

AFRICON 2013

**Pointe-Aux-Piments, Mauritius
9-12 September 2013**

Pages 1-774



**IEEE Catalog Number: CFP13AFR-POD
ISBN: 978-1-4673-5942-9**

Sustainable Engineering, Energy and Environment pp.

Titanium Disilicide as Hot Side Metallization Layer for Thermoelectric Generators <i>U. Hilleringmann, M. Schönhoff and F. Assion</i>	1-5
Negating temperature on photovoltaic panels <i>Ruaan Morné Schoeman, Arthur James Swart and Christo Pienaar</i>	6-10
Ensuring sustainability of PV systems for a given climate region in South Africa <i>James Swart, Ruaan Schoeman and Christo Pienaar</i>	11-15
Evaluating the effect of a stationary PV panel on the charging rate of Deep-Cycle Valve-Regulated Lead-Acid Batteries <i>Osamede Asowata, James Swart and Christo Pienaar</i>	16-21
Analysis of Effects of Sun`s Position in the Sky on Solar Radiation and Solar Panel Output Power <i>Moein Jazayeri, Sener Uysal and Kian Jazayeri</i>	22-28
Determination of Power Losses in Solar Panels Using Artificial Neural Network <i>Kian Jazayeri, Sener Uysal and Moein Jazayeri</i>	29-34
Dynamic Model of an Isolated Six-Phase Self-Excited Induction Generator driven by a Fixed Pitch Wind Turbine <i>A.Senthil Kumar, Josiah L Munda and G.K. Singh</i>	35-39
Planning and Management of Sustainable Microgrids: the test-bed facilities at the University of Genoa <i>Stefano Bracco, Federico Delfino, Fabio Pampararo, Michela Robba and Mansueto Rossi</i>	40-44
Graphical User Interface control for a solar /battery /hydrogen/ fuel cell power plant <i>Marius Viljoen and Christo Pienaar</i>	45-49
Simplified Encapsulation of Solar Cells Using Glass Fibre Reinforced Polymers <i>Warren S Hurter, Haydn du Plessis and Nickey Janse van Rensburg</i>	50-54
A Combined Energy System Model for Solar Racers <i>Stephanus Schoeman and Johnson Carroll</i>	55-59
Optimal Meter Commitment Solutions to CDMEnergy Efficiency Lighting Projects <i>Xianming Ye, Xiaohua Xia and Jiangfeng Zhang</i>	60-64
Interchangeable Energy Sources for Hybrid Vehicles <i>A. Corregedor, C. Murcott, K. Smith, J. Carroll and J. Meyer</i>	65-69
A Statistical Analysis of Cape Town Wind Profile <i>Mbuyamba Tshibanda and Jan-Harm C Pretorius</i>	70-74

Computation of the Mutual Inductance between Circular Filaments with Coil Misalignment <i>Anele O. Amos, Hamam Ykandar, Alayli Yasser and Djouani Karim</i>	75-79
Smart metering implementation for enabling Water Conservation and Water Demand Management <i>Obby A. Masia and Louwrence D. Erasmus</i>	80-84
Level of infrastructure maintenance management in utilities of the Southern African Power Pool <i>L. M. Moeko and J.K. Visser</i>	85-89
Impact of Renewable Energy Deployment on Climate Change in Nigeria <i>Ogbonnaya I. Okoro and E. Chikuni</i>	90-97
Survey on Mobile Phone Battery End-Life in Tanzania <i>Matti Tedre, Veronica Chuma and Mikko Apiola</i>	98-102
Evaluating and optimizing the potential of Photovoltaics in Mauritius <i>Yatindra Kumar Ramgolam, Dishan Sunnoo, Umangish Chumun</i>	103-107
Mapping of intense magnetic fields based on polarization sensitive reflectometry in single mode optical fibers <i>Andrea Galtarossa and Luca Palmieri</i>	108-112
Cost Effective Carbon Mitigation through Energy Efficiency: A Case for a University Student Residence Lighting in Cape Town <i>N. Tshikuvhe, M.Nthontho, S. P. Chowdhury and S. Chowdhury</i>	113-117
Effect of friction stir processing on the electrical resistivity of AA 6082 <i>Esther T. Akinlabi, Stephen A. Akinlabi and K. Surekha</i>	118-121
On the Adaptation of South Africa Experience to Combine Solar Energy and Smart Grid in Namibia <i>G. M'boungui, A. A. Jimoh and T.R. Ayodele</i>	122-126
Characterising Compact Fluorescent Lamp Population Decay <i>Herman Carstens, Xiaohua Xia, Jiangfeng Zhang and Xianming Ye</i>	127-131
Designing a model of a full control module for a camless engine employing rotary valves <i>Ishmael Zibani, Joseph Chuma and Rapelang Marumo</i>	132-136
Biodiesel Production from Used Cooking Oil Using Controlled Reactor Plant <i>Okoye, Ejike K, Edeh, Charles P.C., Ezumezu, Chinyere O. and Ejiogu and Emenike C</i>	137-140
SOGI based grid fault detection for feeding asymmetrical reactive currents to fulfill LVRT requirements <i>Andreas Uphues, Kilian Notzold, Ralf Wegener and Stefan Soter</i>	141-145

Assessing the energy savings potential in public buildings through retrofit measures in tropical climates – A case study in Mauritius <i>Oumesh Kumar Mohit and Vishwamitra Oree</i>	146-150
The Gamified Grid: Possibilities for Utilising Game-based Motivational Psychology to Empower the Smart Social Grid <i>Bradley Marques and Ken Nixon</i>	151-155
Analysis of energy performance of households using energy performance indicators – A case study in Mauritius <i>Yatindra Kumar Ramgolam and Anooj Needroo</i>	156-160
Effects of Tariffs and Energy Saving Schemes on Domestic Households Energy Consumption <i>T.A. Main and K. A. Folly</i>	161-165
Sustainable Green Broadband Solutions for Bridging the Digital Divide in Africa: A Technical survey of feasible and affordable broadband solutions for rural Africa <i>S. Mangeni, Hassan Hamdounm, K. Ennser, Y. K. Dwivedi and J. Mubiru</i>	166-170
Electricity Access in Nigeria: Viability of Off-Grid Photovoltaic System <i>Uduak S. Akpan, Salisu R. Isihak and Ye-Obong N. Udoakah</i>	171-178
Managing digital-system power at the system level <i>Dominik Macko and Katarína Jelemenská</i>	179-183
Harmonic Levels of Domestic and Electrical Vehicle Loads in Residential Distribution Networks <i>Jaan Niitsoo, Jako Kilter, Ivo Palu, Paul Taklaja and Lauri Kütt</i>	184-188
Social Influence and Energy Efficiency Savings <i>Uduakobong E. Ekpenyong, Jiangfeng Zhang and Xiaohua Xia</i>	189-192
Decision factors for locating in an automotive supplier park: A South African Case <i>Vimal Mammen and Jasper L. Steyn</i>	193-197
Strategic Planning of Power Supply in Oman Including Wind Energy Considerations <i>A.S. Malik and C. Kuba</i>	198-202

