

2009 Conference on Innovative Technologies in Intelligent Systems and Industrial Applications

(CITISIA 2009)

**Kuala Lumpur, Malaysia
25 – 26 July 2009**



**IEEE Catalog Number: CFP0944E-PRT
ISBN: 978-1-4244-2886-1**

Table of Contents

Paper Title	Author(s)	Page
A Bit-Serial Sum of Absolute Difference Accelerator for Variable Block Size Motion Estimation of H.264	<i>Mohammad Reza Hossieny Fatemi, Hasan F. Ates, Rosli Salleh</i>	1
A Combination of Inertial Sensors and Vibrotactile Feedback for Balance Improvements in Therapeutic Applications	<i>A.U.Alahakone, S.M.N.A.Senanayake</i>	5
A Highly Efficient Channel Equalizer For Digital Communication System In Neural Network Paradigm	<i>J.K.Satapathy, K.R.Subhashini</i>	11
A Low Complexity Data Embedding Scheme for Video Signal in the Spatial Domain	<i>Mohsen Ashourian, Hooshang Kazemi, Sima Honarmand</i>	17
A New Geometrical Inverse Kinematics Method for Planar Hyper Redundant Manipulators	<i>Samer Yahya, Haider A. F. Mohamed, M. Moghavvemi, and S. S. Yang</i>	20
A Review of Security Implications and possible solutions for Mobile Agents in E-commerce	<i>Mohammed Badrul Hasan, P W Chandana Prasad</i>	23
Adaptive Modulation and Coding in WiMAX System for Optimum	<i>Mohsen Ashourian, Ehsan Beitmashal, Houshang Kazemi</i>	30
An Active Control Method to Reduce the Effect of Negative Damping in Disk Brake System	<i>Sayed-Mahdi Hashemi-Dehkordi, Musa Mailah, Abd Rahim Abu Bakar</i>	34
An Efficient Filter Structure for Multiplierless Sobel Edge Detection	<i>Chusit Pradabpet, S. Chivapreecha, B. Knobnob, S. Yimman, K. Dejhan</i>	40
An Implementation of Embedded RESTful Web Services	<i>C.E. Chang, F. Mohd-Yasin, A.K. Mustapha</i>	45
An Improved Malaysian Automatic License Plate Recognition (M-ALPR) System using Hybrid Fuzzy in C++ Environment	<i>Khairunnisa Thanin, Syamsiah Mashohor, Wisam Al Faqheri</i>	51
An Improved MLMA+ and Its Application in Ontology Matching	<i>Ismail Akbari, Mohammad Fathian, Kambiz Badie</i>	56
Analyzing Sensitivity of Code Execution Efficiency to Software and Hardware Parameters	<i>Azam Beg, Chandana Withana, Faheem Ahmed</i>	61
ANOVA-Based Feature Analysis and Selection in HMM-Based Offline Signature Verification System	<i>Mustafa Agil Muhamad Balbed, Sharifah Mumtazah Syed Ahmad, Asma Shakil</i>	66
Appraising Human Emotions using Time Frequency Analysis based EEG Alpha Band Features	<i>M.Murugappan, R.Nagarajan, Sazali Yaacob</i>	70
Artificial Intelligence Techniques for SPICE Optimization of MOSFET Modeling	<i>Jatmiko Endro Suseno, Munawar A Riyadi, Nurul Ezaila Alias, Yau Wei Heong, Razali Ismail</i>	76
Artificial Intelligent Based Approaches of Estimating of Torque for Multi Teeth per Pole switched Reluctance Motor	<i>Amin Parvizi, R.M. Aris, T. Lachman, T.M. Rom</i>	81
Aurora A Software Framework for All-Optical Network Design and Analysis	<i>Aravinthan Srinivasan, Rajendran Parthiban</i>	87
Body Doping Influence In Vertical MOSFET Design	<i>Munawar Agus Riyadi, Zul Atfyi F. M. Napiah, Jatmiko E Suseno, Ismail Saad, Razali Ismail</i>	92
Closed-loop Force Control for Haptic Simulation: Sensory Mode Interaction	<i>Shoon So Oo, Noor Hazrin Hany M Hanif, Irraivan Elamvazuthi</i>	96
Cloud computing in Malaysia Universities	<i>Siti Fatimah Abdul Razak</i>	101
Cognitive Radio: Cyclostationarity-Based Classification Approach for Analog TV and Wireless Microphone Signals	<i>Alfateh M. Alhassan Mossa, Varun Jeoti</i>	107

