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MESSAGE FROM THE EDITOR-IN-CHIEF

Assalamualaikum and Greetings to all,

I am Maaspaliza Azri, the Editor-in-Chief for the International Journal of Electrical Engineering and Applied Science (IJEEAS).

Firstly, I extend my warm welcome to the readers and authors on the Version 6 no. 2 publication of the International Journal of Electrical Engineering and Applied Science (IJEEAS). I would like to thank the Editorial Board Members for their ongoing hard work and assistance in making the 12th edition of volume 6 no. 2 a reality. The Editorial Advisory Board's support and the Editorial Board's contributions are both crucial and greatly valued. Not to forget the extraordinary efforts of our expert reviewers, we would most definitely not be able to publish a quality journal without their voluntary participation, ensuring high technical and editorial standards. I also like to thank the contribution from the authors, whose faith in us from the start enabled us to move the journal forward. We sincerely believe and looking forward to continuously receive a high-quality research paper from authors all over the world. I always welcome any feedback you may have on how we can keep making improvements to our journal.

This edition features eight interesting articles contributed by the authors from various countries and affiliations. The article from L.H.Kwee and N.M.M. Sobran presents the Transition-based Rapidly-exploring Random Tree Star (TRRT) algorithm for automating the shelf stocking in retail warehouses. The proposed algorithm improves the efficiency and smoothness of the object arrangement path planning robot, making it a viable solution for automating the shelf-stocking process in retail warehouses.

In the ever-evolving landscape of wireless communication, optimizing network resources has gained paramount importance. Accordingly, Muhammad Sajjad et al. introduces innovative algorithms designed to dynamically distribute resources based on user requirements, channel circumstances, and Quality of Service (QoS) preferences. In summary, this research paper makes an important contribution to the field of wireless communication by presenting novel adaptive capacity arbitration algorithms designed specifically for Wideband Code Division Multiple Access (WCDMA) or Universal Mobile Telecommunications System (UMTS) wireless networks. With shown stability and scalability, these algorithms hold great promise for revolutionising resource management in wireless networks, paving the door for improved connection and user experiences. Future study could focus on the actual use of these algorithms in real-world scenarios, as well as enhancing their efficiency under various network conditions.

Many fields of study use optimisation methods to develop solutions that maximise or minimise specific study properties. The adaptive simulated gorilla troop optimizer (ASGTO) algorithm is suggested by A. Bright et al. for addressing optimization problems. In considering this, a modification to the conventional gorilla troop optimizer is suggested. The modification makes use of the effective capabilities of step adaptive simulation and circle chaotic mapping. Another study of optimization is presented by A.F.S. Yussif et al. with the proposed Modified Mountain Gazelle Optimizer (MMGO) algorithm for reducing power losses in power distribution networks. The loss sensitivity factor is used to determine the optimal places for shunt reactive compensators. This strategy minimizes the search space while increasing the efficiency of the optimization process. Second, the suggested MMGO algorithm is used to find the best placements and sizes for the shunt compensators. The proposed method's performance is examined using standard IEEE 33-bus and IEEE 69.

In a work of computational intelligence tool, the researchers form N.A Yusri et al. presents the fuzzy logic controller (FLC) algorithm for determining a photovoltaic (PV) system's maximum power point (MPP) within the converter-supplied PV system. The FLC continuously processes these inputs to adjust the duty cycle of the DC-DC boost converter, ensuring that the PV system operates at its highest energy generation potential and maintaining their operating voltage at an efficient level.

Recently, the solar car is introduced by researchers for example the work from M.A.Khan et al. presents the cost effectiveness of solar car implementation. By introducing the solar car technology, it reduces 30% of power consumption from gridline as well as the charging cost that is about one third of the conventional electric car and it is a remarkable reduction of power from grid line for a large-scale vehicle for any developing country like Bangladesh.

The research by Owusu et al. aims to design and construct a prototype of a remote-controlled lawn mower using dual-tone multi-frequency technology to control the directions of a lawn mower. This research was designed using Arduino Uno, which is based on the ATmega328P microcontroller, 6 VDC geared stepper motor, a 700-HB relay that serves as a motor driver, a sim8001 DTMF module integrated circuit (IC) and a mobile phone.

Integrating photovoltaic power to the power system brings some challenges that need to be addressed for the safe operation of the electric grid. Because of that, the stability evaluation of non-ideal Grid-tied photovoltaic on IEEE-9 Bus system is presented by S.D.Lumina et al. In this paper, the investigation is on the challenge on solar power integration in the grid by demonstrating that due to its randomness and intermittent nature, the photovoltaic power is likely to be associated with voltage disturbance and low power quality that occur on the electrical grid. Data from simulation of a non-ideal grid-tied photovoltaic are collected to demonstrate the characteristics and negative effects of high photovoltaic integration on the IEEE-9 bus system.

I hope readers will enjoy this edition and thank you for always keep following our publication and supporting IJEEAS.

Ir. Dr. Maaspaliza Azri
Editor-in-Chief IJEEAS