Fuzzy immune method microgrid

MATLAB/Simulink simulations were conducted to assess the performance of innovative microgrid stability strategy. A comparative analysis with conventional EMS approaches demonstrates the ...

To improve this efficiency, it is possible to combine this technology in the future with other methods such as neural networks, genetic algorithms, and other techniques to increase performance ...

To solve this problem in this paper we present a Fuzzy Logic Control of isolated Hybrid Systems (HRES) Including Renewable Energy in Micro-Grids to maintain a stability in voltage and...

This proposed study has anticipated a Fuzzy adaptive exponent PID (Fuzzy PI-D Æ) controller to obtain stability in microgrid frequency under different disturbances. Further, the microgrid...

Therefore, this study introduces a novel Deep-Fuzzy Logic Control (Deep-FLC) framework that combines the predictive power of LSTM models with the adaptability of fuzzy logic systems.

Abstract: This research investigates the integration of fuzzy logic-based control calculations with optimization strategies, counting Molecule Swarm Optimization (PSO), Genetic Algorithm (GA), Ant ...

An Integrated Energy Management System (EMS) was proposed employing fuzzy logic as a solution to manage the energy needs of loads in this work.

The proposed control methodology for controlling the charging/discharging of the microgrid storage system has been numerically implemented and tested on a simulated MATLAB model of the ...

In this paper, a brief review of recent advances in microgrid control methods is presented, with a focus on predictive, optimization, and AI methods. Control methods were reviewed based on ...

This paper addresses the problem of fault detection in DC microgrids in the presence of denial-of-service (DoS) attacks. To deal with the nonlinear term in DC microgrids, a Takagi-Sugeno (T-S) model is ...

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