Microgrid Multi-Agent

With scattered renewable energy resources and loads, multi-agent systems are a viable tool for controlling and improving the operation of microgrids. They are autonomous systems, where ...

Microgrid systems are built to integrate a generation mix of solar and wind renewable energy resources that are generally intermittent in nature. This paper presents a novel decentralized multi-agent ...

At the multi-agent level, we identified and created the corresponding types of agents for each component of the microgrid. Each bus of the system is managed by a net agent and connected to other nets ...

This study provides an overview of the agent concept and multi-agent systems, as well as reviews of recent research studies on multi-agent systems" application in microgrid control systems.

This article presents an efficient and easily implementable real-time energy management and control system based on multi-agent systems for hybrid Low-Voltage Micro-Grids (LVMGs) using ...

To address this challenge, this paper proposes a ring-based multi-agent microgrid cluster energy management strategy, which realizes the ...

Multi-Objective Energy Management Optimization on Grid-Integrated Microgrid Using Multi-Agent Deep Reinforcement Learning for Enhanced System Stability in HRES and BESS

The proposed distributed framework employs agent-based communication, where each agent interacts only with its immediate neighbours. The authors in ref. [7] propose a co-simulation ...

In recent years, multi-agent systems have been proposed to provide intelligent energy control and management systems in microgrids. Multi-agent systems offer their inherent benefits of flexibility, ...

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