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
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 provide an alternative solution for these issues. The aim of this paper is to study a novel bearingless permanent magnet synchronous motor. This motor structure is similar to the electromagnetic bearing. The levitation force mechanism is used to lift the rotor and the stator windings are used as the magnetic circuit. The thickness of the PMs is optimized to maximize the levitation force. The simulation is performed in 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 ELINT (electronic intelligence system) process is discussed in this paper. The algorithm is based on the analysis of the clutter pattern and the determination of the PRF (pulse repetition frequency) of the radar signal. The performance of the algorithm is evaluated through simulation and it shows a high accuracy in the de-interleaving process.

Original Research, D3
Daryasafar N and Dehghani H.

ABSTRACT: In the electronic intelligence system (ELINT) process, the de-interleaving of radar pulses is a critical step for the analysis of the signal. In this paper, an improved interval-only algorithm is presented for this purpose. The algorithm is based on the analysis of the clutter pattern and the determination of the PRF (pulse repetition frequency) of the radar signal. The performance of the algorithm is evaluated through simulation and it is shown to be effective in the de-interleaving process.
Direct Kinematics solution of 2-(6UPS) Hybrid Manipulator based on Neural Network

Original Research, D4
Rahmani A, Ghanbari A, Mahboukhah 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. The optical CT utilizes the principle of Faraday’s Law to detect the current by means of a magneto-optic effect in a fiber optic sensor. The developed system is capable of detecting the current in a conductor by using two optical 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. However, due to the intermittent nature of renewable energy, the grid can face unpredictability and reliability issues so that 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

ABSTRACT:
Due to environmentally and economically advantages, high deployment of renewable energy sources (RES) such as wind or solar is expected. However, due to the intermittent nature of renewable energy, the grid can face unpredictability and reliability issues so that 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

Ghanbari A, Haghani M and Mola M.

ABSTRACT:
In this paper, a new high-order chaotic system is proposed. This system has an equilibrium point on center and its chaotic attractor is shown in the animation. Stability of the system around the equilibrium point is guaranteed using a Linear Quadratic Regulator (LQR) controller.

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