

Editor's Column

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Start by doing what's necessary; then do what's possible; and suddenly you are doing the impossible.

St. Francis of Assisi

Editorial Letter

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BEFORE you is the final issue of the *Electronics* journal in this year and probably the last issue of the journal in this format and appearance. Currently, we are considering making some big steps towards changing the whole design of the journal cover and web presentation. More importantly, we initiated major changes of the journal's aims and scope in order to better reflect recent technology advancements as well as our readership.

The second issue of the volume in this year contains four outstanding papers that present some recent advancements in the fields of testing complex digital electronic circuits, improvement of medium voltage distribution networks reliability, electric machine design and modeling, and power electronics.

The paper "New Hybrid-Based Self-Test Strategy for Faulty Modules of Complex Microcontroller Systems" by M. H. El-Mahlawy, S. Hussein, and G. I. Mohameda presents a new hybrid test strategy, called HYBST, that combines the Signature Multi-Mode Hardware-Based Self-Test (SM-HBST) and Software-Based Self-Test (SBST) testing strategies for testing complex digital circuits such as microcontrollers. In the proposed test strategy, a microcontroller is divided into a number of main modules and, afterwards, the test subroutines are used to functionally test each module, based on its instruction set architecture (ISA). After conducting several experiments, it was shown that HYBST outperforms other testing strategies with regards to memory utilization, test application time, testing of internal modules of the microcontroller, and testing of general-purpose input-output (GPIO) pins of the microcontroller.

The paper "Probabilistic Techno-Economic Optimization in Medium Voltage Distribution Networks with Fault Passage Indicators and Fault Locators" by P. Mršić, Đ. Lekić, B. Erceg, Č. Zeljković, P. Matic, S. Zubić, and P. Balcerk proposes a

novel stochastic techno-economic optimization method for determining the number and positions of fault passage indicators (FPIs) aiming at reduction of interruption time and investment costs in medium voltage (MV) distribution networks with and without fault locators (FLs). The proposed method is based on a probabilistic non-sequential Monte Carlo simulation model of the real network and its main goal is to provide maximum improvement of the network reliability indices with minimum number of FPIs.

The paper "Finite Element Design of Rotor Permanent Magnet Flux Switching Machine with Arbitrary Slot, Pole and Phase Combinations" by Đ. Lekić and S. Vukosavić describes a two-dimensional finite element approach for designing RPMFS (Rotor Permanent Magnet Flux Switching) machines. The proposed method enables fast, accurate and computationally efficient assessment of different RPMFS machine designs with an arbitrary number of rotor poles, stator slots and phases. In addition, the authors developed a program using the Octave FEMM (Finite Element Method Magnetics) toolbox. The program is suited for the use in the design stage, where it is necessary to determine various machine parameters for given core dimensions, terminal voltage constraints and adopted value of current density in the conductors, while taking iron saturation effects into account

The paper "Medium Voltage Impedance-Admittance Measurement System Based on the Cascaded H-Bridge Multilevel Converter" by M. Petković, N. Hildebrandt, F. D. Freijedo, and D. Dujić proposes and presents the cascaded H-bridge multilevel inverter topology for perturbation injection converter and impedance-admittance measurement. The measurement methodology is explained together with different measurements requirements. Performance and suitability of this topology for impedance-admittance measurement is evaluated through simulations. Preliminary design principles are given for the converter

I thank all the authors for their contribution to this issue of the journal. I also thank all the reviewer for making significant effort in providing timely and comprehensive reports during the review process.