Communication Theory and Wireless Communications

Recursive MMSE-based Iterative Channel Estimation for OFDM-IDMA Systems <i>Olutayo O. Oyerinde, Member and Stanley H. Mnene</i>	203-207
Interpolation and Mapping of the Median K-factor for Terrestrial Link Applications in South Africa <i>A. M. Nyete and T.J.O Afullo</i>	208-211

The MAP in LC concept for MTR Decoding in Multiple-Head Magnetic Recording Systems <i>Nikola Djuric and Vojin Senk</i>	212-216
Rainfall Microstructures for Microwave and Millimeter Wave Link Budget at Tropical and Subtropical Sites <i>Akintunde A. Alonge and Thomas J. Afullo</i>	217-221
A 3:1 Bandwidth Planar, Lossless Cavity Backed Sinuous Antenna for Reflector Feed Applications <i>Ngoy Mutonkole and Dirk I. L. de Villiers</i>	222-226
Energy Efficient Distributed Receiver Based Cooperative MAC for Wireless Sensor Networks <i>Sithembiso Gama and Tom Walingo</i>	227-232
Polar Coded MQAM with No Noise Variance Estimation for Capacity and Soft Decision Metric <i>Peter Akuon, Hongjun Xu</i>	233-236
Low Phase Noise Cylindrical Cavity Oscillator <i>J. Maree, J. B. de Swardt and P. W. van der Walt</i>	237-241
Attenuation-Rain Rate Power-Law Relation and Critical Diameters from Drop Size Distribution Measurements in Durban <i>O. Adetan and Thomas J. Afullo</i>	242-246
Throughput Optimization MAC Scheme for Cognitive Radio Networks: A POMDP Framework <i>J. A. Msumba and H. Xu</i>	247-251
A Comparison of Spectrum Occupancy in the South African 900 MHz GSM Cellular Bands <i>S. D. Barnes and B. T. Maharaj</i>	252-256
Exponential TEM Horn with a Convex Triangular Arc <i>K. Schoeman, P. Meyer and D. I. L de Villiers</i>	257-261
Hardware Implementations of Gaussian Elimination over GF(2) for Channel Decoding Algorithms <i>Stefan Scholl, Christopher Stumm and Norbert When</i>	262-266
Design of RS232-powered controller for switched parasitic array antenna <i>Mofolo O. R. Mofolo and Albert A. Lysko</i>	267-271
Performance of a transmit diversity MIMO MC-CDMA communication system employing Cyclically Rotated Complete Complementary Codes <i>N. de Figueiredo, L. P. Linde and J. H. van Wyk</i>	272-276

Packet scheduling for VOIP over LTE-A <i>Ronnie Mugisha and Neco Ventura</i>	277-282
Measurement of Loss Mechanisms in Microwave Coaxial Resonator Filters <i>S. Maas, P. Meyer and P. W. Van der Walt</i>	283-285
Analog Signal Acquisition and Transmission within Extremely Low and Very Low Frequency Bands (ELF and VLF) <i>R. Rangata, K. Ouahada and S. Chinnappen</i>	286-288
A Novel Wireless Sensor Network Test Bed Sensor Node <i>Joubert G.J. Krige, Magdalena J. Grobler and Henri Marais</i>	289-293
Inter-Cell Interference-Coordination for Distributed MIMO-Systems based on Wideband Precoder Selection <i>Johannes Dommel, Martin Kurras and Lars Thiele</i>	294-298
Neural Network based efficiency optimization method for RF Power Amplifiers with controllable Power Supply <i>Patrick Jüschke, Andreas Pascht and Georg Fischer</i>	299-302
Modelling of an RFID-based Electronic Vehicle Identification System <i>H. Marais, M.J. Grobler and J.E.W. Holm</i>	303-307
Relay Selection Cooperative Diversity in Land Mobile Satellite Systems <i>Babatunde Awoyemi, Tom Walingo and Fambirai Takawira</i>	308-313
The Design of an HF Antenna on a 1U CubeSat <i>R. Lehmensiek, R. R. van Zyl and D. F. Visser</i>	314-317
Markov Modelling of In-Vehicle Power Line Communication <i>Mark Wilson, Hendrik Ferreiray and Reolyn Heymann</i>	318-323
Robust Behavioral Non Uniform Look-Up Table Spacing in Adaptive Digital Baseband Predistortion Technique for RF Power Amplifier <i>G. Coviello, F. Cannone, G. Avitabile</i>	324-328
Linear MMSE-based Frequency Synchronization Algorithm for OFDM-IDMA Systems <i>Muyiwa B. Balogun, Olutayo O. Oyerinde, Member and Stanley H. Mneney</i>	329-334
Joint Source Channel Decoding of Circular Non Binary Turbo Codes <i>Yogesh Beeharry, T. P. Fowdur, K. M. S. Soyjaudah</i>	335-339
Experimental evaluation of NFC reliability between an RFID tag and a smartphone <i>M. Mareli, S. Rimer, B.S. Paul, K. Ouahada and A. Pitsillides</i>	340-344

Orthogonal Receive Symbols at the Receiver for Fast-Fading Rayleigh Channels <i>Stephan Ludwig, Jens Borner and Berthold Lankl</i>	345-349
Novel Design of Tracking process for UWB Communication Systems <i>Rshdee Alhakim and Emmanuel Simeu</i>	350-354
Modified Backoff Technique with Transmission Priority Scheme in Fiber-Wireless Networks <i>Wan Hafiza Wan Hassan, Horace King, Shabbir Ahmed and Mike Faulkner</i>	355-358
Massive SDMA with Large Scale Antenna Systems in a Multi-Cell Environment <i>Martin Kurras, Leszek Raschkowski, Mostafa Talaat and Lars Thiele</i>	359-363
LDPC Coded Adaptive Multiresolution Modulation for Unequal Error Protection <i>K. Nuckchady and B. Rajkumarsingh</i>	364-368
WSN Lifetime Prolongation for Deterministic Distributions Using a Hierarchical Routing Protocol <i>Nora. A. Ali and Omar. A. Nasr</i>	369-373
Design and Realisation of an Efficient VLIC Architecture for a Linear Frequency Modulation (LFM) Pulse Compression in Pulsed Radars Using FPGA <i>A. E. El-Henaway, A. A. El-Kouny and H. A. Said</i>	374-380
Turbo codes and FSK in Power Line Communication <i>K. Z. Heetun and B. Rajkumarsingh</i>	381-386
Parallel Concatenation of Recursive Systematic Convolutional Codes with Transmission of Interleaved Set <i>Insah Bhurtah, Pierre Clarel Catherine and K. M. Sunjiv Soyjaudah</i>	387-391
Multiple Access with Distance Preserving Mappings for Permutation codes <i>Thokozani Shongwe, Theo G. Swart and Hendrik C. Ferreira</i>	392-396
Coordinated Multipoint Transmission for LTEAdvanced Networks in Dense Informal Settlements <i>Beneyam B. Haile, Edward Mutafungwa and Jyri Hämäläinen</i>	397-401
Comparative Analysis of Algorithms for Making Multiple-sessions Handover Decisions in Next Generation Wireless Networks <i>Olugbenga A. Taiwo and Olabisi E. Falowo</i>	402-407
60GHz delivery over SMF and MMF for In-door Applications <i>Uchenna.O. Igweani and H. S. Al-Raweshidy</i>	408-410
Mobile Device Localization in IEEE 802.11 Networks: A Comparative Analysis of SSDoA against TDoA <i>Geerish Suddul and Avinash Ramdoyal</i>	411-415

