

To ensure the safe and stable operation of an islanded microgrid (MG) system, it is imperative to evaluate the impact of multiple communication constraints. This study addresses the ...

Abstract The interlinking converter, an important device in a hybrid AC-DC microgrid, undertakes the task of power distribution between the AC sub-microgrid and DC sub-microgrid. To ...

The control system uses local controllers for each device in the cluster and a dynamic centralized energy management system to coordinate optimally energy dispatch and distribution among ...

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 ...

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 study enhances the buck-boost modular converter topology, also known as the Y-voltage source inverter, by implementing a control strategy that simultaneously manages active power ...

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 first microgrid control system that can parallel load-share generators of different sizes, even different manufacturers. Power for the entire system can be monitored and controlled from a single computer interface.

Lagouir et al., (2021) have presented a novel optimization technique for direct current microgrid control and day-ahead power management. Minimizing total operating cost, the NO<sub>x</sub>, SO<sub>2</sub>, ...

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

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 ...

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 ...



# Microgrid control beirut

