

WSEAS Transactions on Circuits and Systems

Print ISSN: 1109-2734

E-ISSN: 2224-266X

Contents: 2010

Acceptance Rate (for the years 2013 and 2014): 27.03%

Acceptance Rate = C/D where: C = the number of accepted papers, D= the number of submitted papers. Withdrawn Papers are not considered for the numbers C and D.

Editorial Board:

Editor-in-Chief

Prof. Valeri Mladenov, Technical University Sofia, Bulgaria

URL, Email: valerim@tu-sofia.bg

Associate Editors:

Prof. Bimal Kumar Bose (Life Fellow IEEE), The University of Tennessee, Knoxville, USA

URL, Email: bose@eecs.utk.edu

Prof. D. Subbaram Naidu (Fellow IEEE), University of Minnesota Duluth, USA

URL, Email: dsnaidu@d.umn.edu

Prof. Tadeusz Kaczorek (Fellow IEEE), Warsaw University of Technology, Poland

URL, Email: kaczorek@ee.pw.edu.pl

Prof. Panagiotis Agathoklis, University of Victoria, British Columbia, Canada

URL, Email: panagath@ece.uvic.ca

Prof. Imre J. Rudas, Óbuda University, Budapest, Hungary

URL, Email: rudas@uni-obuda.hu

Prof. Brett Nener, The University of Western Australia, Australia

URL, Email: brett.nener@uwa.edu.au

Prof. Klimis Ntalianis, TEI Athens, Greece

URL, Email: kntal@image.ece.ntua.gr

Lecturer, Dr. Lambros Ekonomou, City University of London, UK

[URL](#), Email: Lambros.Ekonomou.1@city.ac.uk

Prof. Branimir Reljin, University of Belgrade, Serbia

[URL](#), Email: reljinb@etf.bg.ac.yu

Prof. Ronald Tetzlaff, Technical University Dresden, Germany

[URL](#), Email: Ronald.Tetzlaff@tu-dresden.de

Prof. Peter Szolgay, Pazmany Peter Catholic University, Hungary

[URL](#), Email: szolgay.peter@sztaki.mta.hu

Prof. Xiang Bai, Huazhong University of Science and Technology, China

[URL](#), Email: xbai@hust.edu.cn

Prof. Alexander Gegov, University of Portsmouth, UK

[URL](#), Email: alexander.gegov@port.ac.uk

Topics:

Fundamental Theory, Network Theory and Applications, Nanostructures and nanotechnologies, Molecular Electronics, Molecular Computing, DNA Computing, Circuits and Networks inspired from Biology, Microelectronics, Microcircuits, Analog, Digital, Mixed-Mode Circuits, Electronics: Components, Devices, Systems, Silicon Devices: Technology, Modeling, Reliability, Optoelectronic Devices, Laser and Optical Systems, Thin Film Technologies, Very Large Scale Integration Systems (VLSI), Hardware/Software Codesign Very Large Scale Integration Systems (VLSI), Digital Filters, High Level Synthesis, Amplifiers, Nonlinear Circuits, Sensors, Physical Design, Time-Frequency and Wavelet Applications, Modelling and Simulation, CAD Tools, Circuits and Electronics for Data Conversion and S-D Modulation, Capacitor/Current Technoques, Prototype Devices and Measurement, Circuits and Systems for Control and Robotics, Electron Devices for Power Technology, High Voltages and Electric Machines, Device Physics, Physical Design, High-Level Synthesis and Testing, Non-Linear Circuits, Formal Verification, Semiconductors, Superconductivity Circuits, Computer-Aided Design, Instrumentation, Instrument-Computer Interface, Military Electronics, Electronics for Space exploration, Consumer Electronics, Circuits in Power Technology, Electron Devices for Video Technology, Circuits for Antennas Technology, Electron Devices and Systems for Radar and Sonar Systems, Circuit Models, Electrical and Electronic Measurement, Circuits for Industrial Applications, Circuit models for Electromagnetic Fields, Electronics for Signal Processing and other Applications, Neural Networks, Numerical Analysis and Circuits, Logic Synthesis, Automatic Control, Robotics, Dynamical Systems, Stochastic Systems, Simulation, Neural Networks, Fuzzy Systems, Evolutionary Computation, Fuzzy Logic and Circuits Design, Circuit Implementation for Fuzzy Systems, Multidimensional Circuits and Systems, Circuit Modelling and Scientific Computing with Applications in Science and Engineering.

