Research Direction of Genetic Algorithm for Microgrid

The research methodology used in this study focuses on examining the design and optimization of hybrid renewable energy microgrids utilizing genetic algorithm techniques.

The proposed research has to present a thorough approach for applying the evolutionary algorithm to resolve problem-based microgrid size for a specified LPSP value. The results of the ...

We present a hybrid algorithm for the Microgrid Cable Layout problem, which employs a genetic algorithm for optimizing the topology of the layout and a heuristic for assigning the cables to ...

This paper addresses the optimal day-ahead BESS scheduling problem using two approaches: a deep Q-network (DQN) algorithm and a genetic algorithm (GA), applied to a case study comprising a ...

In this research, we optimized the operation of the microgrid using a multiobjective function that considers energy costs and GHG emissions. This multiobjective function is subject to a ...

Therefore, this paper presents a genetic algorithm-based approach that facilitates incorporating multiple objectives for grid partitioning by formulating two types of problems-- node allocation and edge ...

This study used the combined genetic algorithm (GA) and model predictive control (MPC) to size and optimize the hybrid renewable energy PV/Wind/FC/Battery subject to certain constraints ...

Three AI techniques, Genetic Algorithm (GA), Artificial Bee Colony (ABC), and Ant Colony Optimization (ACO), are employed to optimize the optimal composition of energy sources ...

Abstract: Microgrids driven by distributed energy resources are gaining prominence as decentralized power systems offering advantages in energy sustainability and resilience.

Research Direction of Genetic Algorithm for Microgrid

The paper examines the use of genetic algorithm (GA) methods to optimize hybrid renewable energy microgrids by merging various renewable sources and energy storage technologies.

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