## 2012 International Conference on Computer & Information Science

(ICCIS 2012)

Kuala Lumpur, Malaysia 12 - 14 June 2012

Pages 1-557



**IEEE Catalog Number: ISBN:** 

CFP1213T-PRT 978-1-4673-1937-9

## CONTENTS

PROCEEDINGS
Volume 1

2012 International Conference on
Computer & Information Science (ICCIS)

Paper & Author(s)

INFORMATION SCIENCES	
Knowledge Management Practices in IT Project-Based Companies in an African Country Chaya D. Fowdar, Soulakshmee D. Nagowah	1
Implement of Cloud Computing for e-Learning System Manop Phankokkruad	7
Easy Montessori Manager: An online Montessori Management System Siti Hajar Khairuddin, Norlia Mustaffa	12
Design and Evaluation of Knowledge-based Tool for Course Exemption in Institution of Higher Learning Thong Chee Ling, Kuan Hon Keat, Yu Dian Gong	19
Social Software Enhanced E-learning System to Support Knowledge Sharing Among Students: Malaysian Higher Education Institutions Perspectives Yossawadee Kaeomanee, Dhanapal Durai Dominic P., Riaza Perveen Mohd Rias	25
Theoretical Framework for Multi-agent Collaborative Knowledge Sharing for Competitiveness of Institutions of Higher Learning (IHL) in Malaysia Abdulwahab Funsho Atanda, Dhanapal Durai. Dominic, Ahmad Kamil Mahmood	31
Users' Behavioral Intention to Use Clinic Information System: A Survey Aliza Sarlan, Rohiza Ahmad, Wan Fatimah Wan Ahmad, P.D.D. Dominic	37
Design of a Medication Reminder and Feedback System for Thai Elders Suthat Ronglong, Chaiyawut Sookplang, Chonlameth Arpnikanondt, Vajirasak Vanijja	44
A Framework of a Childhood Obesity Intervention Using Persuasive Web-Mobile Technology Liew Kwei Ping, Jion Poh Poh, Law Kok Meng, Wahidah Husain, Muhamad Hariz Muhamad Adnan	50
A Low-cost Game Framework for a Home-based Stroke Rehabilitation System Sanjay Saini, Dayang Rohaya Awang Rambli, Suziah Sulaiman, Nordin Zakaria, Siti Rohkmah Mohd Shukri	55
Knowledge Retrieval Using Hybrid Semantic Web Search Noryusliza Abdullah, Rosziati Ibrahim	61
Weighted Semantic Similarity Assessment Using WordNet Mostafa Ghazizadeh Ahsaee, Mahmoud Naghibzadeh, S. Ehsan Yasrebi Naieni	66
Emergence of Personal Knowledge Networks in Agent-mediated PKM Processes: A Qualitative Analysis in Malaysian Context Shahrinaz Ismail, Mohd Sharifuddin Ahmad	72
How a Semantic Wiki Can Support the Ideas Development in Innovation Activities Davy Monticolo, Laure Morel, Vincent Boly	79
A Case Study on Using Web 2.0 Social Networking Tools in Higher Education Azamjon Tulaboev, Alan Oxley	84
Towards An Effective KMS Usages: The Role of Socio-Technical Antecedents in the Building of Autonomous Motivation to Use Ishaq O. Oyefolahan, P. D. D. Dominic, Nor Shahriza Abdul Karim	89