Articles:

[Pulse Generator Monocycle Gaussian for UWB Applications](#)

Authors: Mohamed Dhieb, Mongi Lahiani, Hamadi Ghariani

[A Software Solution for Mechanical Change Measurement through Virtual Instrumentation](#)

Authors: Nicolae Patrascioiu, Aron Poanta, Adrian Tomus, Bogdan Sochirca

[A Standard Cell Based Synchronous Dual-Bit Adder with Embedded Carry Look-Ahead](#)

Authors: Padmanabhan Balasubramanian, Krishnamachar Prasad, Nikos E. Mastorakis

[Study on the Operation of a Low-Voltage AC Microgrid with Multiple Distributed Generations](#)

Authors: Wei-Tzer Huang

[Dynamic Stability Evaluation for an Electromagnetic Contactor](#)

Authors: Chieh-Tsung Chi, Chih-Yu Hung

[Improving Ion-Sensitive Field-Effect Transistor Selectivity with Backpropagation Neural Network](#)

Authors: Wan Fazlida Hanim Abdullah,, Masuri Othman, Mohd Alaudin Mohd Ali, Md Shabiul Islam

[Modeling Bank Interest Margin and Loan Quality under the Troubled Asset Relief Program: An Option-Pricing Approach](#)

Authors: Jyh-Horng Lin, Jyh-Jiuan Lin, Pai-Chou Huang

[On the Margin Effects of Commercial Bank Expansion into Securities and Insurance Activities under the Same Roof: A Mathematical Swap Approach](#)

Authors: Jyh-Jiuan Lin, Pai-Chou Huang, Wei-Ming Hung

[Laser Interferometric Measuring System for Positioning in Nanometrology](#)

Authors: Josef Lazar, Ondrej Cip, Martin Cizek, Jan Hrabina, Mojmir Sery, Petr Klapetek

[High Frequency Stability Semiconductor Laser Sources at 760 nm Wavelength](#)

Authors: Bretislav Mikel, Zdenek Buchta, Josef Lazar, Ondrej Cip

[Meteorological Parameters Effects on Solar Energy Power Generation](#)

Authors: Safak Saglam

[Switching Power Supply Unit for an Autonomous Monitoring System](#)

Authors: Pospisilik Martin, Adamek Milan

[Adaptive Nonuniform Sampling Delta Modulation - Practical Design Studies](#)

Authors: Ryszard Golanski, Jacek Kolodziej

[Modeling and Performance Evaluation of UTB SGOI Devices Scalable to 22 nm Technology Node](#)

Authors: Kiran Bailey, K. S. Gurumurthy

[A Simple, Efficient, and EMI-Optimized Solar Array Inverter](#)

Authors: K. H. Edelmoser, F. A. Himmelstoss

[DC Motor Behavior Analysis on Blocking the Wheels on a Railway Traction Vehicle](#)

Authors: Ioan Baci, Dragos Pasculescu, Corina Daniela Cuntan, Anca Iordan

[A High-Accuracy Electronic Pressure Transducer with a Wide Temperature Range and Single Iteration Temperature Calibration](#)

Authors: M. J. Burke

[ECO-Aware Obstacle-Avoiding Routing Tree Algorithm](#)

Authors: Jui-Hung Hung, Yao-Kai Yeh, Yu-Cheng Lin, Hsin-Hsiung Huang, Tsai-Ming Hsieh

[Role of Driver and Load Transistor \(MOSFET\) Parameters on Pseudo-NMOS Logic Design](#)

Authors: Nebi Caka, Milaim Zabeli, Myzafere Limani, Qamil Kabashi

[Negative Consequence of Motor Voltage Asymmetry and its Influence to the Unefficient Energy Usage](#)

Authors: Miloje Kostic, Aleksandar Nikolic

[Application of the Elliptical Trigonometry in Industrial Electronic Systems with Analyzing, Modeling and Simulating Two Functions Elliptic Mar and Elliptic Jes-x](#)

Authors: Claude Bayeh

[The Effect of the Output Capacitor on the Power Spectrum of the EMI Radiation, the Output Voltage Ripple and the Efficiency of a SEPIC Converter](#)

Authors: Florian Ion, Marcel Ionel, Gabriel Predusca

[Second Harmonic Signal Detection on Poly\[\$\mu\$ 2-L-alanine- \$\mu\$ 3-nitratosodium \(I\)\] Crystals](#)

Authors: E. Gallegos-Loya, E. Alvarez Ramos, E. Regalado, A. Duarte-Moller

[Aircrafts' Altitude Measurement Using Pressure Information: Barometric Altitude and Density Altitude](#)

