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

Saeedvand S, Naser Razavi S and Ansaroudi F.
ABSTRACT: Path-finding in multi-agent, unexplored and dynamic military environment is one of the most important issues for solving defensive strategy in the modern warfare. 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
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 do not have any bearings or bushing, which prevent any lubrication and renewal. The number of maintenance in these motors is reduced. In this study, the effect of the number of winding pole-pair in the amount of levitation force is investigated. The simulation is done in Maxwell software.

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

PII: S232251141500003-4

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

Original Research, D3
Daryasafar N and Dehghani H.

ABSTRACT: In the electronic intelligence system (ELINT) it is important to analyze the radar signals in a precise way. In this paper, the de-interleaving of radar pulses is considered and an improved interval-only algorithm is proposed. The implementation of the algorithm is done in MATLAB environment. The simulation results show the power of the proposed algorithm in analyzing radar signals.

In the electronic intelligence system (ELINT) it is important to analyze the radar signals in a precise way. In this paper, the de-interleaving of radar pulses is considered and an improved interval-only algorithm is proposed. The implementation of the algorithm is done in MATLAB environment. The simulation results show the power of the proposed algorithm in analyzing radar signals.
ABSTRACT: This contribution addresses forward kinematic analysis of 2-(6UPS) Hybrid Manipulator based on Neural Network.

Keywords: 2-(6UPS) Manipulators, Stewart Mechanism, Nonlinear Multivariable System, WNN.
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 has been developed as an alternative to traditional current transformers. This new system uses two fibers contained in an insulator. 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...
ABSTRACT:
Due to environmentally and economically advantages, high deployment of renewable energy sources (RES) such as wind or solar is expected. RESs have been used in a variety of applications such as power generation, microgrids, and electric vehicles. In this paper, a new high-order chaotic system is proposed. This system has an equilibrium point on center and its stability is guaranteed using a Linear Quadratic Regulator (LQR) controller. The Lyapunov Exponents of the proposed system are calculated, and its chaotic behavior is verified. The proposed system can be used in various applications such as secure communication, cryptography, and chaos-based signal processing.