

Editor's Column

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The present is theirs; the future, for which I really worked, is mine.

Nikola Tesla

Editorial Letter

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ALMOST two years of challenge are behind us. Hopefully, this year we will start returning back to normal life. The time will tell if we learned something or just wasted time as on many occasions before.

In the journal "Electronics", we open this year with four original research papers that provide results in the field of sensor networks, antennas, digital system design, and power electronics.

In the first paper entitled "Energy Optimization in a Multi-hop Sensor Network for a WBAN Application," authors, V. Tyagi, S. H. Gupta, and M. Kaushik, proposed an energy efficient data transmission for multi-hop network based on Particle Swarm Optimization (PSO) algorithm. The provided results show a significant reduction in energy consumption while keeping the node-to-sink distance constant.

The paper "Dual Notched-Band Crescent Moon Dielectric Resonator Antenna," by M. Debab, A. Bendaoudi, and Z. Mahdjoub, proposes a dual-band notched ultra-wideband (UWB) dielectric resonator antenna. Obtained simulation re-

sults demonstrate that the proposed CMDR antenna achieves satisfactory UWB performance, with an impedance bandwidth of around 88.7%, covering the frequency band of 3.2-8.3 GHz, excluding a rejection band for the WLAN and ITU 7 GHz band.

In the paper "On The Implementation of Densely Packed Decimal Number System based Adder: Prospects and Challenges," authored by S. K. Beura, R. U. Ahmed, B. P. Devi, and P. Saha, reports the pros and cons of the Densely Packed Decimal (DPD) coding techniques. Additionally, performance parameters (such as delay, power consumption) have been evaluated through CMOS gpdk45 nm technology.

Finally, the paper "Harmonic Elimination in Uniform Step Nine-Level Inverter Using Differential Evolution: Experimental Validation," by R. F. Abdelgoui, R. Taleb, A. Bentaallah, and F. Chabni, presents the application of differential evolution algorithm for computing optimal switching angles for a single-phase nine-level inverter to improve the output voltage quality. Moreover, the authors built a laboratory prototype based on STM32F407 microcontroller in order to the effectiveness of the proposed modulation method.

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