Joint Odd-Even Quantisation in Cartesian Delta-Sigma ($\Delta\Sigma$) Upconverters 416-419
Sirmayanti Sirmayanti, Vandana Bassoo and Mike Faulkner

Communications Network and Security

A Study of Resilience within Information Security in the Power Industry 420-425
Maria B. Line

Digital Forensic Readiness in a Cloud Environment 426-430
George Sibiya, Thomas Fogwill, H. S. Venter and Sipho Ngobeni

A Secure Management System for Vehicle Number Plates 431-438
Alwyn J. Hoffman, Daniel J. S. Geldenhuys and Albertus B. Pretorius

Birefringence and Polarization Fluctuations as a Result of Optical Fibre Bending During Scanning of a KAT-7 Riser Cable 439-443
H. Kourouma, E. Rotich, T. B. Gibbon, A. W. R. Leitch, R. Siebrits R. Julie and F. Kapp

Characterization of the Polarization Mode Dispersion of Single Mode Fibre in KAT-7 Telescope Array Network, South Africa 444-447
E. K. Rotich Kipnoo, H. Y. S. Kourouma, R. Julie, R. Siebrits and F. Kapp

The FIREMAN: Foraging-Inspired Energy Management in Multi-Radio Wi-Fi Networks 448-452
Thomas Otieno Olwal and Fisseha Mekuria

The eCOMBAT: Energy Consumption Monitoring Tool for Battery Powered Communication Device 453-457
Thomas Otieno Olwal, Litsietsi Montsi, Mofolo Mofolo and Fisseha Mekuria

Effects of Polarization Mode Dispersion (PMD) on Raman Gain and PMD Measurement using an Optical Fibre Raman Amplifier 458-462
D. Kiboi Boiyo, S. Kuja, D. Waswa, G. Amolo, R. R. G. Gamatham, E. K. Rotich Kipnoo, T. B. Gibbon and A. W. R. Leitch

Frequency Optimization for Narrowband Power-Line Communications 463-468
T. O. Sanya, T. G. Swart, and H. C. Ferreira

A Testbed Evaluation of Energy-Efficiency of Routing Protocols in Battery-Powered Wireless Mesh Networks 469-474
O. A. Oki, P. Mudali, M. B. Mutanga and M. O. Adigun

Fibre-to-the-Hut: Research into Tailored FTTH Solutions for Africa 475-479
Romeo Gamatham, Enoch Rotich, Andrew Leitch and Timothy Gibbon

A Clustering Algorithm based on Energy variance and coverage density in centralized hierarchical Wireless Sensor Networks 480-484
Rivo S. A. Randriatsiferana, Frederic Alicalapa, Richard Lorion and Aquil-Mirza Mohammedy

System Architecture for Ubiquitous Live Video Streaming in University Network Environment <i>Angeline G. Dlodla, Mncedisi J. Bembe, Badamsuren Byambaakhuu, Mohammed-Sani Abdulai and Jae Jeung Rho</i>	485-489
Cyber-Physical Systems Networking with TCP/IP <i>Miroslav Sveda and Radimir Vrba</i>	490-494
A Case for Packet-Switched Telecommunication Infrastructure for Low-Density Traffic Rural Areas <i>Kennedy Ifeh</i>	495-500
Evaluating ALWadHA for Providing Secure Localisation for Wireless Sensor Networks <i>Adnan M. Abu-Mahfouz and Gerhard P. Hancke</i>	501-505
Windows 8 32 bit - Improved Security? <i>Manuel Corregedor and Sebastiaan Von Solms</i>	506-510
A New Packet Scheduling Algorithm in Satellite LTE Networks <i>Gbolahan Aiyetoro, Giovanni Giambene and Fambirai Takawira</i>	511-516
Enabling Dynamic Spectrum Access through Location Aware Spectrum Databases <i>Luzango Mfupe, Listietsi Montsi, Mjumo Mzyece and Fisseha Mekuria</i>	517-522
An SSL-Based Client-Oriented Anti-Spoofing Email Application <i>D. Mooloo and T. P. Fowdur</i>	523-527
An Enhanced Mechanism for the Authentication of Students taking Online Exams <i>Roopesh Kevin Sungkur, Irma Beekoo and Dicshita Luveena Bhookhun</i>	528-532
Cloud Computing Authentication using Cancellable Biometrics <i>Krishnaraj Madhavjee Sunjiv Soyjaudah, Ganeswar Ramsawock and Muhammad Yaasir Khodabacchus</i>	533-536

Multimedia and Signal Processing

A Multi-GPU implementation of diffusion operators within 3D volumes <i>William John Shipman, André Leon Nely and Deshenthree Chetty</i>	537-542
Periodic Signal Frequency Tracking via a Shifted Second-Order Generalized Integrator <i>Giuseppe Fedele, Andrea Ferrise and Ciro Picardi</i>	543-547
Fast Technique for Mixed Gaussian and Impulsive Noise Suppression in Color Images <i>Bogdan Smolka and Krystyna Malik</i>	548-552

