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 environment is one of the most important issues for solving... 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 of permanent magnet](image-url)
ABSTRACT: One maintenance task that still exist with conventional motors, are bearing lubrication and renewal. Bearingless motors have been used in various fields of industry. In this paper, the bearingless permanent magnet synchronous motor (BPMMSM) is designed and studied. As the levitation force is the main parameter of the BPMMSM, the optimization of the BPMMSM is achieved 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

ABSTRACT: In the electronic intelligence system (ELINT) in the process of identification radar signals are used both technical and hardware methods. A large number of radar signals are generated and need to be examined. In this paper, an improved interval-only algorithm for the de-interleaving of radar pulses is studied. The block diagrams and implementations steps as well as their ability in deinterleaving of radar pulses are analyzed.

Original Research, D2
Honarjou M., Faraji H. and Shirzadi A.

Original Research, D3
Daryasafar N and Dehghani H.

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**

**Original Research, D4**

Rahmani A, Ghanbari A, Mahboubkhah M.


**ABSTRACT:**

This contribution addresses forward kinematic analysis of 2-(6UPS) hybrid manipulator. Neural network is used to find the closed form solution (CFS) of kinematics for 2-(6UPS) showing proper performance of proposed network in less than 1% error.

**Keywords:**

2-(6UPS) Manipulators, Stewart Mechanism, Forward Kinematics Analysis, Nonlinear Multivariable System, WNN.
Current Measurement with Optical Current Transformer

ABSTRACT: Applying an optical current transformer (optical CT) to substations has several advantages, e.g. high accuracy and reliability. An existing technique was proposed to apply an optical current transformer in substations by inserting optical fibers into a hollow core optical fiber 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 of Renewable Resources
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 energy for supplying electrical energy to electric vehicles (EVs) is considered in microgrids. In this paper, optimal charge-discharge scheduling, considering the lifetime of battery, is proposed. The objective is to maximize the expected energy supplied (EES) to EVs during a time horizon and technically feasible charging/discharging constraints. In addition, reliability of EVs is considered. The proposed method is solved using the Lagrangean relaxation method. The results show that the proposed method increases the loadability of the system and reliability.

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. Lyapunov Exponent, Equilibrium Point, and Chaotic System are analyzed. The simulation results show the effectiveness of the proposed controller.

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