Authors: Teodor Lucian Grigorie, Liviu Dinca, Jenica-Ileana Corcau, Otilia Grigorie

[Symbolic Equation for Linear Analog Electrical Circuits using Matlab](#)

Authors: Zoltan Erdei, Luiza Alexandra Dicso, Liviu Neamt, Oliver Chiver

[Isolated Zeta Converter: Principle of Operation and Design in Continuous Conduction Mode](#)

Authors: Pijit Kochcha, Sarawut Sujitjorn

[Odd/Even Scroll Generation with Inductorless Chua's and Wien Bridge Oscillator Circuits](#)

Authors: Watcharin Jantanate, Peter A. Chaiyasena, Sarawut Sujitjorn

[Study on Ultrasonic Detecting Technology of Profiled Component](#)

Authors: Yanhua Zhang, Lu Yang, Haijun Cao

[Design of Accurate Power Factor Measurement Approach Using FPGA-based Chip](#)

Authors: Shu-Chen Wang, Chi-Jui Wu

[Bio-Inspired Visual Information Processing – The Neuromorphic Approach](#)

Authors: W. J. Han, S. D. Kim, I. S. Han

[Study of the Operating States of Intrinsic Safety Barriers of the Electric Equipment Intended for Use in Atmospheres with Explosion Hazard](#)

Authors: Niculescu Titu, Pasculescu Dragos, Pana Leon

[Micro-Robots used in Control of Automatic Drilling Operations](#)

Authors: Paul Ciprian Patic, Mihaita Ardeleanu, Florin Popa

[Eddy Current Testing in Height Measurement of Copper Cylinder and its 2D Electromagnetic Field Simulation](#)

Authors: Yanjie Wang, Qing Li, Xiong Li

[High Precision Time and Frequency Counter for Mobile Applications](#)

Authors: R. Szplet, Z. Jachna, K. Rozyc, J. Kalisz

[Discussion on the Algorithms of a New Siphon Rain Gauge](#)

Authors: Hong-Yang Li, Qing Li, Xiong Li, Jia-Long Song

[Development of Piezoelectric Braille Cell Control System Using Microcontroller Unit \(MCU\)](#)

Authors: S. Mad Saad, F. Razaly, M. Z. Md Zain, M. Hussein, M. S. Yaacob, A. R. Musa, M. Y. Abdullah

[Adder Designs using Reversible Logic Gates](#)

Authors: P. K. Lala, J. P. Parkerson, P. Chakraborty

[Multiplierless, Reconfigurable Folded Architecture for VLSI Wavelet Filter](#)

Authors: Tze-Yun Sung, Hsi-Chin Hsin, Sheng-Dong Chang

[Reconfigurable Architecture for VLSI 9/7-5/3 Wavelet Filter](#)

Authors: Tze-Yun Sung, Hsi-Chin Hsin

[A Novel Linear Array for Discrete Cosine Transform](#)

Authors: Yaw-Shih Shieh, Tze-Yun Sung, Hsi-Chin Hsin

[Piezoresistive Microcantilever Biosensor Potentiometric Signal Transduction for Human Stress Measurement](#)

Authors: Nina Korlina Madzhi, Anuar Ahmad, Lee Yoot Khuan, Mohd Firdaus Abdullah

[A VHDL-Based Design Methodology for Asynchronous Circuits](#)

Authors: Sun-Yen Tan, Wen-Tzeng Huang

[Design of a Simple OTA-Based Mixed-Signal Controller for Adaptive Control System of Shunt Active Power Filter](#)

Authors: Sombat Vanichprapa, Cherdchai Prapanavarat, Boonruk Chipipop

[Transport Supervision of Perishable Goods by Embedded Context Aware Objects](#)

Authors: A. Wessels, R. Jedermann, W. Lang

[A Ring Oscillator with High Temperature Independency](#)

Authors: Mohammad Hassan Montaseri

[A Ring Oscillator of Remarkable Power Supply Independent Characteristic](#)

Authors: Mohammad Hassan Montaseri

[An Implementation of Parallel Power Flow Calculation based on Graph Partitioning Algorithm](#)

Authors: Wenkai Zhao, Xinyan Fang, Xu Dong, Yuan Bi, Ying Wu

[Preservation of Synchronization in Dynamical Systems via Lyapunov Methods](#)

Authors: G. Fernandez Anaya, C. Rodriguez Lucatero, J. J. Flores-Godoy, C. Miranda-Reyes

[Infrared Thermal Detectors Parameters: Semiconductor Bolometers Versus Pyroelectrics](#)