Paper & Author(s)	Page
Soft Set Theory for Automatic Classification of Traditional Pakistani Musical Instruments Sounds Saima Anwar Lashari, Rosziati Ibrahim, Norhalina Senan	94
Dynamic Referencing Rules Creation Using Intelligent Agent in Geo Spatial Data Mining Mussarat Yasmin	100
Integration of Data Quality Component In An Ontology–Based Knowledge Management Approach for E-Learning System Anbuselvan Sangodiah, Lim Ean Heng	105
User Acceptance of eGOVERNMENT: Integrating Risk and Trust Dimensions with UTAUT Model	109
Ayankunle Adegbite Taiwo, Ahmad Kamil Mahmood, Alan G. Downe	
Ontology Design for Process Safety Management X. C. Tan, K. H. Yew, T. J. Low	114
Trusted Partner Identification Method through Trust Values for E-Business (B2B) Supply Chain Integrator- A Qualitative Analysis using Sequential Explanatory Strategy Norshakirah Ab Aziz, Rohiza Ahmad, Dhanapal Durai Dominic	120
An Assessment of Parameters Affecting Projects of Regional Public Sector Universities, Pakistan	125
Muhammad Salim Javed Gandapur, Ahmad Kamil Mahmood, Suziah Sulaiman	
A Proposed Model for Assessing E-Government Service Quality: An E-S-QUAL Approach Mohammed Ateeq Alanezi, Ahmad Kamil Mahmood, Shuib Basri	130
A Gap Between Business Process Intelligence and Redesign Process Abid Sohail, P. Dhanapal Durai Dominic	136
MetroBuzz: Interactive 3D Visualization of Spatiotemporal Data Wei Zeng, Chen Zhong, Afian Anwar, Stefan Muller Arisona, Ian Vince McLoughlin	143
Comparing the Use of Enterprise Content Management Systems in Replicated and Unified Businesses Noreen Izza Arshad, Simon K. Milton, Rachelle Bosua	148
Eco-Design Strategy among ISO 14001 Certified Manufacturing Firms in Malaysia: Green Drivers and Its Relationship to Performance Outcomes Savita K. S., Dominic P. D. D., Ramayah T.	154
Perceived Usefulness Elevating Responsiveness of SME Employees in Digital Business Ecosystem Environment  Muhammad Abdul Tawab Khalil, P. D. D. Dominic, Mohd. Fadzil Hassan, Hassan Kazemian	160
Assessing the Performance of Information Technology Strategic Planning for Organization Using Performance Measurement Framework Mohammed Alaa H. Altemimi, Mohamad Shanudin Zakaria, Ahmad Kamil Mahmood	164
An Exploratory Study on Technical and Functional Sophistications of Health Information Technology in Twin Cities of Pakistan Fozia Anwar, Azra Shamim, Suziah Sulaiman, Vimala Balakrishnan	170
Infolab 3-Link as a Proposed Decision Support System for Assisting Livestock Disease Diagnose Adhistya Erna Permanasari 1, Wahyuni, Warsun Najib, Samkhan	176
A Blended Community of Inquiry Approach: The Usage of Social Network as a Support for Course Management System N. A. Iahad, Marva Mirabolghasemi, Sharin Hazlin Huspi	180

Paper & Author(s)	Page
MyTourGuide.com: A Framework of a Location-Based Services for Tourism Industry Wahidah Husain, Lam Yih Dih, Heng Foo Yen, Neesha Jothi	184
Bayesian Spam Filtering for Vietnamese Emails Vu Duc Lung, Truong Nguyen Vu	190
Financial Indicators Tracker Application (FIT) Khairul Shafee Kalid, Muhammad Zulhilmi Bachok, Md Akhir Mohd Sharif	194
Review on Online and Mobile Weight Loss Management System For Overcoming Obesity Ahmad Fadhil Yusof, N. A. Iahad	198
Mashup for Knowledge Sharing Paradigm: A Case Study in Undergraduate Industrial Internship Training Programme Oi Mean Foong, Norfarahin Adiba Abd Kadir, Rozana Kasbon, Suet Peng Yong	204
2½ Dimensional Web-based Virtual Walkthrough of Chancellor Hall (CH) and Undercroft of Universiti Teknologi PETRONAS(UTP) Dg Ku Zuraidah Ag. Majid , Siti Rohkmah Mohd Shukri	210
Distance-based Hoax Detection System Adzlan Ishak, Y. Y. Chen, Suet-Peng Yong	215
The Studies of Knowledge Management System in Organization: A Systematic Review S. Matayong, A. K. Mahmood	221
COMPUTATIONAL INTELLIGENCE	
Combinational Equivalence Checking on the OpenAccess Platform: Performance Analysis and Research Opportunities Wen-Mau Chong, Chin-Kuan Ho, Andal Jayalakshmi	227
A Distributed Algorithm Solving Multiobjective Dynamic Car Pooling Problem Ta Anh Son, Le Thi Hoai An, Pham Dinh Tao, Djamel Khadraoui	231
Dynamic PC Power State Transitioning Based on a Monitoring Service Chan Piseth, Alan Oxley, Low Tan Jung	237
An Improved Heuristic-Based Fuzzy Time Series Forecasting Model Using Genetic Algorithm	242
T. A. Jilani, U. Amjad, J. Jaafar, S. Hassan	
Pashto Endoclitic Generation Aziz-Ud-Din, Alvin W. Yeo, Bali Ranaivo-Malancom,	248
Iterative MapReduce Based Heuristic Algorithm for Solving N Puzzle Rohit Kondekar, Akash Gupta, Gulshan Saluja, Richa Maru, Ankit Rokde, Parag Deshpande	253
Using Genetic Algorithm in Implementing Capacitated Vehicle Routing Problem Mazin Abed Mohammed, Mohd Sharifuddin Ahmad, Salama A. Mostafa	257
A MapReduce Based Hybrid Genetic Algorithm Using Island Approach for Solving Time Dependent Vehicle Routing Problem Rohit Kondekar, Akash Gupta, Gulshan Saluja, Richa Maru, Ankit Rokde, Parag Deshpande	263
A Genetic Algorithm approach Towards Compiler Flag Selection Based on Compilation and Execution Duration Thayalan Sandran,Nordin Zakaria, Anindya Jyoti Pal	270
Colorectal Cancer Image Classification Using Image Pre-Processing and Multilayer Perceptron  Mohd Yamin Ahmad, Azlinah Mohamed, Yasmin Anum Mohd Yusof, Siti Aishah Md. Ali	275

