ABSTRACT: Owing to advances in medicine, with the increased demands on clinical services, quality enhancement of medical images becomes highly important. The image fusion process is utilized to combine the advantages of two or more images to produce an enhanced or more informative image. The proposed algorithm for the enhancement of medical images is provided using the wavelet transform and for the fusion of medical images, SWT-denoising and CLAHE are applied. The experimental results indicate that the proposed algorithm significantly improves the quality of an image while removing its noise.

Key words: Wavelet transform, Medical image, Image fusion, SWT-denoising, CLAHE
Modeling and Design of Controllers for Switched Reluctance Motor Based on Asymmetrical Γ-Source Inverters

Original Research, C15
Mehdizadehmoghadam SM and Hajizadeh M.

ABSTRACT:
In this paper a power electronic converter on the basis of asymmetrical Γ-Source inverter has been identified to control the switched reluctance motor. The control strategy has been implemented using the practical testing system of the proposed control system has been tested in MATLAB/simulink to prove the performance of the designed control system.

Keywords:
Power Electronic Converter, Asymmetrical Γ-Source Inverter.
Path-finding in Multi-Agent, unexplored And Dynamic Military Environment Using Genetic Algorithm

Original Research, C16
Saeedvand S, Razavi SN, Ansaroudi F.

ABSTRACT

Keywords
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**ABSTRACT:** Optimal placement of dispersed generation in electrical distribution systems was carried out considering the voltage profile and losses. Comparisons were made between the optimized and non-optimized cases. The results indicated the competency of the proposed algorithm.

**Keywords:** Optimal Placement, Dispersed Generation, PSO Algorithm, Voltage Profile, Losses

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**ABSTRACT:** A tiny wideband microstrip-fed monopole antenna was designed for wireless applications. Details of the proposed antenna design approach and measured results are presented.

**Keywords:** Microstrip Antenna, Monopole, Wireless.
 Modeling and Optimizing the Hardness of the Melted Zone in Submerged Arc Welding Process using Taguchi Method

Original Research, C19
Aghakhani M and Shahverdi Shahraki H.

ABSTRACT: Welding, as one of the most useful method for permanent joint of components, is of great importance in industry. Among the several factors that affect the quality of welds, the hardness of the melted zone is one of the most important factors. In the present study, the effect of various parameters on the hardness of the melted zone was investigated. The Taguchi method was employed to optimize the hardness of the melted zone. The results indicated that the composition of the electrode and the content of magnesium oxide nanoparticles had respectively the highest impact on the hardness of melted zone.

Keywords: Submerged Arc Welding, Hardness of Melted Zone, Taguchi Method, Analysis of Variance, Optimization
**Discretization of Cuckoo Optimization Algorithm for Solving Quadratic Assignment Problems**

Original Research, C20
Kazemi E and Dejam S.

**ABSTRACT:** Quadratic Assignment Problem (QAP) is one of the combinatorial optimization problems about which research has been done in the last decades. Cuckoo Optimization Algorithm (COA) is a nature-inspired algorithm that is used to solve optimization problems. This paper represents the way of discretizing the Cuckoo optimization algorithm for solving the quadratic assignment problem.

**Keywords:** Quadratic Assignment Problem (QAP), Meta-Heuristic Algorithms, Discrete Cuckoo Optimization Algorithm (DCOA).