energy output, forecasting energy demand trends, and optimizing energy distribution in microgrids.

By using fuel cells, wind turbines, and photovoltaics, a single microgrid is constructed using this suggested topology's distributed energy resources (DERs).

Intelligent RBF neural network-based control for dynamic stability and power control in renewable-integrated microgrids Venkatesh Chiluka, G. G. Raja Sekhar, Ch. Rami Reddy, K. V. ...

This study provides practical evidence of the effectiveness of neural network-based predictive control for voltage stabilization in large-scale residential microgrids and bridges the gap ...

uN can provide accurate and robust prediction of transient dynamics for nonlinear microgrids over a long-term time period. Therefore, the PIDGeuN offers a potent tool for the modeling of large scale ...

RLNNA exhibits faster convergence to the global solution than other algorithms, including PSO, MRFO, and SDO, while MRFO, PSO, and SDO show the ability to converge to the optimal ...

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