Paper & Author(s)	Pag
A Hybrid Approach Using Naïve Bayes and Genetic Algorithm for Childhood Obesity Prediction  Muhamad Hariz B. Muhamad Adnan, Wahidah Husain, Nur`Aini Abdul Rashid	281
Design and Rules Development of Expert System for Diagnosing Oyster Mushroom Diseases Y. Munirah, M. Rozlini, Y. Siti Mariam	286
Performance Analysis of Combined Algorithms for Hybridization in Mammography N. A. Setiawan, K. A. Nugroho, T. B. Adji	290
Computer Aided Diagnosis System based on Machine Learning Techniques for Lung Cancer Hamada R. H. Al-Absi, Brahim Belhaouari Samir, Khaled Bashir Shaban, Suziah Bt. Sulaiman	29
A MultiSwap Algorithm for the University Course Timetabling Problem Mohammed Azmi Al-Betar, Ahamad Tajudin Khader, Osama Muslih	301
A Pure Graph Coloring Constructive Heuristic in Timetabling Tri A. Budiono, Kok Wai Wong	307
Harmony Annealing Algorithm for Curriculum-Based Course Timetabling Problem Juliana Wahid, Naimah Mohd Hussin	313
A Multi-agent Framework for Dynamic Task Assignment and Delegation in Task Distribution Al-Mutazbellah Khamees Itaiwi, Mohd Sharifuddin Ahmad, Nurzeatul Hamimah Abd Hamid, Nur Huda Jaafar, Moamin A Mahmoud	318
Resource Description Framework Based Intelligent Tutoring System Muhammad Azeem Abbas, Wan Fatimah Wan Ahmad, Khairul Shafee Kalid	324
Development of Decision Support System for Identification of Bullet-Induced Glass Fractures  Malek Raduan, Sharifah Mastura Syed-MohdDaud, Mohd Nazri Mat-Husin, Mohamad Hadzri Yaacob, Kuppuswamy-Ramaswamy, Sharifah Mastura Syed-Mohamad, R. Jagannathan	329
Emotion Detection Using Sub-image Based Features through Human Facial Expressions Krishna Mohan Kudiri, Abas Md Said, M Yunus Nayan	332
Clustering Model of Multimedia Data By Using Rough Sets Theory Yuzarimi M Lazim, M Nordin A Rahman, Farham Mohamed	336
HDT-HS: A Hybrid Decision Tree/Harmony Search Algorithm for Biological Datasets Khalid Mohammad Jaber, Rosni Abdullah, Nur'Aini Abdul Rashid	341
Temporal Data Classification and Rule Extraction Using a Probabilistic Decision Tree Mojtaba Malek Akhlagh, Shing Chiang Tan, Faiiaz Khak	346
Exploiting Short Query Expansion for Images Retrieval Rooh Ullah, J. Jaafar	352
The Application of Committee Fuzzy Inference System to Improve Results of Fuzzy Model in Flow Units Prediction of Petroleum Reservoirs  Mohammad Reza Adelzadeh, Javad Ghiasi-Freez, Amir Hatampour	357
Using Committee Machine with Intelligent Systems for Permeability Prediction, A Case Study of South Pars Gas Field, Persian Gulf, Iran Amir Hatampour, Javad Ghiasi-Freez, Mohammad Reza Adelzadeh	361
Inter Related Metal Price Prediction Based on eABC-LSSVM Zuriani Mustaffa, Yuhanis Yusof	364

