Path-Finding in Multi-Agent, Unexplored and Dynamic Military Environment Using Genetic Algorithm

Original Research, D1
Saeedvand S, Naser Razavi S and Ansaroudi F.
ABSTRACT: Path-finding in multi-agent, unexplored and dynamic military environments is one of the most important issues for solving the mission. Necessary constraints to find path in a dynamic and unexplored environment are considered and Genetic algorithm is used.

Keywords: Multi-Agent System, Path-finding, Chromosome

PII: S232251141500002-4

Optimal Design of Bearingless Permanent Magnet-Type Synchronous Motors for Generating Maximum Levitation Force

[Diagram: Diagram showing a system with a permanent magnet, torque winding, and suspension winding.]
Original Research, D2
Honarjou M., Faraji H. and Shirzadi A.

ABSTRACT: One maintenance task that still exist with conventional motors, are bearing lubrication and renewal. Bearingless motors, however, eliminate this task. In this paper, the effects of thickness of permanent magnets (PM) on the maximum levitation force of Bearingless Permanent Magnet Synchronous Motor (BPM) is investigated. By numerical simulations, the effects of thickness of PMs on the levitation force are investigated. The simulation is done using Maxwell software.

Keywords: Bearingless Permanent Magnet Synchronous Motor, Maximum Levitation Force, Optimization, Thickness of PM.

PII: S232251141500003-4

Original Research, D3
Daryasafar N and Dehghani H.

ABSTRACT: Studying an Improved Interval-Only Algorithm for the De-Interleaving of Radar Pulses

In the electronic intelligence system (ELINT) in the process of identification radar signals are used both technical and geographical information systems. The method presented in this work is an improved interval-only algorithm for the De-interleaving of radar pulses. In this paper, the block diagrams and implementations steps as well as their ability in Deinterleaving of radar pulses are analyzed.

Studying an Improved Interval-Only Algorithm for the De-Interleaving of Radar Pulses
Direct Kinematics solution of 2-(6UPS) Hybrid Manipulator based on Neural Network

ABSTRACT: This contribution addresses forward kinematics of 2-(6UPS) Manipulators, Stewart Mechanism, Neural Network.
Current Measurement with Optical Current Transformer

Original Research, D5
Alavi O.

ABSTRACT: Applying an optical current transformer (optical CT) to substations has several advantages, e.g. high accuracy and reliability. The optical CT operates without moving parts and can be used in hostile environments. In addition, it is immune to electromagnetic interference. The optical CT is used to sense the current in the conductors. The sensing fiber is placed in the conductor, and the output fiber is connected to the optical receiver. As an application of the optical CT, a new fault location system has been developed.

Keywords: OCT, Fiber Optic, Current Sensor, Protection

Reliability Constrained Energy and Reserve Scheduling of Microgrids Including High Penetration...
Scheduling of Electric Vehicles Considering Their Battery Lifetime

Due to environmentally and economically advantages, high deployment of renewable energy sources (RES) such as wind or solar energy is anticipated. The integration of such RES into the power grid necessitates the development of energy and reserve scheduling strategies to ensure reliability and economic efficiency. The expected energy not supplied (EENS) is a critical metric for evaluating the performance of these systems.

Keywords: Microgrids, renewable energy sources (RES), energy and reserve scheduling, expected energy not supplied (EENS).

Optimal Charge-Discharge Scheduling of Electric Vehicles Considering Their Battery Lifetime

Introducing a New High-Order Chaotic System with an Equilibrium Point and Stabilizing It Using LQR Controller

In this paper, a new high-order chaotic system is proposed. This system has an equilibrium point on center and its Lyapunov exponent is negative, indicating its chaotic behavior. The stability of the system around the equilibrium point is guaranteed by using a Linear Quadratic Regulator (LQR) controller.