HJ Solar

Hybrid solar container genetic algorithm

Overview

This paper presents an optimization technique to design the hybrid PV/wind system. The hybrid system consists of photovoltaic panels, wind turbines and storage batteries. Firstly, we introduce the Genetic Reinforcement Learning Algorithm (GRLA) for energy-efficient container placement, representing a pioneering approach in data center management. Secondly, we propose the Hybrid Attention-enhanced GRU with Random Forest (HAGRU-RF) model for accurate solar energy. Citation:Wang R, Li J, Bai R, Wang L (2023) Storagestrategy of outboundcontainers with uncertain weightby data-driven hybridgenetic simulated annealingalgorithm. The main objective of this work is to minimize the net present cost (NPC) of the system, considering the equivalent loss factor (ELF) as a reliability index.

Hybrid solar container genetic algorithm

(PDF) An improved genetic algorithm-based optimal sizing of solar

This paper proposes an improved GA-based new approach for the optimal design of hybrid energy systems comprises of solar PV, wind, diesel generator and battery connected systems ...

Genetic Algorithm-Based Hybrid Deep Learning Framework for ...

A streamlined hybrid machine learning framework that combines the sequence modeling capability of Long Short-Term Memory (LSTM) networks with the robustness of Random Forest ...

An event-based model and hybrid genetic search ...

For large-scale instances, we develop a Hybrid Genetic Search (HGS) algorithm that incorporates a Dynamic Programming (DP)-optimized enumeration method to handle multi-size container loading ...

Modeling and Sizing of the Hybrid Renewable System Opting Genetic ...

The proposed hybrid system for techno-economic analysis was carried out through genetic algorithm optimization. The above cases are

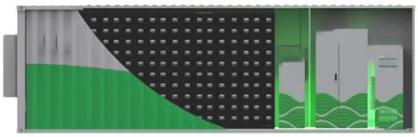
implemented and analyzed using MATLAB ...

Modeling and optimization of hybrid geothermal-solar energy plant ...

The objective of the study was to create an energy production system that integrates solar and geothermal energies to generate electricity and provide natural gas to consumers in the ...

A hybrid ant colony and genetic algorithm to solve the container

This article addresses the container storage problem (CSP) in a port terminal. The good management of the storage space is essential to ensure the productivity of a port. This explains the ...



Unveiling Genetic Reinforcement Learning (GRLA) and Hybrid

In this subsection, we present a comprehensive analysis integrating the results obtained from the Genetic Reinforcement Learning Algorithm (GRLA) for energy-efficient containerized data ...

Hybrid genetic algorithms for the three-dimensional multiple container

This paper presents new hybrid genetic algorithms (HGAs) that address current limitations related to the 3DMCPP and enable use of relatively few containers. Rotation constraints are also ...

Storage strategy of outbound containers with uncertain weight by ...

Secondly, a Hybrid Genetic and Simu-lated Annealing Algorithm (HGSAA) model is proposed for the container stacking and loading stacking in the yard. The specific container space allocation and multi ...

Optimal Design of A Hybrid PV-Wind Energy System Using ...

In this paper, a new approach of optimum design for a Hybrid PV/Wind energy system is presented in order to assist the designers to take into consideration both the economic and ecological aspects.

Hybrid genetic algorithms for the three-dimensional multiple ...

This paper presents new hybrid genetic algorithms (HGAs) that address current limitations related to the 3DMCPP and enable use of relatively few containers. Rotation con-straints are also addressed.

Modeling and Sizing of the Hybrid Renewable System Opting Genetic Algorithm

Nowadays hybrid energy systems are in more use, especially the systems that contain solar photovoltaic systems because they are widely used in energy supply for remote locations, ...

Extended priority-based hybrid genetic algorithm for the less-than

To fill the gap, this study aims to formulate the LCL problem and develop an extended priority-based hybrid genetic algorithm (EP-HGA) for determining the loading patterns of cargos with ...

optimising hybrid energy design using genetic algorithm

i'm working on optimising a design of a hybrid PV/Wind energy system (with battery) using Genetic Algorithms,and based on a research paper i have been able to code the following :

Hybrid Genetic Algorithms Applied to the Glass Container Industry

In recent years, hybrid algorithms based on exact methods and heuristic algorithms show outstanding performance in solving large-scale combinatorial optimization problems.