Paper & Author(s)	Page
Application of Fuzzy Clustering Analysis to Compound Datasets for Drug Lead Identification	369
Sinarwati Mohamad Suhaili, Mohamad Nazim Jambli, Abdul Rahman Mat	
On Improving CAMSHIFT Performance Through Colour Constancy Approach Mohd Asyraf Zulkifley, Mohd Marzuki Mustafa, Aini Hussain	375
Efficiency Evaluation and Ranking of Manufacturing Designs with Unmanageable Factor Using a Fuzzy Data Envelopment Analysis Model  Ehsanollah Mansourirad	379
Complaint Handling Theoretical Framework Razulaimi Razali, Jafreezal Jaafar	382
Distributed Knowledge Extracted by a MAS Using Ontology Alignment Methods Davy Monticolo, Inaya Lahoud, Eric Bonjour	386
Automatic Kurdish Sorani Text Categorization Using N-Gram Based Model Falah Salih Mohammeda, Lailatul Qadri Zakariab, Nazlia Omarc, Mohammed Albaredd	392
A Statistical Dictionary-based Word Alignment Algorithm: An Unsupervised Approach Norshuhani Zamin, Alan Oxley, Zainab Abu Bakar, Syed Ahmad Farhan	396
Alert Correlation Framework Using a Novel Clustering Approach Ashara Banu Mohamed, Norbik Bashah Idris, Bharanidharan Shanmugum	403
Comparative Study of Random-PSO and Linear-PSO Algorithms Sharifah Lailee Syed Abdullah, Naimah Mohd Hussin, Hazaruddin Harun, Noor Elaiza Abd Khalid	409
Half-Against-Half Multi-Class Support Vector Machines in Classification of Benthic Macroinvertebrate Images Henry Joutsijoki	414
Layered Filtering Technique for Content-Based Video Retrieval Gulshan Saluja, Ankit Rokde, Richa Maru, Rohit Kondekar, Akash Gupta, Parag Deshpande	420
Effective Content-Based Image Retrieval: Combination of Quantized Histogram Texture Features in the DCT Domain Fazal-e-Malik, Baharum Baharudin	425
Reducing Memory Complexity Using Data Minimization Technique on FPGA Syed Abdul Mutalib Al Junid, Nooritawati Md Tahir, Zulkifli Abd Majid, Zulkifli Othman, Khairul Khaizi Mohd Shariff	431
Bit-Communication in Artificial Swarm A. Jaafar, N. F. Alias, W.A.F.W. Othman, M. N. Shah Zainudin, M.Muzafar Ismail, M. N. Mahmud	435
An Ant Colony Optimization Approach for Solving the Multidimensional Knapsack Problem Soh-Yee Lee, Yoon-Teck Bau	441
Application of 13-Point Feature of Skeleton to Neural Networks-Based Character Recognition Nguang Sing Ping, Mohd Amaluddin Yusoff	447
Function Fitting for Control Source Electro-Magnetics Data Using Elman Neural Network Muhammad Abdulkarim, Afza Shafie, Radzuan Razali, Wan Fatimah Wan Ahmad	453
A Norms Mining Approach to Norms Detection in Multi-agent Systems  Moamin A. Mahmoud, Mohd Sharifuddin Ahmad, Azhana Ahmad, Mohd Zaliman Mohd Yusoff, Aida  Mustapha	458
Collision Detection Optimization on Mobile Device for Shoot'em Up Game K. W. Ng, Y. W. Yeap, Y. H. Tan, K. I. Ghauth	464

Paper & Author(s)	Page
Detecting Malicious Executable File Via Graph Comparison Using Support Vector Machine Abubakr Sirageldin, Baharum Baharudin, Low Tang Jung	469
Hybrid Optimization Approach to Estimate Random Demand Wahab Musa, Ku Ruhana Ku-Mahamud, Azman Yasin	474
An RDF Model for Meteorological and Oceanographic Information Systems Kamaluddeen Usman Danyaro, Jafreezal Jaafar, Mohd Shahir Liew	480
The Effect of Noise Removing on Emotional Classification Maziyar molavi, Jasmy Yunus	485
Significance Level of Image Enhancement Techniques for Underwater Images Norsila Shamsuddin, Wan Fatimah Wan Ahmad, Baharum Baharudin, Mohd Kushairi Mohd Rajuddin, Farahwahida Mohd	490
Employing Artificial Intelligence Techniques in Mental Health Diagnostic Expert System Rozita Yati Masri, Hajar Mat Jani	495
An Augmented Reality Tool to Aid Understanding of Protein Loop Configuration Nabila Lau, Alan Oxley, M. Y. Nayan	500
Application of Fuzzy Expert Systems for Construction Labor Productivity Estimation Sana Muqeem, Arazi Bin Idrus, Mohd Faris Khamidi, Yap Keem Siah, Muhammad Saqib	506
Towards the Development of an Online Adaptive System Framework for English Learning Using Perturbation Learner Model Nguyen Viet Dung, Suziah Sulaiman, Mohd Fadzil Hassan	512
A Review on Monitoring Vague Quality of Service(QoS) Compliance for Web Services Mohd Hilmi Hasan, Jafreezal Jaafar, Mohd Fadzil Hassan	517
Emotion Detection Using Relative Amplitude-Based Features through Speech Krishna Mohan Kudiri, Abas Md Said, M Yunus Nayan	522
Intelligent Personal Monitoring System for Fire Rescue Operation: A Case Study Azwin Hazrina Ahmad, Ahmad Kamil Mahmood, Jafreezal Jaafar	526
A Hybrid System Using Possibilistic Fuzzy C-Mean and Interval Type-2 Fuzzy Logic for Forecasting: A Review H. Shah., J. Jaafar, Rosdiazli Ibrahim, S. Hassan, M. Abdul Hashim	532
Hybrid Algorithm for Hand Gesture Recognition Shikha Gupta, Jafreezal Jaafar, Wan Fatimah Wan Ahmad	538
Composite Subdivisions for 3D Quad-Triangle Meshes K. W. Ng, S. W. Andi, K. I. Ghauth	543
Agent-based Message Oriented Middleware(MOM) for Cross-platform Communication in SOA Systems Najhan M.Ibrahim, Mohd Fadzil Hassan	547
A Framework to Detect Cybercrime in the Virtual Environment Murugan Thangiah, Shuib Basri, Suziah Sulaiman	553

