ADVANCES IN SCIENCE, TECHNOLOGY AND ENGINEERING SYSTEMS JOURNAL

Volume 4 Issue 1 **January-February 2019**

CONTENTS

Automation System for Regulation Optimization in Power Transformer Design 01
Tatjana Šimović , Mislav Gazdović

Spectral Grid Impedance Identification on the Low-, Medium- and High-Voltage Level – System Design, Realization and Measurement Results of Grid Impedance Measurement Devices 08
Hauke Wilken, Michael Jordan, Detlef Schulz

A Wearable Exoskeleton Rehabilitation Device for Paralysis – A Comprehensive Study 17
Ahmed Roshdy, Samer Al Kork, Sherif Said, Taha. Beyrouthy

A Practical PIR-based Scheme for Discovering Nearby Places for Smartphone Applications 27
Maryam Hezaveh, Carlisle Adams

A Proposed Architecture for Parallel HPC-based Resource Management System for Big Data Applications 40
Waleed Al Shehri, Maher Khemakhem, Abdullah Basuhail, Fathy E. Eassa

Morphological and Optoelectrical Characterization of Silicon Nanostructures for Photovoltaic Applications 45
Babacar Dieng, Moussa Toure, Modou Beye, Diouma Kobor, Amadou Seidou Maiga

Extending the Life of Legacy Robots: MDS-Ach via x-Ach 50
Daniel M. Lofaro, Magdalena Bugajska, Donald Sofge

State Estimation based Echolocation Bionics and Image Processing based Target Pattern Recognition 73
David Kondru, Mehmet Celenk, Xiaoping A. Shen

Web Authentication: no Password; Listen and Touch 84
Viorel LUPU

Hypervolume-Based Multi-Objective Reinforcement Learning: Interactive Approach 93
Hiroyuki Yamamoto, Tomohiro Hayashida, Ichiro Nishizaki, Shinya Sekizaki

Optimal Designs of Constrained Accelerated Life Testing Experiments for Proportional Hazards Models 101
Xiaojian Xu, Wanyi Huang

Fuzzy Logic Implementation for Enhanced WCDMA Network Using Selected KPIs 114
Nosiri Onyebuchi Chikezie, Onyenwe Ezinne Maureen, Ekwueme Emmanuel Uchenna

Conducted and Radiated Interference on Interconnection's Lines 125
Patricio E. Munhoz-Rojas

Can parallelization save the (computing) world? 141
János Végh, József Vásárhelyi, Dániel Drótos

Low Contrast Image Enhancement Using Convolutional Neural Network with Simple Reflection Model 159
Bok Gyu Han, Hyeon Seok Yang, Ho Gyeong Lee, Young Shik Moon

Photodecoloration of Methyl Orange Solution Assisted by ZrS_3 Powders 165
Sofya Artemkina, Anastassiia Poltarak, Pavel Poltarak, Igor Asanov, Vladimir Fedorov

A Novel Pulse Position Modulator for Compressive Data Acquisition 171
Constantine A. Pappas

Enhancing and Monitoring Patient Outcomes Through Customized Learning 183
Majed Almotairi, Mohammed Abdulkareem Alyami, Yeong-Tae Song

Robot-Assisted Posture Emulation for Visually Impaired Children 193
Fang-Lin Chao, Hung-Chi Chu, Liza Lee

Development of Application Specific Electronic Nose for Monitoring the Atmospheric Hazards in Confined Space 200
Muhammad Aizat Bin Abu Bakar, Abu Hassan Bin Abdullah, Fathinul Syahir Bin Ahmad Sa'ad

Trajectory Tracking Control Optimization with Neural Network for Autonomous Vehicles 217
Samuel Oludare Bamgbose, Xiangfang Li, Lijun Qian

PAPR and BER Performances of OFDM System with Novel Tone Reservation Technique Over Frequency Non-Selective Fading Channel 225
Moftah Ali, Raveendra K. Rao, Vijay Parsa

Critical Embedded Systems Development Using Formal Methods and Statistical Reliability Metrics 231
Jonathan Lockhart, Carla Purdy, Philip Wilsey

Observing and Forecasting the Trajectory of the Thrown Body with use of Genetic Programming 248
Konstantin Mironov, Ruslan Gayanov, Dmiriy Kurennov

Performance Investigation of Semiconductor Devices using Commutation-speed based methodology for the application of Boost Power Factor Correction 258
Barkha Parkash, Ajay Poonjal Pai, Wei Tian, Ralph Kennel

Strategies of the Level-By-Level Approach to the Minimal Route 268
Nikolay Starostin, Konstantin Mironov

Over-The-Air Testing of Automotive Antennas and Wireless Links in The Installed State on The Basis of LTE Downlink Communication Parameters 282
Philipp Berlt, Lisa Jäger, Andreas Schwind, Frank Wollenschläger, Christian Bornkessel, Matthias A. Hein

Insight into the IEEE 802.1 Qcr Asynchronous Traffic Shaping in Time Sensitive Network 292
Zifan Zhou, Michael Stübert Berger, Sarah Renée Ruepp, Ying Yan

A Study on the Efficiency of Hybrid Models in Forecasting Precipitations and Water Inflow Albania Case Study 302
Eralda Gjika, Aurora Ferrja, Arbesa Kamberi

Talk Show's Business Intelligence on Television by Using Social Media Data in Indonesia 311
Eris Riso, Abba Suganda Girsang

Application Layer Security Authentication Protocols for the Internet of Things: A Survey 317
Shruthi Narayanaswamy, Anitha Vijaya Kumar

Managing and Optimizing Quality of Service in 5G Environments Across the Complete SLA Lifecycle 329
Evgenia Kapassa, Marios Touloupou, Panagiotis Stavrianos, Georgios Xylouris, Dimosthenis Kyriazis