

Contents

1	Tidal Current Turbine, Wind Turbine and Their Dynamic Modelling	1
	Hamed H. H. Aly and M. E. El-Hawary	
2	Practical Approach in Design of HVAC Systems Utilizing Geothermal Energy	15
	M. Fathizadeh and D. Seims	
3	Efficiency Analysis of Submersible Induction Motor with Broken Rotor Bar	27
	Hayri Arabaci and Osman Bilgin	
4	Analysis of a Multilevel Inverter Topology with Reduced Number of Switches	41
	Hulusi Karaca	
5	Comparison of PWM Techniques for Back to Back Converters in PSCAD	55
	Agustina Hernandez, Ruben Tapia, Omar Aguilar and Abel Garcia	
6	Robust Control Strategy for a WECS Based at PMSG	67
	Omar Aguilar Mejía and Ruben Tapia Olvera	
7	Optimum APC Placement and Sizing in Radial Distribution Systems Using Discrete Firefly Algorithm for Power Quality Improvement	83
	Masoud Farhoodnea, Azah Mohamed and Hussain Shareef	
8	Evaluation of Water Consumption and Neuro-Fuzzy Model of the Detergent Leavings Kinetics' Removal in a Clean in Place System	97
	Rodrigo Sislian, Valdir M. Júnior, Leo Kunigk, Sérgio R. Augusto, Ricardo A. Malagoni, Ubirajara C. Filho and Rubens Gedraite	

9	In Situ Photocatalytic Reduction for Contaminated Soil with Hexavalent Chromium by Titanium Dioxide	107
	A. López-Vásquez, N. Ramirez and R. López-Vásquez	
10	An Improved Cross-Correlation Velocity Measurement Method Based on Fraction Delay Estimation	121
	Xinggan Zhang, Yechao Bai and Xiaoli Chen	
11	A New Common Subexpression Elimination Algorithm for Constant Matrix Multiplications Over Binary Field	131
	Ning Wu, Xiaoqiang Zhang, Yunfei Ye and Lidong Lan	
12	Accuracy Enhancement of a SHM System by Light Scanning Sensor Improvement	147
	Wendy Flores-Fuentes, Moises Rivas-López, Oleg Sergiyenko, Julio C. Rodriguez-Quinonez, Daniel Hernandez-Balbuena and Javier Rivera-Castillo	
13	A Metric Suite for Predicting Software Maintainability in Data Intensive Applications	161
	Ruchika Malhotra and Anuradha Chug	
14	High-Assurance Cryptography for Web-Based Enterprises	177
	William R. Simpson and Coimbatore Chandrasekaran	
15	Algorithm Based Partial Reconfiguration with Application on Matrix Inverse Computations.	193
	Etienne Aubin Mbe Mbock	
16	Algorithmic Analysis of the Pseudoanalytic Cryptographic Algorithm	207
	Ariana Guadalupe Bucio Ramirez, Cesar Marco Antonio Robles Gonzalez, Marco Pedro Ramirez Tachiquin and Rogelio Adrian Hernandez Becerril	
17	Toward Modeling Emotion Elicitation Processes Using Fuzzy Appraisal Approach	213
	Ahmad Soleimani and Ziad Kobti	
18	A Graph-Based Model for Quadratic Separable Programs and Its Decentralization	229
	Jaime Cerda, Alberto Avalos and Mario Graff	

19	Predicting Congestions in a Ship Fire Evacuation: A Dynamic Bayesian Networks Simulation	247
	Parvaneh Sarshar, Jaziar Radianti and Jose J. Gonzalez	
20	An Intelligent Composition Algorithm for Automatic Thematic Music Generation from Extant Pieces	261
	Abhijit Suprem and Manjit Ruprem	
21	On Combining Boosting with Rule-Induction for Automated Fruit Grading	275
	Teo Susnjak, Andre Barczak and Napoleon Reyes	
22	Fuzzy Logic Modeling for Higher Adhesion Strength of Cr/Cr-N Multilayer Thin Film Coating on Aerospace AL7075-T6 Alloy for Higher Fretting Fatigue Life	291
	Erfan Zalnezhad and Ahmed Aly Diao Mohammed Sarhan	
23	Measuring the Usability of the Interface of the Saudi Digital Library	305
	Abdulrahman Nasser Alasem	
24	Predictive Models for Undergraduate Student Retention Using Machine Learning Algorithms	315
	Ji-Wu Jia and Manohar Mareboyana	
25	Mobile Adaptive Tutoring System with Formative Assessment . . .	331
	Hisashi Yokota	
26	A Mentorship Framework for WIL in Software Development . . .	343
	Mosima Anna Masethe and Hlaudi Daniel Masethe	
27	CLAHE Inspired Segmentation of Dermoscopic Images Using Mixture of Methods	355
	Damilola A. Okuboyejo, Oludayo O. Olugbara and Solomon A. Odunaike	
28	ISAR Imaging for Moving Targets with Large Rotational Angle	367
	Jinjin Zhang, Xinggan Zhang and Yechao Bai	
29	Analysis of Acoustic Signal Based on Modified Ensemble Empirical Mode Decomposition	377
	Sundeok Kwon and Sangjin Cho	