## CONTENTS

PROCEEDINGS
Volume 2

2012 International Conference on
Computer & Information Science (ICCIS)

Paper & Author(s)

DATA COMMUNICATION AND NETWORK SYSTEMS	
Dynamic Optimization of LTE Pilot Scattering Based on Channel Estimation A. Omri, R. Hamila, M. Hasna, R. Bouallegue	558
A Deadlock-Free Dimension Order Routing for Hierarchical 3D-Mesh Network M. M. Hafizur Rahman, Asadullah Shah, Yasushi Inoguchi	563
An Approach towards Intrusion Detection using PCA Feature Subsets and SVM Noreen Kausar, Brahim Belhaouari Samir, Suziah Bt Sulaiman	569
Parallel Heuristic Graph Matching Algorithm for Task Assignment Problem in Distributed Computing Systems  P. Mohan, N. P. Caralan, Direct Presenth S. H. Siddhart Sanyam, Sagar P. Varras	575
R Mohan, N P Gopalan, Dinesh Prasanth S H, Siddhant Sanyam, Saagar R Varma  A Serverless Ultra-Lightweight Secure Search Protocol for EPC Class-1 Gen-2 UHF RFID  Tags  Servergen Sundargeen Rebin Dogs, World Zhou	580
Saravanan Sundaresan, Robin Doss, Wanlei Zhou	
Wi-City: a Federated Architecture of Metropolitan Databases to Support Mobile Users in Real Time Alfio Costanzo, Alberto Faro, Daniela Giordano, Mario Venticinque	586
In Support of Hydrocarbon Exploration and Discovery Using Clouds Izzatdin A Aziz, Andrzej M Goscinski, Michael Hobbs	592
Interference-Aware Virtual Machine Placement in Cloud Computing Systems Jenn-Wei Lin, Chien-Hung Chen	598
Cloud Services – Enhancing the Malaysian Healthcare Sector Kalai Anand Ratnam, P. Dhanapal Durai Dominic	604
A Mobility Optimization CRRM Approach for Next Generation Wireless Networks Abdallah AL Sabbagh, Robin Braun, Mehran Abolhasan	609
A Lightweight Agent-based Egress NAC on Wireless LAN Somnuk Puangpronpitag, Atthapol Suwannasa	614
Data Transmission Reliability of IEEE 802.15.4 Based Wireless Sensor Networks with Synchronised Periodic Data S. Wijetunge, U. Gunawardana, R. Liyanapathirana	619
Effectiveness of Multi-homing and Parallel Transmission During and After the Vertical Handover Peer Azmat Shah, Muhammad Yousaf, Amir Qayyum, Halabi Hasbullah	625
Statistical Analysis of Grid Traffic Alan Oxley, Syed Nasir Mehmood Shah	630
Performance Evaluation of Energy Consumption for AODV and DSR Routing Protocols in MANET  Mehdi Barati, Kayvan Atefi, Farshad Khosravi, Yashar Azab Daftari	636
SNR-based Dynamic Sequence Distance Vector Routing Protocol Metric for Mobile Ad-	643
<b>Hoc Networks</b> Mohamed Elshaikh, Mohd Fairuz Muhamad Fadzil, Che Muhammad Nor Che Isa, Nidal Kamel, Layth Hasnawi	