Generation of Panoramic View with Depth Cue using Image Convergence Technique <i>Abdulkadir Iyyaka Audu and Abdul Hamid Sadka</i>	553-558
New Current-Mode All-Pass Filter With Grounded Capacitor Based on Gain-Variable CCIII <i>Norbert Herencsar, Jaroslav Koton, Kamil Vrba and Oguzhan Cicekoglu</i>	559-562
Image Recovery by 2-D Least Mean Square Adaptive Method <i>P. Manyere and A. L. Nel</i>	563-569
Highly Parallel Implementation of Sphinx-3 Voice Recognition Algorithm <i>Dimitris Tsiamasiotis, Ioannis Papaefstathiou and Charalampos Manifavas</i>	570-576
Some Remarks on Choosing Video Stream Encoding for Remote Video Verification on Android Mobile Devices <i>Dariusz Mrozek, Bartłomiej Buk and Bożena Małysiak-Mrozek</i>	577-582
Effect of training algorithms on performance of a developed automatic modulation classification using artificial neural network <i>Jide Julius Popoola and Rex van Olst</i>	583-588
A Colour Image Watermarking Technique Resistant to Affine Geometric Attacks <i>Felix Owalla and Elijah Mwangi</i>	589-593
Comparison between General Cross Correlation and a Template matching scheme in the application of acoustic gunshot detection <i>J. F. van der Merwe and J. A. Jordaan</i>	594-598
Algorithms for Fast Calculation of Scalar Optical Diffraction Field on a Pixelated Display Device <i>G. Bora Esmer</i>	599-603
Spectrum Estimation using New Efficient 2-D AR Lattice Modeling of Random Fields <i>Erdogan Camcioglu and Ahmet H. Kayran</i>	604-609
Monitoring Respiration by Using Fiber-Optic Interferometry and Maximum A Posteriori Estimation <i>Damjan Zazula and Sebastijan Šprager</i>	610-614
An Unequal Error Protection Scheme for SPIHT Image Transmission with Prioritised Retransmissions and De-noising <i>T. P. Fowdur, D. Indoonundon and K. M. S. Soyjaudah</i>	615-619
SSVEP Enhancement Based on Canonical Correlation Analysis to Improve BCI Performances <i>Emmanuel Kalunga, Karim Djouani, Yskandar Hamam, Sylvain Chevallier and Eric Monacelli</i>	620-624

Cloud Computing, GRIDs and Virtualization

- Implementation and Verification of a Cloud-Based Machine-to-Machine Data Management System 625-629
Pieter Willem Jordaan and Johann Erich Wolfgang Holm
- A Technique for Load-Balanced Management of Security Tasks Load in Grids 630-634
Najlaa Al-Huwaishel and Soha S. Zaghloul
- A Comparative Analysis of Pricing Models for Enterprise Cloud Platforms 635-641
Promise Mvelase, George Sibiyi, Nomusa Dlodlo, John Oladosu and Matthew Adigun
- Partitioned Services Layer Autonomous System for Cloud Computing 642-645
Shahad Alqefari and Soha S. Zaghloul
- The Mutual Effect of Virtualization and Parallelism in a Cloud Environment 646-650
Soha S. Zaghloul
- New cloud consolidation architecture for electrical energy consumption management 651-653
N. MADANI, A. LEBBAT, S. TALLAL and H. MEDROMI

Mobile Computing and Geoprocessing Systems

- A combined GPS/Rfid system for improved cross-border management of freight consignments 654-661
Alwyn J Hoffman and Kabanda Lusanga and Ernest Bhero
- Compensating the Effect of Doppler Shift in a Vehicular Network 662-668
E. A Feukeu, K. Djouani and A. Kurien
- Geo-Based IPv6 Multicast in LTE for Dynamic Addressing of Road Users 669-672
C. Dannheim, M. Maeder and C. Icking
- Active Driving Safety Based On Efficient Mobile Technologies 673-678
C. Dannheim, M. Maeder and C. Icking
- A Pattern Based Tokenization Model for XML Parsing on Mobile Devices 679-683
Geerish Suddul, Nimal Nissanke and Nawaz Mohamudally
- An Open API to Monetize Mobile Micro-Services for Emerging Countries 684-687
Naveesh Doolhur, Geerish Suddul, Ravi Foogooa and Morgan Richomme

Scientific Computing and Computational Engineering

Continuous-Time Model Identification Using Non-Uniformly Sampled Data <i>Rolf Johansson, Marzia Cescon and Fredrik Stahl</i>	688-693
Development of a stereolithography (STL) slicing and G-Code generation algorithm for an entry level 3-D printer <i>Andrew C. Brown and Deon de Beer</i>	694-698
Simulating Quantum Circuits with GNU Octave and Python <i>Makhamisa Senekane, Lerato Mohapi and Francesco Petruccione</i>	699-702
Low Cost Fault Tolerant Techniques for Nano/Pico-Satellite Applications <i>P. J. Botma, W. H. Steyn and A. Barnard</i>	703-707
Shape-deformable Models for Computational Electromagnetic Dosimetry of a Human Body <i>Tomoaki Nagaoka</i>	708-711
Performance Evaluation of Wire Pairs in Telecommunications Networks by Fuzzy and Evolutionary Models <i>Ferenc Lilik and Laszlo T. Koczy</i>	712-716
Investigating Antenna Radiation Properties with Characteristic Mode Analysis <i>W. J. Strydom and M. M. Botha</i>	717-721
Integrating the dynamic MoM kernel with near-singularity cancellation quadrature schemes <i>M. M. Botha and W. J. Strydom</i>	722-724
Attitude Control of a CubeSat in a Circular Orbit using Reaction Wheels <i>Ajayi Michael Oluwatosin, Karim Djouani and Yskandar Hamam</i>	725-732
Attitude Control of a CubeSat in a Circular Orbit using Magnetic Actuators <i>Ajayi Michael Oluwatosin, Karim Djouani and Yskandar Hamam</i>	733-741
Exploiting Reversibility in the Complete Simulation of Reversible Circuits <i>Robert Wille, Simon Stelter and Rolf Drechsler</i>	742-747
A Compact and Efficient SAT Encoding for Quantum Circuits <i>Robert Wille, Nils Przigoda and Rolf Drechsler</i>	748-753
RHINO Cluster Control and Management System <i>Valerie Chiriseri, Simon Winberg and Shanly Rajan</i>	754-758
A Novel Highly Flexible Network Multi-Processor Optimised for Reconfigurable Devices <i>Grigoris Raptis, Ioannis Papaefstathiou, Konstantinos Georgopoulos and Charalampos Manifavas</i>	759-764