Paper Title	Author(s)	Page
Comparitive Study of Fuzzy Logic Speed Controller in Vector Controlled PMSM Drive: Minimum Number of Fuzzy Rule-Base	<i>Siti Noormiza Mat Isa, Zulkifillie Ibrahim, Fazli Patkar</i>	112
Comparison of 3S Multi-Thresholding with Fuzzy C-Means Method	<i>Daryoush Mortazavi, Syamsiah Mashohor, Rozi Mahmud, Adznan B. Jantan</i>	119
Computerized Segmentation of Sinus Images	<i>Lila Iznita I., Vijanth S.A., Venkatachalam P.A., Lee S.N.</i>	125
Cross Layer Design of IEEE 802.11e Enhanced Distributed Channel Access Wireless Network for Telemedicine Application	<i>Emansa Hasri Putra, E. Supriyanto, J. Din, H. Satria</i>	129
Defect Cluster Segmentation for CMOS Fabricated Wafers	<i>W.J. Tee, M.P-L. Ooi, Y.C. Kuang, C. Chan</i>	134
Design and Construction of Hybrid Robots for Robotics Competition	<i>M. K. Aftab, P. Vasant, Ahmad A, I. Elamvazuthi, S. Rajendran</i>	139
Design of a Differential-Drive Wheeled Robot Controller with Pulse-Width Modulation	<i>Farshad Arvin, Khairulmizam Samsudin, M. Ali Nasser</i>	143
Design of a Reconfigurable Computing Platform	<i>Justin John Papu, Ong Hang See</i>	148
Detection of Bond Cratering Defects Under Aluminum Wedge Bond Using I-V Characteristics and Liquid Crystal Thermography	<i>C.K.Lau, K.S. Sim, C.P. Tso</i>	154
Dynamical System Approach for Navigation using Behavior Coordination in Indoor Environments	<i>Chin Huang Chen, S. Veera Ragavan</i>	159
Effect of Quine-McCluskey Simplification on Boolean Space Complexity	<i>P. W. Chandana Prasad, Azam Beg, Ashutosh Kumar Singh</i>	165
EMG Denoising Estimation Based on Adaptive Wavelet Thresholding for Multifunction Myoelectric Control	<i>Angkoon Phinyomark, Chusak Limsakul, Pornchai Phukpattaranont</i>	171
Energy Efficient Cooling Fan for PC Chassis	<i>Rodney Tan, Y.H. Goh, Y.Q. Wong, V.H. Mok</i>	177
Enhanced SEA-MAC: An Efficient MAC Protocol for Wireless Sensor Networks for Environmental Monitoring Applications	<i>Marwan Ihsan Shukur Al-Jemeli</i>	182
Enhancement of Optical Images using Hybrid Edge Detection Techique	<i>Sim Kok Swee, Thong Li Wah, Lai Min Ann, Tso Chih Ping</i>	186
Evaluating the Communication Performance of an Ad Hoc Wireless Network Using Mech Connectivity Layer (MCL) Protocol	<i>Muhammad Azhar bin Mansor, Jiwa bin Abdullah</i>	192
Face Animation Parameter Extraction in Real Movie Capturing Environment	<i>Mohsen Ashourian, Mabood Hosseini, Shirin Mousavi, Amirhasan Monadjemi</i>	198
Facial Expression Recognition for Human Computer Interaction Using a Fuzzy Model in the E-business	<i>Amir Jamshid Nezhad</i>	202
Flexible Approach for Region of Interest Creation for Shape-Based Matching in Vision System	<i>Lim Wee Teck, Marizan Sulaiman, Hairol Nizam Mohd Shah</i>	205
Fuzzy Technique for Optimization of Objective Function with Uncertain Resource Variables and Technological Coefficients	<i>I. Elamvazuthi, M. K. Aftab, C. J. Andreaski, P. Vasant</i>	209
Genetic Algorithm for Optimizing Cutting Conditions of Uncoated Carbide (WC-Co) in Milling Machining Operation	<i>Azlan Mohd Zain, Habibolaah Haron, Safian Sharif</i>	214
Genetic Algorithm Optimization of I/O Scales for FLIC in Servomotor Control	<i>Oyas Wahyunggoro, Nordin Saad</i>	219
High Performance of Minimizing in Term-Document Matrix Representation for Document Clustering	<i>Lailil Muflikhah, Dr. Baharum Baharudin</i>	225
Human Assisted Tools for Gait Analysis and Intelligent Gait Phase Detection	<i>Chathuri Senanayake, S.M.N. Arosha Senanayake</i>	230

