

**INTERNATIONAL JOURNAL OF
ELECTRICAL ENGINEERING AND APPLIED SCIENCES**

Contents

Volume 7

Number 2

October 2024

<i>No.</i>	<i>Title</i>	<i>Page</i>
1.	Inverse Definite Overcurrent Relay Response at Pencawang Masuk Utama Pagoh, Johor <i>M.H. Hairi, A.S. Mohd Isira, M.N. Kamarudin, M.F. Packer Mohamed, A.S. Sobri.....</i>	1
2.	Solar-Powered Peltier Thermoelectric Water Cooling and pH Monitoring <i>K.I. Jasmine, S.A. Jumaat</i>	5
3.	Sigmoid-Function-Based Adaptive Pelican Optimization Algorithm for Global Optimization <i>A. F. Seini Yussif, S.Adjei, B.E.Wilson</i>	15
4.	Improving Grid-Connected Tidal Power Systems Through PWM Inverters Based on Voltage-Oriented Control <i>L. M. Kangaji, E. Orumwense, A. Raji.....</i>	27
5.	Integration of Artificial Neural Network in a IEEE 5 BUS System <i>T.L. Makosso, A.Almaktoof, K.Abo-Al-Ez</i>	39
6.	Review of Different Types of Neural Network Architectures <i>T.L. Makosso, A. Almaktoof, K. Abo-Al-Ez</i>	47
7.	Understanding the Discharge Characteristics of Lithium Iron Phosphate and Lithium Cobalt Oxide Cathode Materials <i>M.S.A. Muhamad Saripudin, R. Ranom, I.W. Jamaludin, U. Habibah</i>	59
8.	Development of Automatic Cloth Folding System by Using Arduino Uno Microcontroller and Servo Gears <i>S. Md Rozali, N. S. Mohd Shaari, R. Ramli, M. F. Rahmat, Z. Has.....</i>	69
9.	Effect of Defect Density Variation in CdTe Solar Cell Using Cu as A Hole Transport Layer and Back Contact <i>F. T. Johora, M. A. Khan, A. Al Asad, Md. Rabiul Islam, A. Rayhan</i>	77
10.	Enhancing PV System Stability in the Angolan Power Network through Modeling and Simulation of Fuzzy Logic Controllers <i>A.F. Catraio, M.E.S. Mnguni</i>	87
11.	Improved Tuna Swarm Optimization (ITSO) Algorithm based on Adaptive Fitness-Weight for Global Optimization <i>A.F.Seini Yussif, T.Seini, C.Adu.....</i>	99
12.	Real-time Implementation of a Full State Feedback Controller for a DC Motor <i>K. Love, C. Kriger, N. Tshemese-Mvandaba</i>	109

MESSAGE FROM THE EDITOR-IN-CHIEF

It is with great enthusiasm that we present Volume 7, Issue 2 of the International Journal of Electrical Engineering and Applied Sciences (IJEEAS). This issue reflects our ongoing commitment to showcasing cutting-edge research and innovative contributions in electrical engineering and related fields.

The articles in this edition cover a wide range of topics, including the integration of Artificial Neural Networks for fault detection in power grids, enhancements in CdTe solar cell performance, and real-time implementation of control systems for DC motors. Advancements in renewable energy are also highlighted, with studies focusing on PV system stability in Angola, optimization algorithms for global solutions, and grid-connected tidal power systems. Further contributions include overcurrent protection assessments, solar-powered water-cooling systems, and a review of neural network architectures. Additionally, practical applications such as automatic cloth folding systems and in-depth analyses of lithium-ion battery discharge characteristics showcase the diverse applications of electrical engineering research.

I extend my heartfelt appreciation to the authors, reviewers, and the entire editorial team for their dedication and hard work. Together, we continue to drive innovation and knowledge sharing in our field. We hope this volume inspires readers and fosters collaboration in solving engineering challenges.

Sincerely,

Maaspaliza Azri

Editor-in-Chief IJEEAS