Electric power distribution system visualization with graph partitioning <i>Nemanja Kovacev, Imre Lendák, Darko Capko and Aleksandar Erdeljan</i>	765-770
Large-scale FDTD Analysis to Obtain Precise Propagation Characteristics of In-flight Wireless Access Service <i>Takashi Hikage, Toshio Nojima, Shunichi Futatsumori, Akiko Kohmura, and Naruto Yonemoto</i>	771-774
Theory of Adaptive Oscillators: Mathematical Principles and Background <i>Ajayi Michael Oluwatosin, Karim Djouani and Yskandar Hamam</i>	775-780
Finite State Representation of Reduplication Processes in Igbo <i>Olamma Iheanetu and Michael Adeyeye</i>	781-786
Improved LR Algorithm for Computation of the Approximate Symbolic Pole/Zero Expressions <i>Alexandru Gabriel Gheorghe, Florin Constantinescu and Miruna Nătescu</i>	787-790
A Flexible Algorithm for Solving Systems of Circuit Differential-Algebraic Equations With Integrated Fortran 95 Compiler for Modeling <i>Josef Dobes, Vaclav Panko, David Cerny and Jan Divin</i>	791-795
DE-Based PID Control of Full-Car Nonlinear, Servo-Hydraulic Suspension Systems <i>J. O. Pedro, M. Dangor, O. A. Dahunsi and M. M. Ali</i>	796-800
E-Learning and Educational Technology	
Predictable Patterns in Microtext as seen in Educational Applications using MXit in South Africa <i>L. L. Butgereit and R. A. Botha</i>	801-808
A SAT-based Approach to Solve the Faculty Course Scheduling Problem <i>Fadi Aloul, Imad Zabalawi and Ahmed Wasfy</i>	809-813
The Opportunities and Challenges in using Mobile Phones as learning tools for Higher Learning Students in the Developing Countries: Zanzibar Context <i>Haji Ali Haji, Abdalla Abu Shaame and Omar Haji Kombo</i>	814-818
Designing OLPC Learning Environments: A Case on 1:1 Pedagogy in Rural Tanzania <i>Saila Pakarinen, Mikko Apiola, Nella Moisseinen and Matti Tedre</i>	819-823
E-Learning and Educational Technology <i>Engr. John Funso-Adebayo</i>	824-828
Effects of Prior Learning on Mathematics Performance at Secondary Level <i>Perienen Appavoo, K. M. Sunjiv Soyjaudah and Vinaye Armoogum</i>	829-833

Pre-Adoption Motives for Successful eLearning: A Case Study of Socially Deprived Users in South Africa <i>Heiko Gewald and Olaf Jacob</i>	834-838
Engendering an e-safety awareness culture within the South African context <i>E. Kritzinger and K. Padayachee</i>	839-843
A Software Tool for the Administration of Final Year Engineering Projects <i>Magdadalena J. Grobler, Henri-Jean Marais and Melanie Delpont</i>	844-849
Readiness of mathematics' educators to incorporate ICT as a teaching tool in Mauritius <i>Perienen Appavoo, K. M. Sunjiv Soyjaudah and Vinaye Armoogum</i>	850-854
Engaging the Student: Programming Solving Real-Life Problems <i>R. C. Aylward</i>	855-859
Extensible Framework for Graphical Representation of HDL Models and Simulation Results <i>Katarína Jelemenská, Martin Hyben, Tomáš Jančiga, Martin Kardoš, Ľubomír Maron and Zsolt Süll</i>	860-864
Working Practices in One-to-one Computing: a Rural Tanzanian Case <i>Mikko Apiola, Salla Pakarinen and Matti Tedre</i>	865-869
Software System for Expert Systems Learning <i>Drazen Draskovic and Bosko Nikolic</i>	870-875
Assessing the technological and pedagogical supports of distance education institutions in Mauritius <i>Havisha Vaghjee and Shireen Panchoo</i>	876-882
Instrumentation and Control	
A small-plant PID temperature controller for thermoluminescence measurement <i>R. O. Ocaya and M. Mbongo</i>	883-886
Decentralized Adaptive Robust Controllers with Simpler Structure of Uncertain Large Scale Nonlinear Interconnected Systems □ <i>Hansheng Wu and Mingcong Deng</i>	887-891
Reactive Sub-nanometer Displacement Sensors: Advantages and Limitations <i>Stoyan Nihtianov</i>	892-895
Layout-to-Schematic as a Step Towards Layout-Versus-Schematic Verification of SFQ Integrated Circuit Layouts <i>Rebecca M. C. Roberts and Coenrad J. Fourie</i>	898-902

Assessment of Daily Exposure in the Broadband Continuous Monitoring System – SEMONT <i>Nikola Djuric and Dragan Kljajic</i>	903-907
Implementation of an unshielded SQUID as a geomagnetic sensor <i>Lucas J. Janse van Vuuren, Anton Kilian, Temwani-Joshua Phiri, Coenrad J. Fourie, Elisabeth Pozzo di Borgo, Pascal Febvre, Elda F. Saunderson, Emile T. Lochner and Daniel J. Gouws</i>	908-912
HIL Real-Time Simulation of a Digital Fractional Order PI Controller for Time Delay Processes <i>Cristina I. Muresan, Roxana Both, Eva H. Dulf, Adrian Neaga and Clara Ionescu</i>	913-917
Identification of acoustic spectra for fault detection in induction motors <i>Huseyin Akcay and Emin Germen</i>	918-922
Impulsive observer-based control for linear systems using irregularly sampled measurements <i>Y. Khaled, J. P. Barbot, K. Busawon and D. Benmerzouk</i>	923-927
Artificial Intelligent-Based Feedforward Optimized PID Wheel Slip Controller <i>Samuel John</i>	928-933
A New Fast Tracking Resolver for Mechanical Angle Measurement <i>Mohieddine Benammar and Antonio S. P. Gonzales Jr.</i>	934-937
Connecting Industrial Automation Software to a Discrete Manufacturing Plant Model for Research and Education <i>Kaylin Phillips, Bartek Gruszka, Johnson Carroll, Margret Bauer and Oomesh Maharaj</i>	938-942
Ethernet based Industry Automation using FPGA <i>Anish N. K., Kowshick B. and S. Moorthi</i>	943-946
Intelligent Location Identification and Passenger-Alert System in Indian Railways using GPS Receiver <i>Anish N. K. and S. Moorthi</i>	947-951
Chaos Synchronization on Visible Light Communication with Application for Secure Data Communications <i>Pep Canyelles-Pericas, Andrew Burton, Hoa Le-Minh, Zabih Ghassemlooy and Krishna Busawon</i>	952-956
An Overview of Aerial Refueling Control Systems applied to UAVs <i>Aarti Panday and Jimoh O. Pedro</i>	957-961

Nanotechnology, Materials and Structures

- The Future of Nanoelectronics is Black: From Silicon to Hexagonal Carbon 962-966
Udo Schwalke
- A Simple Microwave Plasma-Enhanced Chemical Vapour Deposition System for the Production of Carbon Nanotubes 967-970
Roland D. Harrison, A. L. Leigh Jarvis and S. Sergio Babet
- A DSP-Enhanced AC Susceptometer for Characterisation of Superconductors 971-975
S. Sergio Babet and A. L. Leigh Jarvis