Paper & Author(s)	Page
A 3-D Markov Chain Correlated Algorithm for MANETS  A. H Azni, Rabiah Ahmad, Zul Azri Mohamad Noh	649
A New Cache Replacement Policy for NEMO Using Prioritizing Mechanism Samer Sami Hasan, Rosilah Hassan	654
One-Shot Data Clustering Mechanism Using A Distributed Associative Memory Scheme for On-Site Recognition Within Network of Smart Objects  Anang Hudaya Muhamad Amin, Asad I. Khan	658
Health, Link Quality and Reputation Aware Routing Protocol (HLR-AODV) for Wireless Sensor Network in Smart Power Grid Hasan Farooq, Low Tang Jung	664
Multi-user Access Interference Suppression for UWB System G. C. Chung	670
Mean Opinion Score Performance in Classifying Voice-enabled Emergency Communication Systems Nuwan Waidyanatha, Tharaka Wilfred, Kasun Perera, Manoj Silva	676
Localising Peers in P2P Live Streaming Systems Within Resource-Constrained Networks Wahidah Md. Shah, Nicholas J. P. Race	683
Automation of Residential Electricity Cut off Using Network Based Embedded Controller Nazri Abdullah, Siti Salwani Yaacob, Bana Handaga, Yuszaimi Yaacob	689
Advanced Videoconferencing Educational System - A Case Study Danco Davcev, Zdravko Stafilov, Sanja Veleva, Vladimir Trajkovik	694
QoS Based Performance Evaluation of Grid Scheduling Algorithms Syed Nasir Mehmood Shah, Ahmad Kamil Mahmood, Alan Oxley, Mohamed Nordin Zakaria	700
Signature-Based IDS using Boolean Weighted Score Multiple Classifiers Pornruthai Saelee, Piboonlit Viriyaphol	706
Stochastic Prefix-based Fault Tolerant Source Routing Algorithm for Network on Chip Gengchun Xu, Kaixin Ren, Naijie Gu	712
A Flexible Relay Selection Technique for Bluetooth Scatternet Sheikh Tahir Bakhsh, Halabi Hasbullah, Sabeen Tahir, Fazli Subhan, Muhammad Aman Sheikh	718
Testing and Validating Activity Models for Network Intrusion Detection Marko Määttä, Tomi Räty	723
A Biologically Inspired Energy Efficient Intrusion Detection System Vasaki Ponnusamy, Anang Hudaya, Alan G. Downe	729
Wireless Network Attack: Raising the Awareness of Kampung WiFi Residents Syahrul Fahmy, Akhyari Nasir, Nooraida Shamsuddin	736
Web Services Extension Model Simulation in Hierarchical Colored Petri Net Dani Adhipta, Mohd Fadzil Hassan, Ahmad Kamil Mahmood	741
Impact of Fountain-based Protocol in the Uncongested and Congested Network Zan-Kai Chong, Bok-Min Goi, Hong-Tat Ewe, Su-Wei Tan, Cheng-Kuan Bryan Ng	747
Comparison of Queuing Disciplines for Fiber to the Home Networks Rakesh Kumar Pradhan, Mark A Gregory	751
Bluetooth Network Re-formation Protocol for Reducing Path Length (BNR) Sabeen Tahir, Abas Md Said, Sheikh Tahir Bakhsh	755

Paper & Author(s)	Page
Improving EAP-TLS Performance Using Cryptographic Methods Bahareh Shojaie, Iman Saberi, Mazleena Salleh, Mahan Niknafskermani, Seyyed Morteza Alavi	760
Challenges and Solutions of QoS Provisioning for Real Time Traffic in Mobile Ad Hoc Networks Sabri Saeed, Kasmiran Jumari, Mahamod Ismail, Abdulmalek Al-hemyari	765
Impact of Gaussian Deployment Strategies on the Performance of Wireless Sensor	771
Network	
Atiq-Ur-Rahman, Halabi Hasbullah, Najm-Us-Sama	
A Framework for Early Detection of Incident in Dense Traffic using Vehicular Ad-Hoc Networks  Bharat Singh, Halabi Hasbullah, M. Y. Nayan	777
Analysis of Bluetooth Signal Parameters for Indoor Positioning Systems Fazli Subhan, Halabi Hasbullah, Azat Rozyyev, Sheikh Tahir Bakhsh	784
Adaptive QoS Control Approaches for VoIP Over Multi-Rate WLANs H. Kazemitabar, A. Md. Said	790
A Comparative Analysis of Routing Architecture for Information Dissemination in Vehicular Ad Hoc Networks  Masood Ur Rehman, Halabi Hasbullah, Irshad Ahmad Somra	796
Agent Based Resource Broker for Medical Informatics Application in Clouds Mohamad Izuddin Nordin, Anang Hudaya Muhamad Amin, Syed Nasir Mehmood Shah	802
Dynamic Load-based Multi-node Repositioning for Mobile Sensor Network Muhammad Amir Khan, Halabi Hasbullah, Babar Nazir	808
Studying the Effect of Transmission Rate and Packet Size Parameters on VolP Performance Sameha Ahmed Ali Alshakhsi, Halabi Hasbullah	814
Towards Cloud Utilization as an External Entity to Address Overloading Issues in Grid Computing Systems Ahmed Mohammed Al-iesawi, Mohd Fadzil Hassan	820
Review of Various Firewall Deployment Models Okta Nurika, Anang Hudaya Muhamad Amin, Abdullah Sani Abd. Rahman, Mohamed Nordin Zakaria	825
A Comparative Survey of Multicast Routing Protocol in MANETs Abdulmalek Al-hemyari, Kasmiran Jumari, Mahamod Ismail, Sabri Saeed	830
SOFTWARE ENGINEERING	
A Review of the Current Status of the Java Programming on Embedded Real-time Systems Hitham Alhussian, Nordin Zakaria, Fawnizu Azmadi Hussin, Hussein T. Bahbouh	836
CAI of Flowchart (CAIFlow) Development Using Object-Oriented Methodology Nur W. Rahayu, Sri Hartati	843
Optimization Of Testing Time In RUP: A Group Testing Approach Mahwish Kundi, Bashir Ahmad, Muhammad Inaythulaha, Jamal Abdul Nasir	848
Process Model and Software Process Improvement For Small Software Organization: An ethnographic Study in Indonesia Indriana Hidayah, Wahyuni, Lukito Edi Nugroho	852
An Introduction on Extensions of Process Algebra: Concurrent and Communicating Systems  Arpit, Afza Binti Shafie, Wan Fatimah Binti Wan Ahmad	857