Paper Title	Author(s)	Page
Hybrid Built-In Self Test (BIST) for Sequential Circuits	<i>Abu Khari bin A'ain, Muhamad Ridzuan bin Radin Muhamad Amin, Mahmud Adnan</i>	236
Impact of Nanometer Transistor on Analog Performance	<i>Abu Khari bin A'ain, Mohamad Asfa Husaini bin Zakaria, Khor Jeen Ghee, See Jin Hui</i>	240
Implementation of Behaviour-Based Mobile Robot for Obstacle Avoidance Using a Single Ultrasonic Sensor	<i>Tan Tiong Cheng, Muhammad Nasiruddin Mahyuddin</i>	244
Implementation of Parallelization and Nano Simulation using Multi Scale Modeling on various HPC setups	<i>Satyadhar Joshi, Rohit Pathak, Salman Ahmed</i>	249
Improving Response Time in Traffic Police Infraction Registration System	<i>Habibollah Arasteh Rad, Khairulmizam Samsudin, Abdul Rahman Ramli, Mohamad Bagher Tehrani, Mohamad Ali Tavallaie</i>	255
Intelligent Conflict Detection and Awareness for UAVs	<i>B. M. Albaker, N. A. Rahim</i>	261
Intelligent Position Control of Earth Station Antennas with Backlash Compensation Based on MLP Neural Networks	<i>Amir, Mohammad Bagher Menhaj - Ali Mohebbi</i>	265
Latex Glove Protein Detection Using Maximum-Minimum Clustering Variation Technique	<i>Ting Huong Yong, Sim Kok Swee, Tso Chih Ping</i>	271
Intricate Modeling of HDD and Reliability Analysis in Light of Advances in Nanotechnology and MEMS	<i>Satyadhar Joshi, Rohit Pathak, Salman Ahmed</i>	275
Modeling Nano Enabled Elements of Solar Cells and Fuel Cells	<i>Salman Ahmed, Satyadhar Joshi, Rohit Pathak, Pawan Kotak, Virendra Verma</i>	281
MPIFA: A Modified Protocol Independent Fairness Algorithm for Community Wireless Mesh Networks	<i>C.H Widanapathirana, Bok-Min Goi, Sim Moh Lim</i>	287
Multi Scale Modeling and Intricate Study of MEMS Based Elements in RFID systems	<i>Satyadhar Joshi, Rohit Pathak, Salman Ahmed</i>	293
Network Management Software Tool for FTTH-PON: SANTAD	<i>Ng Boom Chuan, Mohammad Syuhaimi Ab-Rahman, Aswir Premadi, Kasmiran Jumari</i>	299
Neuro-Fuzzy Algorithm for Obstacle Avoidance Mission of a Mobile Robot Using FPGA	<i>Chan Zhi Wei, Muhammad Nasiruddin Mahyuddin</i>	305
Non-Destructive Quality Evaluation In Spice Industry With Specific Reference To Cuminum Cyminum L (Cumin) Seeds	<i>Kaavindra Jain, Chintan Modi, Kunal Pithadiya</i>	311
Principle Subspace-Based Signature Verification Technique	<i>Roushanak Rahmat, Nidal S. Kamel, Norashikin Yahya</i>	317
Optimization Of Cooling Systems In Data Center By Computational Fluid Dynamics Model And Simulation	<i>Rahmat Romadhon, Maisarah Ali, Ayub Mohd Mahdzir, Yousif Abdalla Abakar</i>	322
Intelligent Optimization of Node Coordination in Wireless Sensor Network	<i>Nik Noordini Nik Abd Malik, Mazlina Esa, Sharifah Kamilah Syed Yusof</i>	328
Reliability Modeling and Optimization of MEMS Elements in Various Devices Using Multi-Scale Concepts	<i>Satyadhar Joshi, Rohit Pathak, Salman Ahmed</i>	332
Optimizing Three-layer Neural Network Model for Grid-connected Photovoltaic System Output Prediction	<i>Shahril Irwan Sulaiman, Titik Khawa Abdul Rahman, Ismail Musirin and Sulaiman Shaari</i>	338
PAPR Reduction Using Huffman Coding Combined with Clipping and Filtering for OFDM Transmitter	<i>Filbert Hilman Juwono, Dadang Gunawan</i>	344