30	High Precision Numerical Implementation of Bandlimited Signal Extrapolation Using Prolate Spheroidal Wave Functions	387
	Amal Devasia and Michael Cada	
31	Path Loss Prediction in Relay Station Environment.	403
	Masoud Hamid and Ivica Kostanic	
32	System Integration of a Home Network System with a Narrowband Power Line Communication Method and a Voice Recognition Command Controller	417
	Lee Kyung Mog	
33	A New Non-stationary Channel Model Based on Drifted Brownian Random Paths	429
	Alireza Borhani and Matthias Pätzold	
34	On the Performance of MU SIMO/MIMO UWB Communication Systems Applying Time-Reversal Technique	445
	Vu Tran-Ha, Duc-Dung Tran, Dac-Binh Ha and Een-Kee Hong	
35	Efficient Bandwidth Allocation Methods in Upstream EPON	459
	S. K. Sadon, N. M. Din, N. A. Radzi, Mashkuri Bin Yaacob, Martin Maier and M. H. Al-Mansoori	
36	Soft Tissue Characterisation Using a Force Feedback-Enabled Instrument for Robotic Assisted Minimally Invasive Surgery Systems.	473
	Mohsen Moradi Dalvand, Bijan Shirinzadeh, Saeid Nahavandi, Fatemeh Karimirad and Julian Smith	
37	Perception and Trust Towards a Lifelike Android Robot in Japan.	485
	Kerstin Sophie Haring, Yoshio Matsumoto and Katsumi Watanabe	
38	A Wearable Walking-Aid System for Visual-Impaired People Based on Monocular Top-View Transform	499
	Qing Lin and Youngjoon Han	
39	Design and Characterization of a Model Fatigue Testing Machine for Academic Laboratories	515
	Austin Ikechukwu Gbasouzor, Clementina Ogochukwu Okeke and Lazarus Onyebuchi Chima	

40	The 2007–2009 Financial Crisis and Credit Derivatives	533
	Mmboniseni Mulaudzi, Mark Petersen and Janine Mukuddem-Petersen	
41	Research Studies on Irreversible Relative Movements (Creeping) in Rolling Bearing Seats Regarding the Influential Parameters and the Remedies	549
	Erhard Leidich and Andreas Maiwald	
42	Erlang Distribution and Exponential Distribution Models in Wireless Networks	563
	Lela Mirtskhulava, Giorgi Gugunashvili and Mzia Kiknadze	
43	On the Numerical Solution of Multi-dimensional Diffusion Equation with Non Local Conditions	579
	Ahmed Cheniguel	
44	Parameter Identification for Population Equations Modeling Erythropoiesis	599
	Doris H. Fuertinger and F. Kappel	
45	Design Support System of Fishing Vessel Through Simulation Approach	615
	Stefano Filippi, Piero Giribone, Roberto Revetria, Alessandro Testa, Guido Guizzi and Elpidio Romano	
46	Fuzzy Controller Design for an FCC Unit	631
	Hossein Tootoonchy and Hassan H. Hashemi	
47	A Cost-Criticality Based (Max, +) Optimization Model for Operations Scheduling	645
	Karla Quintero, Eric Niel, José Aguilar and Laurent Piétrac	
48	Detailed Analysis of Deformation Behavior of Plexiform Bone Using Small Specimen Testing and Finite Element Simulation	661
	Nitin Kumar Sharma, Swati Sharma, Daya K. Sehgal and Rama Kant Pandey	
49	Factors Affecting the Intention to Leave Among White-Collar Employees in Turkey	675
	Ecem Basak, Esin Ekmekci, Yagmur Bayram and Yasemin Bas	

50	Risk Appraisal in Engineering Infrastructure Projects: Examination of Project Risks Using Probabilistic Analysis.	687
	Jane Lai, Lihai Zhang, Colin Duffield and Lu Aye	
51	Virtual Production Intelligence: Process Analysis in the Production Planing Phase	703
	Daniel Schilberg, Tobias Meisen and Rudolf Reinhard	
52	Operating Room Scheduling Problems: A Survey and a Proposed Solution Framework	717
	Zakaria Abdelrasol, Nermine Harraz and Amr Eltawil	
53	Improving the Logistics Operations of the Hospital Pharmacy Using a Barcode-Rfid Identification System.	733
	Alejandro Romero	
54	Algorithms for the Circle-Packing Problem via Extended Sequence-Pair	749
	Shuhei Morinaga, Hidenori Ohta and Mario Nakamori	
55	Integration of Knowledge-Based Approach in SHM Systems	765
	Fazel Ansari, Inka Bueth, Yan Niu, Claus-Peter Fritzen and Madjid Fathi	
56	Models Supporting Project Subcontractors Selection for Main Types of Contracts.	781
	Pawel Blaszczyk and Tomasz Blaszczyk	

Transactions on Engineering Technologies
Special Issue of the World Congress on Engineering
and Computer Science 2013

Kim, H.K.; Ao, S.-I.; Amouzegar, M.A. (Eds.)

2014, XII, 796 p. 372 illus., Hardcover

ISBN: 978-94-017-9114-4