Power Electronics and Power Systems

- Modelling and Simulation of Adaptive Frequency Relaying for Distributed Generation 976-980
C. Buque, S. Chowdhury and S. P. Chowdhury
- Investigation of Influence of Parasitic Impedances on Demagnetization Process in DC-DC Forward Converter with High Transformation Ratio 981-985
D. Habumugisha, S. Chowdhury and S. P. Chowdhury
- The Efficiency in interleaved structures based on VSI topologies 986-990
Fioretto M., Rubino G., Rubino L., Serbia N., Ladoux P. and Marino P.
- Modeling and Control of the Offshore wind energy system based on 5MW DFIG connected to grid 991-995
M. S. Camara, M. B. Camara, B. Dakyo and H. Gualous
- Energetic capability characterization for the tidal turbine farm implementation 996-1000
Mamadou Oury Fatoumata DIALLO, Slamani YOUSSEF, Jérôme THIEBOT, Hamid GUALOUS, Mamadou Bailo CAMARA and Brayima DAKYO
- Energy Saving Position Control Algorithm for PMSM Drives with Quadratic Friction 1001-1006
Jan Vittek, Peter Bris, Zdeno Biel and Michal Hrkel
- Wireless Circulating Current Control for Parallel Connected Photovoltaic Inverters 1007-1010
Mikko Purhonen, Tatu Musikka, Juhamatti Korhonen, Pertti Silventoinen and Tero Viitanen
- Low Power Very High Frequency Resonant Converter with High Step Down Ratio 1011-1016
Mickey Madsen, Arnold Knott and Michael A. E. Andersen
- High Frequency Inverter for Resistance Spot Welding Applications with Increased Power Cycling Capability 1017-1023
Martin Wagner and Steffen Bernet

Reliability Evaluation of Distribution Networks Using NEPLAN & DIgSILENT PowerFactory <i>O. K. P. Mokoka and K. O. Awodele</i>	1024-1028
On the Usability of RC Filters for the Limitation of Distorting Regimes Induced by Controlled Rectifiers <i>Petre Marian NICOLAE, Marian Ștefan NICOLAE and Ileana Diana NICOLAE</i>	1029-1033
Decomposed Model Predictive Control for Economic Dispatch Problems <i>Zhou Wu, Xiaohua Xia and Jiangfeng Zhang</i>	1034-1038
Computer aided design and complex power control effectiveness of large scale photovoltaic system integrated into a grid <i>Ahmed Bagre, Djamel Ikni, Brayima Dakyo and Yao Azoumah</i>	1039-1043
Integrated Analysis of Network and Protection System in Future Grids <i>Fuchs Jochen and Jaeger Johann</i>	1044-1048
Coordinated In-home Charging of Plug-in Electric Vehicles from a Household Smart Microgrid <i>Anastasia Davydova, Roustiam Chakirov, Yuriy Vagapov, Taras Komenda and Sergey Lupin</i>	1049-1052
High Power Electrical Systems Design for a Solar Car Designing and building the solar car Ilangal.I <i>David Menasce, Michael Grobler and Pieter Janse van Rensburg</i>	1053-1057
Optimizing DC-Resistance of a Foil Wounded Toroidal Inductor Combining Matlab and Comsol <i>Henrik Schneider, Thomas Andersen, Arnold Knott and Michael A. E. Andersen</i>	1058-1062
Space Vector Model of A Three-Phase to Five-Phase AC/AC Converter <i>Khaliqur Rahman, Atif Iqbal and Rashid Al-ammari</i>	1063-1068
High Frequency Transformer with Synchronous Rectifier for Resistance Spot Welding <i>Martin Wagner, Steffen Bernet and Stefan Kolb</i>	1069-1074
Proof-of-Concept Residential Load Control System Using Wireless Technologies and Smart Metering Techniques <i>Craig A. MacDonald and Kehinde O. Awodele</i>	1075-1079
Comparison of Distributed and Lumped Parameters Stray Current Models <i>F. Fichera, A. Mariscotti, A. Ogunsola and L. Sandrolini</i>	1080-1084
High Force Tubular Linear Actuator with Integrated Eddy Current Brake for Spring-loaded Systems <i>Sebastian Gruber, Benjamin Kruger and Stefan Soter</i>	1085-1089

FPGA Based Control Scheme for a Single-Stage Grid-Connected Solar Photovoltaic System <i>Anish N. K., Murali Chakravarthi, B. Dastagiri Reddy, S. Moorthi and M. P. Selvan</i>	1090-1093
Neural Networks For designing an Automatic Voltage Regulator of a Synchronous Generator <i>Luyolo N. Magangane and Komla A. Folly</i>	1094-1098
Design of a contactless battery charging system <i>Mude Kishore Naik, Manuele Bertoluzzo and Giuseppe Buja</i>	1099-1105
Demand response program implementation in an energy district of domestic prosumers <i>D. Menniti, A. Burgio, Member, A. Pinnarelli, G. Brusco and N. Sorrentino</i>	1105-1111
Design of a grid-connected Photovoltaic system with grid ancillary services <i>A. Burgio, D. Menniti, G. Brusco, A. Pinnarelli and N. Sorrentino</i>	1112-1118
Optimization Models for Conductor Size Selection in Single Wire Earth Return Distribution Networks <i>Geofrey Bakkabulindi, Mohammad R. Hesamzadeh and Izael P. Da Silva</i>	1119-1123
Magnetic Properties of Reduced Dy NdFeB Permanent Magnets and Their Usage in Electrical Machines <i>Toomas Vaimann, Ants Kallaste, Aleksander Kilk and Anouar Belahcen</i>	1124-1128
Improved High Bandwidth Current Controller for FPGA Based Inverter Drives <i>Florian Senicar, Alexander Bartsch, Karsten Klitzke and Stefan Soter</i>	1129-1133
A Modern Self-Defined Extinction Advance Angle Controller for CCC based Hybrid HVDC Systems <i>M. Venkata Kirthiga and M. Rajasekaran</i>	1134-1138
A Case Study for Controlled Islanding based on Line Contingency Ranking in Autonomous Micro-grids <i>M. Venkata Kirthiga and Pramodkumar Muppiddi</i>	1139-1143
Effects of slot opening on the performance of a six phase squirrel cage induction machine using Finite Element and Field Analysis <i>E. K. Appiah, A. A. Jimoh, G. M'boungui and J. L. Munda</i>	1144-1148
A Fuzzy-Controlled Active Power Factor Correction and Voltage Regulation Scheme <i>M. I. Jahmeerbacus and M. S. Imrit</i>	1149-1154
Stability improvement of a HVDC transmission link between weak AC systems by Multi-terminal scheme <i>A. F. Nnachi, J. L. Munda, D. V. Nicolae and A. Mpanda Mabwe</i>	1155-1160

A Study on Relay Coordination in a Distribution System with Distributed Generation and Hybrid SFCL 1161-1166
Shashank Kumar De and P. Raja

