

Does modified particle swarm algorithm improve microgrid optimization?

The simulation of the optimization effect of the conventional particle swarm algorithm and the modified particle swarm algorithm on the microgrid were carried out, respectively, in MATLAB, which verifies the advantage of the modified particle swarm algorithm on the optimization of microgrids.

What is Binary Particle Swarm Optimization?

GitHub - Anvoker/MicrogridPSO: Binary Particle Swarm Optimization (BPSO) is used to solve the Unit Commitment Problem in the context of electric power generation in an idealized microgrid. The project, named MicrogridPSO, fails to load the latest commit information.

How does the modified particle swarm algorithm work?

The modified particle swarm algorithm sets up an external repository in order to filter and store the particles that meet the requirements. The particles in the repository determine the particle swarm moving state, and the addition and deletion of particles in the repository are accomplished by the adaptive grid method.

Does a modified particle swarm algorithm improve global convergence?

From the above simulation results, it can be understood that the modified particle swarm algorithm obtained through the introduction of variable inertia weight and learning factors has a higher utilization rate of external storage libraries and a better global convergence.

Can particle swarm optimization solve batch-processing machine scheduling problems?

A modified particle swarm optimization algorithm tailored to address a batch-processing machine scheduling problem characterized by arbitrary release times and non-identical job sizes is introduced [38]. Novel machine learning methodologies are applied for fault diagnosis and optimization [39, 40, 41].

What is the inertia weight of the modified particle swarm algorithm?

The initial and final values of the inertia weight of the modified particle swarm algorithm are set to 0.9 and 0.2, respectively, and the larger initial value in the early stage facilitates the global search, while the weight gradually decreases as the number of iterations increases, which is convenient for the convergence of the particle swarm.



Particle swarm optimization microgrid code

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