ADVANCES IN SCIENCE, TECHNOLOGY AND ENGINEERING SYSTEMS JOURNAL

Volume 2 Issue 6 **November-December 2017**

CONTENTS

Clean Energy Use for Cloud Computing Federation Workloads 01
Yahav Biran, Sudeep Pasricha, George Collins, Joel Dubow

Design of Cognitive Radio Database using Terrain Maps and Validated Propagation Models 13
Anwar Mohamed Fanan, Nick Riley, Meftah Mehdawi

Smart Grid Operational functions and Control Challenges by Implementing SSSC Tailored to Optimize performance in between Qatar and KSA on the GCC Electrical-power grid 20
Tariq Masood, Muhammad Tajammal, Samer Karim Shah, Ghulam Hashmi, Suhail Aftab Qureshi, D. P Kothari

A novel beamforming based model of coverage and transmission costing in IEEE 802.11 WLAN networks 28
Mehdi Guessous, Lahbib Zenkouar

A New profiling and pipelining approach for HEVC Decoder on ZedBoard Platform 40
Habib Smei, Kamel Smiri, Abderrazak Jemai

Flexible Aperture Tuning Solution for Cellular Main Antenna in Metallic Back Cover Mobile Phone 49
Yew Choon Mark Tan, Guan Hong Ng, Yew Siow Roger Tay

A New Identification Approach of MIMO Hammerstein Model with Separate Nonlinearities 56
Chekib Ghorbel, Zeineb Rayouf, Naceur Benhadj Baraiek

ARMA feeding techniques for isoflux coverage from a micro satellite 63
Ali Siblini ,Hussein Abou Taam, Bernard Jecko, Mohamed Rammal, Eric Arnaud, Bellion Anthony

Selective Electron Beam Melting Manufacturing of Electrically Small Antennas 70
Saad Mufti, Christopher Smith, Alan Tennant, Luke Seed

Real-Time Flux-weakening Control for an IPMSM Drive System Using a Predictive Controller 76
Tian-Hua Liu, Shao-Kai Tseng, Yi Chen, Mao-Bin Lu

Discovering Interesting Biological Patterns in the Context of Human Protein-Protein Interaction Network and Gene Disease Profile Data 87
Rami Alroobi, William Perizzo

Modelling and Analysis of Radial Flux Surface Mounted Direct-Driven PMSG in Small Scale Wind Turbine 94
Theint Zar Htet, Zhengming Zhao, Qing Gu, Jing Li

A Switched-Capacitor Low-Pass Filter with Dynamic Switching Bias OP Amplifiers 100
Hiroo Wakaumi

Cognitive Cybernetics vs. Captology 107
Zdenko Balaž, Davor Predavec

Control of a three-stage medium voltage solid-state transformer 119
Claudio Busada, Hector Chiacchiarini, Sebastian Gomez Jorge, Favio Mengatto, Alejandro Oliva1, Jorge Solsona, German Bloch and Angelica Delgadillo

Leaf-shaped solar cell antenna for Energy Harvesting and RF Transmission in ku-band 130
Chokri Baccouch, Hedi Sakli, Dhaou Bouchouicha, Taoufik Aguili

Distributing the computation in combinatorial optimization experiments over the cloud 136
Mario Brcic, Nikica Hlupic, Nenad Katanic

A Relational Database Model and Tools for Environmental Sound Recognition 145
Yuksel Arslan, Abdussamet Tan?s, Huseyin Canbolat

Analysis of Economic Load Dispatch with a lot of Constraints Using Vortex Search Algorithm 151
Mustafa Saka, Ibrahim Eke, Suleyman Sungur Tezcan, Muslum Cengiz Taplamacioglu

Numerical evaluation of ABS parts fabricated by fused deposition modeling and vapor smoothing 157
Sung-Uk Zhang

Mealy-to-Moore Transformation – A state stable design of automata 162
Mustafa Oezguel, Florian Deeg, Sebastian M. Sattler

Data Exchange Strategies for Aggregating Geographical Distribution of Demands for Location-Dependent Information Using Soft-State Sketches in VANETs 175
Akihiro Yamada, Susumu Ishihara

Fault Tolerant Control Based on PID-type Fuzzy Logic Controller for Switched Discrete-time Systems: An Electronic Throttle Valve Application 186
Wafa Gritli, Hajer Gharsallaoui, Mohamed Benrejeb

Review on security issues in RFID systems 194
Mohamed El Beqqal, Mostafa Azizi

Novel Analysis of Synchronous and Induction Generators in Parallel Operation Mode in an Isolated Electric System 203
Vinicius Zimmermann Silva, Ângelo Jose Junqueira Rezek, Rafael Di Lorenzo Corrêa

Measurement of the Bridge Surface Deflections Using Near-Field Amplitude of Secondary Radiators System 217
Oleksandr Poliarus, Yevhen Poliakov, Andrii Lebedynskyi, Viktor Ivanov, Ruslan Pashchenko

A Taxonomy for Enhancing Usability, Flexibility, and Security of User Authentication 225
Susan Gottschlich

A Study on Isomorphic Properties of Circulant Graphs 236
V. Vilfred Kamalappan

Efficiency Assessment of Plasma-Aided Porous Media Surface Finishing 242
Peter Dineff, Dilyana Gospodinova, Ivaylo Ivanov

Heuristic Based Approach for Voltage Stability Improvement using FACTS Devices 252
Hajer Jmii, Asma Meddeb, Souad Chebbi

Enhancement of Voltage Stability through Optimal Location of UPFC 261
Hajer Jmii, Asma Meddeb, Souad Chebbi

2×1 Microstrip Patch Array Antenna with Harmonic Suppression Capability for Rectenna 267
Nur Aisyah Amir, Shipun Anuar Hamzah, Khairun Nidzam Ramli

Cyclical Wave Bolt for Sound Waves in a Gas Stream 272
Vladimir Arabadzhi

A Multilingual System for Cyberbullying Detection: Arabic Content Detection using Machine Learning 275
Batoul Haidar, Maroun Chamoun, Ahmed Serhrouchni

Applying Machine Learning and High Performance Computing to Water Quality Assessment and Prediction 285
Ruijian Zhang, Deren Li

Flexible lengthening-shortening arm mechanism for fishery resource management 290
Yoshiki Iwamochi, Motoki Takagi, Tasuku Miyoshi