Paper & Author(s)	Page
A Degree Centrality-Based Approach to Prioritize Interactions of Component-Based Systems Sajjad Mahmood, Muhammad Ali Khan	863
A Conceptual Framework for Pre Deployment Network Analysis of Specification Driven Systems Gaurav Varshney, Ramesh Chandra Joshi, Anjali Sardana, Swami Nathan Natarajan, Subhrojyoti Roy Chaudhuri	868
Optimizing Method to Provide Model Transformation of Model-Driven Architecture as Web-Based Services Mohammed Abdalla Osman Mukhtar, Mohd Fadzil Hassan, Jafreezal Jaafar	874
Security Modelling along Business Process Model of SOA Systems Using Modified "UMLSOA-Sec" Muhammad Qaiser Saleem, Jafreezal Jaafar, Mohd Fadzil Hassan	880
SOFL-based Approach for Requirements Analysis of Brain Tumor Treatment System A Rahman Mat, Azman Bujang Masli	885
Temporal Property Preservation Under Z Refinement in CSP-OZ Specifications Azman Bujang Masli, Abdul Rahman Mat, Suriati Khartini Jali, Noor Hazlini Borhan	889
Generation Test case from UML Activity Diagram Based on AC Grammar Kanjanee Pechtanun, Supaporn Kansomkeat	895
Context-Aware Instant Messenger with Integrated Scheduling Planner M. A. Md Nawi, N. S. Haron, M. H. Hasan	900
Two Dimensional Password Based Hybrid Authentication Methods in Vulnerable Workflows Sohail Safdar, Mohd Fadzil Hassan	908
A Framework of Software Process Tailoring For Small and Medium Size IT Companies Rehan Akbar, Mohd Fadzil Hassan, Azrai Abdullah	914
Performance Testing: Analyzing Differences of Response Time between Performance Testing Tools  Muhammad Dhiauddin Mohamed Suffian, Fairul Rizal Fahrurazi	919
A Novel Approach of Automation Testing on Mobile Devices Leckraj Nagowah, Gayeree Sowamber	924
Improving Test Data Management in Record and Playback Testing Tools Leckraj Nagowah, Kishan Doorgah	931
Framework and Model design for Higher Education Mash-ups Rabiu Ibrahim	938
A Propose Framework for Requirement Change Management in Global Software Development Arif Ali Khan, Shuib Basri, P.D.D. Dominic	944
Enhancing Decision Support in an Automatic Workflow Management Tool Soulakshmee D. Nagowah, Cedric C.C. Philippe	948
A Framework for Development of Runtime Monitors Ramya Dharam, Sajjan. G. Shiva	953
Techniques for Data-Race Detection and Fault Tolerance: A Survey Yasir Hafeez, Muhammad Azeem Abbas, Ghulam Mustafa	958
A Review on Open Source Architecture in Geographical Information Systems. M. H. Selamat, M. S. Othman, N. H. M. Shamsuddin, N. I. M. Zukepli, A. F.Hassan	962

