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 environments is one of the most important issues for solving real-world problems. In this research, the necessary constraints to find a path in a dynamic and unexplored environment are considered and a 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 mechanical moving parts, and do not require lubrication. The focus of this research is to study the influence of input conditions of the rotor on the maximum levitation force in a Magnetic Bearingless Motor (MBM). The simulation of the MBM 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) an important task is to analyze captured radar impulses and determine the radar system type and characteristics. This task is generally referred to as the de-interleaving problem and is considered as one of the key issues in electronic intelligence (ELINT). This problem is solved in two steps: 1) Interleaving the captured impulses to their original form and 2) Decoding the radar impulses to determine their characteristics. The ability of the de-interleaving algorithm to decode the captured impulses depends on many factors including the PRF, the PR1, the platform's velocity, and other parameters. In this work, an interval-only algorithm is introduced to solve this problem. This algorithm is only based on the difference of the captured impulses and their positions and is independent of other factors. The results of the simulation indicate that the proposed algorithm has high performance in de-interleaving the radar impulses. Keywords: Interval-Only Algorithm, De-Interleaving, Radar Pulses.
Direct Kinematics solution of 2-(6UPS) Hybrid Manipulator based on Neural Network

Original Research, D4
Rahmani A, Ghanbari A, Mahboubkhah M.

ABSTRACT: This contribution addresses forward kinematic
Keywords: 2-(6UPS) Manipulators, Stewart Mechanism,
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. OCT is a new technology that is being used in substations to measure current. OCT is a current sensor that uses fiber optic technology to measure current.

Keywords: OCT, Fiber Optic, Current Sensor, Protection

Reliability Constrained Energy and Reserve Scheduling of Microgrids Including High Penetration of Renewable Resources
ABSTRACT:
Due to environmentally and economically advantages, high deployment of renewable energy sources (RES) such as wind or solar can be seen in the last decades. This kind of deployment increases the demand for energy and reserve scheduling. Energy scheduling is the process of determining the amount of energy to be supplied to the load in order to meet the load demand and to ensure reliability. Reserve scheduling is the process of determining the amount of reserve capacity to be available for meeting the load demand in case of a failure. The optimal requirement reserve is determined by a tradeoff between reliability and economics.

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

PII:
S232251141500007-4

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

ABSTRACT:
Due to environmentally and economically advantages, high deployment of renewable energy sources (RES) such as wind or solar can be seen in the last decades. This kind of deployment increases the demand for energy and reserve scheduling. Energy scheduling is the process of determining the amount of energy to be supplied to the load in order to meet the load demand and to ensure reliability. Reserve scheduling is the process of determining the amount of reserve capacity to be available for meeting the load demand in case of a failure. The optimal requirement reserve is determined by a tradeoff between reliability and economics.

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

PII:
S232251141500008-4

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

ABSTRACT:
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 Exponent and Equilibrium Points are calculated and the equilibrium point is stabilized.

Keywords: Chaotic System, High-Order Chaos, Lyapunov Exponent, Equilibrium Point, LQR Controller