Business Informatics, Software Engineering and Web Services

Determining the Signalling Overhead of two common WebRTC methods: JSON via XMLHttpRequest and SIP over WebSocket 1167-1171
Michael Adeyeye, Ishmeal Makitla and Thomas Fogwill

Modeling Software Engineering Projects as a Business: A Business Intelligence Perspective 1172-1176
Robert T. Hans and Ernest Mnkandla

A Case Study in Automated GUI Generation for Multiple Devices 1177-1182
David Raneburger, Roman Popp, Barbara Weixelbaumer, Nicole Mirnig and Brigitte Ratzer

Target Tracking Using Multiple Classifier Systems and Statistical Process Control 1183-1188
Motena Mapesela and Bhekisipho Twala

Formal Verification and Validation of DEVS Simulation Models 1189-1194
Soremekun Ezekiel Olamide and Traoré Mamadou Kaba

Pre-fetching Techniques for Effective Web Latency Reduction - A Survey 1195-1200
N. Nandin, H. K. Yogish and G. T. Raju

PWTool, A Novel Automated Tool for Pairwise Testing 1201-1205
Roopesh Kevin SUNGKUR and Hanaa MUHAMODSAROAR

Artificial Intelligence and Robotics

Experimental validation of tip over stability of a tracked mobile manipulator 1206-1211
Chioniso Dube

An Overview and Comparison of Upper Limb Prosthetics 1212-1219
Drew van der Riet, Riaan Stopforth, Glen Bright and Olaf Diegel

Probabilistic Object and Viewpoint Models for Active Object Recognition 1220-1226
Natasha Govender, Jonathan Warrell, Philip Torr and Fred Nicolls

Traversability Analysis for a Mine Safety Inspection Robot 1227-1232
Fred Senekal

Comparison of active SIFT-based 3D object recognition algorithms 1233-1237
Mogomotsi Keaikitse, Natasha Govender and Jonathan Warrell

The Development of a Remote Controlled, Omnidirectional Six Legged Walker with Feedback <i>Tracy Booyesen and Stephen Marais</i>	1238-1242
Self-collision avoidance for humanoids using circular and elliptical capsule bounding volumes <i>Chioniso Dube</i>	1243-1248
Human Recognition based on Occulo-motion Characteristics <i>Bipin Tripathi, Vivek Srivastava and Vinay Pathak</i>	1249-1253
Ensemble Multisensor Data Using State-of-the-Art Classification Methods <i>Bhekisipho Twala and Fisseha Mekuria</i>	1254-1259
Design and Implementation of a Locally Sourced Robotic Arm <i>Simeon OluwaFunmilore ADEBOLA</i>	1260-1263
Weighted Least Squares and Iteratively Reweighted Least Squares Comparison using Particle Swarm Optimization Algorithm in Solving Power System State Estimation <i>D. H. Tungadio, B. P. Numbi, M. W. Siti and J. A. Jordaan</i>	1264-1269
Belief-node Condensation for Online POMDP Algorithms <i>Gavin Rens and Alexander Ferrein</i>	1270-1274
CSIR Center for Mining Innovation and the Simulated Test Stope <i>Ruth Teleka, Jeremy Green and John Dickens</i>	1275-1280
A Proposal for RoboCupJunior in Africa: Promoting Educational Experience with Robotics <i>Amy Eguchi and Luis Almeida</i>	1281-1286
Trajectory Control of a Two-Link Robot Manipulator in the Presence of Gravity and Friction <i>Markus E, Didam, John T. Agee and Adisa A. Jimoh</i>	1287-1291

URSI-BEJ

A Large Ultra-long Wavelength Radio Astronomy Instrument in Space [Abstract only] <i>Mark Bentum</i>	N/A
From tape reel to intercontinental lightpaths: technical developments in the EVN <i>Arpad Szomoru and Michael Lindqvist</i>	1293-1296
RFI Assessment of Photovoltaic Modules for Radio Astronomy Applications Hall [Abstract only] <i>Franz Schlagenhauser, Budi Juswardi and Peter Hall</i>	N/A

The Concept of the SEMONT Monitoring System and its Influence on the EM Pollution Protection <i>Nikola Djuric, Dragan Kljajic, Karolina Kasas-Lazetic, Miodrag Milutinov, Miroslav Prsa, Vera Bajovic, Neda Pekaric-Nadj and Vladimir Milosevic</i>	1298-1302
VLBI science in the EVN, now and in the future [Abstract only] <i>Michael Lindqvist and Arpad Szomoru</i>	N/A
Considerations for the Optimal Radio Astronomy Site: Featuring the Square Kilometre Array as an example <i>Rob Millenaar</i>	1304-1308
Computing Cost of Sensitivity and Survey Speed for Aperture Array and Phased Array Feed Systems <i>Stefan J. Wijnholds and Rik Jongerius</i>	1309-1312
Towards an optics design for the SKA <i>I. P. Theron, R. Lehmensiek and D. I. L. de Villiers</i>	1313-1317
Aperture Arrays for the Square Kilometre Array [Abstract only] <i>Jan Geralt Bij de Vaate, Andrew Faulkner, Andre Gunst and Peter Hall</i>	N/A
An Overview of the MITRA Radio Telescope Signal Chain <i>Dominique G. K. Ingala and Stuart D. MacPherson</i>	1319-1323
Design, Environmental and Sustainability Constraints of new African Observatories: The example of the MRAO [Abstract only] <i>Claudio Paulo, Domingos Barbosa, Valerio Ribeiro, Anita Loots, Venkatasubramani Thondikulam, Michael Gaylard, Miguel Bergano and José Amador</i>	1324-1324
Performance limits of future instruments and surveys: ghosts, surprises and simulations [Abstract only] <i>Oleg Smirnov</i>	N/A
Radio Astronomy transformed, Aperture Arrays – Past, Present and Future <i>Michael A. Garrett</i>	1326-1330
Multifrequency Interferometry Telescope for Radio Astronomy (MITRA): Science and Technology <i>Girish Kumar Beeharry, Stuart David MacPherson and Gary Peter Janse Van Vuuren</i>	1331-1333
New Robust Approaches to Designing Large Radio Research Instruments [Abstract only] <i>Howard C. Reader</i>	1334-1334

Some Reflector and Feed Antenna Inventions that Made a Difference:
Fundamentals and examples from radio telescopes, satellite communications and
radio links 1335-1337
Per-Simon Kildal

Statistical Study of the Dependence of Tropospheric Refractive Index on Different
Weather Vagaries 1338-1341
Ayantunji B. G. and Umeh M. C.