Authors: Genc Hyseni, Nebi Caka, Kujtim Hyseni

[Nonlinear Adaptive Controller Design of SSSC for Damping Inter-Area Oscillation](#)

Authors: Lihong Gu, Xiaoxin Zhou, Min Liu, Haobo Shi

[Fault Tolerance Design by Accurate SER Estimation for Nano-Scale Circuits](#)

Authors: Yu Changhong

[Analysis and Control of Two Switches AC Chopper Voltage Regulator](#)

Authors: Jin Nan, Tang Hou-Jun, Bai Liang-Yu, Geng Xin, Yang Xiao-Liang

[Development and Calibration of an Impulse Magnetic Field Measurement System for Lightning Electromagnetic Pulse Investigation](#)

Authors: Xiao-Ming Ren, Zheng-Cai Fu, Wei Sun

[Application of Genetic Algorithms for Optimal Reactive Power Planning of Doubly Fed Induction Generators](#)

Authors: P. Sangsarawut, A. Oonsivilai, T. Kulworawanichpong

[Adiabatic and Standard CMOS Interfaces at 90 nm Technology](#)

Authors: Neha Arora, B. P. Singh, Tripti Sharma, K. G. Sharma

[Investigation of the Heat Meters Calculator Applying a Measurement Devices Software Reliability Method](#)

Authors: V. Knyva, M. Knyva

[Efficient Interconnect Design with Novel Repeater Insertion for Low Power Applications](#)

Authors: Tripti Sharma, K. G. Sharma, B. P. Singh, Neha Arora

[Formation of ZnO in or on Glasses by Using the Sol-Gel and Chemical Bath Deposition Techniques](#)

Authors: S. J. Castillo, M. C. Acosta-Enriquez, Ma. E. Zayas, H. Arizpe, T. Mendivil-Reynoso, A. Garcia-Juarez, M. E. Alvarez-Ramos, E. Larios-Rodriguez

[Nanometric Layers of Cadmium Sulphide by CBD and a Potential Application](#)

Authors: M. C. Acosta-Enriquez, A. Apolinar-Irribé, M. E. Alvarez-Ramos, M. A. Quevedo-Lopez, R. Ramirez-Bon, A. F. Jalbout, A. De Leon, A. Duartemoller, R. P. Duarte-Zamorano, L. E. Regalado, M. R. Manzo-Valencia, S. J. Castillo

[Testing of High Breaking Capacity Fuses Using Modular Current Sources](#)

Authors: Adrian Plesca, Emilian Furnica

[Evaluation of Dynamic Bandwidth Allocation Algorithms in GPON Networks](#)

Authors: Joanna Ozimkiewicz, Sarah Ruepp, Lars Dittmann, Henrik Wessing, Sylvia Smolorz

[Evaluating Multicast Resilience in Carrier Ethernet](#)

Authors: Sarah Ruepp, Henrik Wessing, Jiang Zhang, Anna V. Manolova, Anders Rasmussen, Lars Dittmann, Michael Berger

[Comparative Study of Noise Reduction in Ultrasonic Inspection System](#)

Authors: Jaejoon Kim

[State-Space Averaging \(SSA\) Revisited: On the Accuracy of SSA-Based Line-To-Output Frequency Responses of Switched DC-DC Converters](#)

Authors: Viera Biolkova, Zdenek Kolka, Dalibor Biolek

[Automated Traffic Light System for Road User's Safety in Two Lane Road Construction Sites](#)

Authors: Siva Kumar Subramaniam, Vigneswara Rao Ganapathy, Sivarao Subramonian, Abdul Hamid Hamidon

[Design and Implementation of a Negative Feedback Oscillator Circuit Based on a Cellular Neural Network with an Opposite Sign Template](#)

Authors: Baran Tander, Atilla Ozmen, Yasin Ozcelep

[A Novel Design for Evaluating Simultaneous Switching Noise within an Enhanced IBIS Model](#)

Authors: Wen-Tzeng Huang, Sun-Yen Tan, Yuan-Jen Chang, Chiu-Ching Tuan

[An Overview about Monitors Colors Rendering](#)

Authors: Toadere Florin, Nikos E. Mastorakis

[Simulation the Functionality of a Laser Pulse Image Acquisition System](#)

Authors: Toadere Florin, Nikos E. Mastorakis

[Performances of CMOS Thermal-Compensation Total-Current References](#)

Authors: Radu D. Mihaescu, Mircea A. Ciugudean

[Quantum-Well Tridiagonal: A Qualitative Comprehension of Optoelectronics Nanotechnology](#)

Authors: E. A. Anagnostakis