

A comparative analysis of the classical PI and sliding mode control-based designs is conducted under various grid conditions, such as cold ironing mode of the shipboard microgrid, and load variations, considering both the AC and DC loads.

The application of a virtual synchronous generator (VSG) to provide virtual inertia in isolated microgrids has emerged as a promising control strategy for converter-interfaced renewable ...

Model predictive control (MPC) has emerged as a powerful control strategy for microgrids due to its ability to handle complex dynamics and optimization problems. This study aims to conduct ...

This trend will likely lead to more specialized software solutions tailored to specific applications and microgrid configurations. Finally, the increasing use of AI and machine learning in ...

The multiagent systems are one of the recent advanced strategies that use multiple autonomous agents, and it is often integrated with other control techniques to ensure optimal performance ...

However, in the context of microgrid, the misleading information spread by honeypots will also impact the system performance. This paper proposes an attack-resilient distributed control for ...

This paper proposes an adaptive secondary control strategy for islanded AC microgrids (MGs) using Distributed Stochastic Deep Reinforcement Learning (DSDRL), targeting reliable ...

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Microgrids are a cornerstone of modern energy infrastructure, but the increase in digitalization presents security challenges. Cyberattacks can target various microgrid components and have ...

The project, partially financed by European funds, represents a significant step forward in the field of sustainability, integrating batteries from three distinct automotive manufacturers (Nissan, ...

The centralized control is one in which central system manages all operations making it efficient but vulnerable to single-point failures [34 - 37]. In decentralized control, each component is ...

A microgrid is a localized energy system that can operate independently or in tandem with the utility grid. It intelligently manages multiple energy sources to deliver reliable cost-effective power.



# Microgrid control rome