Additonal Papers

Manage Your Energy, Not Your Time 1342-1343
Tony Schwartz, Catherine McCarthy

A Hybrid DCT-SVD Based Robust Watermarking Scheme For
Copyright Protection 1344-1348
Priyanka Singh, Suneeta, Agarwal

Connectivism: A Learning Theory And Pedagogical Approach For e-
and m-Learning 1349-1353
P.W. Conradie

Developments Of Optimal Higher Order Multipoint Methods Using
Weight Functions And Their Applications In Ocean Acidification 1354-1357
D.K.R. Babajee

The SUMO Toolbox: A Tool For Automatic Regression Modeling And
Active Learning 1358-1361
*Ivo Couckuyt, Dirk Gorissen, Karel Crombecq, Dirk Deschrijver, Tom
Dhaene*

Entry-Level Additive Manufacturing: Comparing Geometric
Complexity To High-Level Machines 1362-1366
M. S. Lotz, HCvZ Pienaar, D.J. De Beer

Embedded Vision-Based Monte-Carlo Robot Localisation Without
Additional Sensors 1367-1372
Sven Olufs, Markus Vincze

Towards A Channel-Agnostic Mobile Transaction Platform To
Support Drug Adherence Within A Resource Constrained
Environment 1373-1377
M. Koedderitzsh, A. Botha, M. Herselman, A. Coleman

A Quantitative Study Of The Optimal Control Model For An Electric
Power Generating System 1378-1381
Y. Aderinto, O. Bamigbola

Performance Enhancement Of Pragmatic General Multicast (PGM)
Protocol Using A Local Loss Recovery Strategy 1382-1387
T. Shome, S. Gupta

An Efficient Median Filter In A Robot Sensor Soft IP - Core <i>Liberty Mutaaranwa, Magripa Nleya</i>	1388-1392
Cloud Resource Management - Virtual Machines Competing For Limited Resources <i>Aaron Blojay Grant, Opeoluwa Tosin Eluwole</i>	1393-1399
Factors Affecting E-Learning Implementation In Southern Africa <i>D. L. Owuor, P. O. Kogeda, A. O. Anele, S. O. Osuri</i>	1400-1404
Performance Improvements Of OFDM Based Simple Cooperative Relaying With Virtual OSTBC <i>Ugljesa Urosevic, Z. Veljovic, Milica Pejanovic-Djurisic</i>	1405-1409
Engineered Transitions In Molecule - A Photonic System <i>Ali W. Elshaari, Stefan F. Preble</i>	1410-1413
Segmentation Of Sputum Color Image For Lung Cancer Diagnosis Based On Mean Shift Algorithm <i>Fatma Taher, Naoufel Werghi, Hussain Al-Ahmad</i>	1414-1419
Designing An Off-Grid PV System For A Residential Consumer In Mashhad-Iran <i>Morteza Khatami, Hashem Mortazavi, Mostafa Rajabi Mashhadi, Mahdi Oloomi</i>	1420-1424
Multi-Tenant SaaS Cloud <i>Gurudatt Kulkarni, Prasad Khatawkar, Rupali Shelke, Vikas Solanke, Rani Waghmare</i>	1425-1428
Simulation And dSPACE Hardware Implementation Of The MPPT Techniques Using Buck Boost Converter <i>Abdullah M. Noman, Khaled E. Addoweesh, Hussein M. Mashaly</i>	1429-1437
An Intelligent FLC Method For Tracking The Maximum Power Of Photovoltaic Systems <i>Abdullah M. Noman, Khaled E. Addoweesh, Hussein M. Mashaly</i>	1438-1445
Fuzzy Set Classification Of HV Electrical Grid Noise For Smart System Management By Powerline Communication <i>S. Barmada, M. Raugi</i>	1446-1449
Implementing A Municipal Metropolitan Area Network In Africa <i>Sybrand Brink, Leon Van Wyk, Riaan Wolhuter</i>	1450-1454

Security Analysis Of Electric Power Supply In SADC Region <i>Stacey Juliana Mwale, Innocent Ewean Davidson</i>	1455-1460
Clustering Of Preprocessed Web Usage Data Using ART1 Neural Network And Comparative Analysis Of ART1, K-Means And SOM Clustering Techniques <i>H. K. Yogish, G. T. Raju</i>	1461-1466
Abrasive Wear Behavior Of Natural Fiber Reinforced Polymer Composite <i>Punyapriya Mishra, S.K. Acharya</i>	1467-1471
Characterization Of Medical Images Using Edge Density <i>N. Rajaram, S. Viriri</i>	1472-1477
Robust Real-Time Face Recognition <i>B. Lagerwall, S. Viriri</i>	1478-1482
Vibration And Noise Analyses Of Canned Switched Reluctance Machines With Different Winding Topologies <i>Christian Laudensack, Dieter Gerling</i>	1483-1487
Smart Grids Instrumentation - Obtaining Subgrid Impedance Information <i>Z. Staroszczyk</i>	1488-1493
Selected Aspects Of Large Scale, Wireless, Distributed Measurement System For Water Quality Monitoring <i>Andrzej Michalski, Bogdan Dziadak, Andrzej Kalicki, Lukasz Makowski, Zbigniew Staroszczyk</i>	1494-1498
A Collaborative Intrusion Detection And Prevention System In Cloud Computing <i>Mohamed Hassani, Adil Lebbat, Saida, Tallal, Hicham Medromi</i>	1499-1503
An Attitude Control System For The Deployment And Stabilisation Of A Tethered Dual CubeSat Mission <i>Mike-Alec Kearney, Willem H. Steyn</i>	1504-1508

Investigation On The Interfering Effect Of Feeding Network On The Performance Of A Beamforming Antenna Array <i>Samuel Ajiboye, Yi Wang</i>	1509-1512
Efficient Encoding Of Customer Class Load Profiles <i>Sandor F. Beretka, Ervin D. Varga</i>	1513-1517
Performance Improvement Of Two Hop Decode-And-Forward Relay Systems Using Dual Polarized Antenna <i>Maja Ilic-Delibasic, Milica Pejanovic-Djurisic</i>	1518-1522
Analysis Of WRR Scheduling Algorithm Frame Size Impact On CQ Switch Performance <i>Igor Radusinovic, Milutin Radonjic, Milica Pejanovic Djurisic</i>	1523-1527
Data Mining On Semantic Datasets <i>Manuella Kadar, Maria Muntean</i>	1528-1532
Multimodel Modeling Of Double Fed Induction Motor <i>Aicha Abid, Lassaad Sbita</i>	1533-1540
Optimization Of Copper Indium Gallium Di-Selenide (CIGS) Based Solar Cells By Back Grading <i>Soumaila Ouedraogo, Raguilignaba Sam, Francois Ouedraogo, Marcel Bawindsom Kebre, Francois Zougmore, Jean-Marie Ndjaka</i>	1541-1546
Developments Of Optimal Higher Order Multipoint Methods Using Weight Functions And Their Applications In Ocean Acidification <i>D.K.R. Babajee</i>	1547-1550