Paper Title	Author(s)	Page
Parameter Tuning of Model Predictive Controller; a Case Study	Masood Askari, Haider A. F. Mohamed, M. Moghavvemi, S. S. Yang	348
Positive Voltage Injection Switching Inductor (P-VISI) Method for Fast Transient Response in SMPS under Loading Condition.	Jegandren J., Gobbi.R, Hussain S.Athab	352
Privacy Enhanced Data Management for an Electronic Identity System	S. Nimalaprakasan, S. Ramanan, B. A. Malalaseena, K. Shayanthan	358
Protection Scheme of Fiber to the Home Passive Optical Network using Access Control System	Aswir Premadi, Mohammad Syuhaimi Ab-Rahman, Ng Boon Chuan, Mohamad Najib Mohamad Saupe, Kasmiran Jumari	364
Reactive Dye Impingement on Woven Fabrics and It's Effect on Colour	I. Elamvazuthi, P. Vasant, Ahmad A, M. K. Aftab and S. Rajendran	370
Real-Time Facial Expression Recognitions: A Review	Adekunle Micheal Adeshina, Siong-Hoe Lau, Chu-Kiong Loo	375
Relationship between RFID Readers' Output Power and Detected Transponder Distance – A Preliminary Study for 3D RFID Library Search System	Terence Jerome Daim, Razak Mohd Ali Lee	379
Remote Wireless Health Monitoring Systems	B. Priya, S. Rajendran, and R. Bala	383
Restoration Scheme Issues in Fiber to the Home Ethernet Passive Optical Network (FTTH-EPON)	Siti Asma Che Aziz, Mohamad Syuhaimi Ab-Rahman, Kasmiran Jumari	389
Searching Phase Optimize in PTS-APPR Method by GA for PAPR Reduction in OFDM-WLAN Systems	Chusit Pradabpet, Shingo Yoshizawa, Yoshikazu Miyanaga, Kobchai Dejhan	393
Segmentation of Retinal Vasculature in Colour Fundus Images	Pang Kee Yong, Lila Iznita I, Ahmad Fadzil M H, Hanung A. N., Hermawan N., Vijanth S A	398
Series Compensation For Static And Dynamic Voltage Stability Enhancement	M.Kowsalya, Kanika Garg, Neha Gupta	402
Signature Verification using Data glove with Prominent Sensors	Shohel Sayeed, Rosli Besar, Nidal S. Kamel	407
Simple particle swarm optimization for economic dispatch with piecewise quadratic fuel cost function	Chang-Huang Chen, Chin-Chung Lin	412
Small-scale Monitoring System on LabVIEW Platform	Rahmat Sanudin, Wong Kang Huei, Ida Laila Ahmad, Masnani Mohamed	418
Synonym Based Malay Linguistic Text Steganography	Hasanah Zulcefli Muhammad, Sharifah Mumtazah Syed Ahmad Abdul Rahman, Asma Shakil	423
Synthesis of Fiber Bragg Grating Parameters Using Hybrid Optimization Algorithm	Teoh Chee Way, Faidz A. Rahman	428
Texture Classification Using Wavelet Extraction: An Approach to Haptics Texture Searching	Waskito Adi, Suziah Sulaiman	434
The Development of Ozone Generation with Low Power Consumption	Mochammad Facta, Zolkafle Bin Buntat	440
The Investigations Of Input Shaping With Optimal State Feedback For Vibration Control Of A Flexible Joint Manipulator	Mohd Ashraf Ahmad, Mohd Syakirin Ramli, Raja Mohd Taufika Raja Ismail, Najidah Hambali, Mohd Anwar Zawawi	446
The Investigations Of PD-Type Fuzzy Logic With Different Polarities Input Shaping For Anti-Sway Control Of A Gantry Crane System	Mohd Ashraf Ahmad, Mohd Syakirin Ramli, Raja Mohd Taufika Raja Ismail, Ahmad Nor Kasruddin Nasir, Mohd Anwar Zawawi	452

Paper Title	Author(s)	Page
Toward Self-Organizing Service Oriented Architecture	<i>Muhammad Agni Catur Bhakti, Azween B. Abdullah</i>	458
Use of Lagrange Time Delay Estimation Interpolation in the Magnification of Electron Microscope Images	<i>Thong Li Wah, Sim Kok Swee, Tso Chih Ping</i>	462
VAr Compensation by Evolutionary Programming Considering Unbalanced Load and Multiple Harmonics in Source Voltage and Load Current	<i>K. N. Pau, C. Venkateshaiah, K. Ramar</i>	467
Weights Binary Decision Diagram and its Application to Matrix Multiplication	<i>T.Bhuvaneswari, V.C.Prasad, Ajay Kumar Singh, P.W.C Prasad</i>	470
Wireless Appliance Control System	<i>Rahmat Sanudin, Yoo Tuck Mun, Wan Suhaimizan Wan Zaki, Mohd Helmy Abd Wahab</i>	476
Determination Of Overcurrent Time Delay Using Fuzzy Logic Relays	<i>Aidil Azwin Bin Zainul Abidin, Farrukh Hafiz Nagi, Izham Bin Zainal Abidin, Agileswari K. Ramasamy</i>	480

Author Index