On a Hybrid Genetic Algorithm for Solving the Container Loading ...

This paper presents a new hybrid genetic algorithm for solving the container loading problem in the general case, precisely when the boxes have no orientation constraints. In order to improve the g

A Hybrid Methodology Approach for Container Loading Problem Using

This research presents a hybrid methodology for the Container Loading Problem (CLP), specifically focusing on the Knapsack Loading Problem (3D-KLP). The novel approach integrates a backtracking ...

Hybrid genetic algorithm for container packing in three dimensions

The concept of genetics using multiple-chromosomes is applied to a 3D container packing problem. The 3D packing problem deals with packing a given set of regular shaped boxes of different sizes and ...

A Group Genetic Algorithm for Energy-Efficient Resource Allocation in

Our proposed algorithm is named as Energy-aware Group Genetic Algorithm with Local Search-based Unpacking (EGG-LSU). In summary, the contributions of this paper are as follows: We ...

Digital system for dynamic container loading with neural network ...

To address realistic issues, this study aims to develop a framework that integrates the placement heuristic, hybrid genetic algorithm, and deep learning model to enhance the effectiveness ...

Hybrid genetic algorithms for the three-dimensional multiple container

The three-dimensional multiple container packing problem (3DMCPP) is used to determine non-overlapping packing of a set of finite three-dimensional rectangular items into the ...

An improved genetic algorithm-based optimal sizing of solar

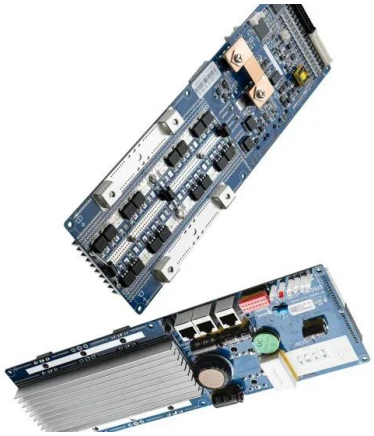
This paper proposes an improved GA-based new approach for the optimal design of hybrid energy systems comprises of solar PV, wind, diesel generator and battery connected systems ...

On a Hybrid Genetic Algorithm for Solving the Container Loading ...

In order to improve the genetic algorithm efficiency, we developed a hybrid method, based on deterministic approaches combining the wall-building, level-slice approach and strip packing. A serie ...

On a Hybrid Genetic Algorithm for Solving the Container Loading ...

This paper presents a new hybrid genetic algorithm for solving the container loading problem in the general case, precisely when the boxes have no orientation constraints. In order to improve the ...



An improved genetic algorithm based optimal sizing of Solar

An improved genetic algorithm-based optimal sizing of solar photovoltaic/wind turbine generator/diesel generator/battery connected hybrid energy systems for standalone applications

A Genetic Algorithm Based Optimal Sizing Strategy for PV/Battery

In this paper, the genetic algorithm (GA) is chosen to optimize a standalone PV/battery/hydrogen hybrid system. The main objective of this work is to minimize the net present ...

Multi-objective multi-population biased random-key genetic algorithm

This study provided a multi-objective hybrid genetic algorithm to maximize the container space utilization and the total value of the loaded boxes. The proposed genetic algorithm applied ...

Optimizing Container Loading and Unloading through Dual-Cycling ...

This paper proposes the Quay Crane Dual Cycle - Dockyard Rehandle Genetic Algorithm (QCDC-DR-GA), a hybrid Genetic Algorithm (GA) that holistically optimizes both aspects: ...

Optimizing Empty Container Allocation Based on Hybrid Genetic Algorithm

According to the characteristics of shipping container transport, aiming at solving effectively shipping empty container allocation optimization, this paper proposed a novel hybrid ...

On a Hybrid Genetic Algorithm for Solving the Container Loading Problem

Abstract This paper presents a new hybrid genetic algorithm for solving the container loading problem in the general case, precisely when the boxes have no orientation constraints.

A Genetic Algorithm Based Optimal Sizing Strategy for PV

In this paper, the genetic algorithm (GA) is chosen to optimize a standalone PV/battery/hydrogen hybrid system. The main objective of this work is to minimize the net present ...

A hybrid genetic algorithm based on reinforcement learning for the

Firstly, we establish a mixed integer programming model with the minimization of the energy consumption and the penalty for excess of the due date. Then, we propose a hybrid genetic ...

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