Paper & Author(s)	Page
An Evolutionary Study of Reusability in Open Source Software Fazal-e-Amin, Ahmad Kamil Mahmood, Alan Oxley	967
MPI and POV-Ray Parallel Solution to Improve Performance of Photo-Realistic Rendering Utilizing Albacore and Sequoia Shawn E. O'Keeffe, Jason Breland, Mohd Fairuz Shiratuddin	973
Improving ERP Integration Sreekeessoon Jaya Devi, Cadersaib Bibi Zarine	979
Data Forecasting to Assist Software Verification & Validation Strategy Preparation Mujiono Sadikin	985
A Prototype of Halal Product Recognition System Murizah Kassim, Cik Ku Haroswati Che Ku Yahaya, Muhammad Hafiz Mazlan Zaharuddin, Zamri Abu Bakar	990
Interoperation of Elements in Process Safety Management Via Ontology-oriented Architecture Yew Kwang Hooi, Mohd Fadzil Hassan, Tan Xiao Ci	995
Interactive Image-based 3D Modeling Mai Babiker Adm, Abas Md Said	1000
Implementation of Software Process Improvement in Pakistan: An Empirical Study Syed Nasir Mehmood Shah, Mehrosh Khalid, Ahmad Kamil Bin Mahmood, Nazleeni Haron, Muhammad Younus Javed	1006
HUMAN FACTORS & ERGONOMICS	
A Study of User Interface Design Principles and Requirements for Developing a Mobile Learning Prototype  Maziar Seraj, Chui Yin Wong	1014
SGameFlow Framework: How to Experience Enjoyment in Serious Game (SG) for Motor Impaired Users (MIU) Nurul Hidayah Mat Zain, Azizah Jaafar, Fariza Hanis Abdul Razak	1020
Eye-tracker Data Analysis in Cephalometric Landmarking Francesco Maiorana, Rosalia Leonardi, Daniela Giordano	1025
A Preliminary Study on Heuristics for Mobile Games Sarmad Soomro, Wan Fatimah Wan Ahmad, Suziah Sulaiman	1030
Manipulating Surveillance Videos Using a Multi-Touch Interface System Suziah Sulaiman, Dayang Rohaya Awang Rambli, Eileen Kho Sing Yee, Ahsanullah Abro	1036
A Preliminary Study on Technique to Visualize Haptic Sensation Fasihah Haji Abd Samad, Suziah Sulaiman, Dayang Rohaya Awang Rambli	1041
Blind Users' Mental Model of Web Page Using Touch Screen Augmented With Audio Feedback Ahmad Hisham Zainal Abidin, Hong Xie, Kok Wai Wong	1046
A Proposed Framework for an Interactive Visuotactile 3D Virtual Environment System for Visuomotor Rehabilitation of Stroke Patients  Mohd Fairuz Shiratuddin, Alen Hajnal, Atilla Farkas, Kok Wai Wong, Gabor Legradi	1052
Empirical Validation of Usability Evaluation Framework for Haptic Systems Muzafar Khan, Suziah Sulaiman, Abas M. Said, Muhammad Tahir	1058
Effects of Culture and Age on Attitudes to Mobile Technology	1062

Paper & Author(s)	Page
Development of Audio Video Describer Using Narration to Visualize Movie Film for Blind and Visually Impaired Children Shadiqin Firdus, Wan Fatimah Wan Ahmad, Josefina Barnachea Janier	1068
Emotional User Experiences in Discussion Board Design: Kansei Methodological Triangulation Approach Prasanna Ramakrisnan, Azizah Jaafar, Noor Faezah Mohd Yatim	1073
Development of Computer Literacy Courseware for Rural Children Using Sarawak Borneo Local Dialects S.H. Subri, S.N. Junaini	1078
A Framework for Developing General Live Multimedia Presentation Applications Rustam Asnawi, Wan Fatimah Wan Ahmad, Dayang Rohaya Awang Rambli	1083
Usability of User Interface Styles for Learning a Graphical Software Application Cpf kuj gj "Hgkl k'cpf "Ej wk" kp"Y qpi	1089
End User's Perspective of Usability in Mobile Learning System Lim Ean Heng, Anbuselvan Sangodiah, Wan Fatimah Wan Ahmad	1095
Mobile Language Translation Game Wan Fatimah Wan Ahmad, Ainol Rahmah Shazi Shaarani, Shafitra Afrizal	1099
Android-based Exercise Application Goh Kim Nee, Muhammad Syazwan Abu Bakar	1105
Development and Usability Study of Multimedia Courseware for Slow Learners: 'Komputer Saya' Norfarhana Abdollah, Wan Fatimah Wan Ahmad, Emelia Akashah Patah Akhir	1110
Mapping Job Requirements of Software Engineers to Big Five Personality Traits Mobashar Rehman, Ahmad Kamil Mahmood, Rohani Salleh, Aamir Amin	1115
Design Consideration for Augmented Reality Book-based Application for Collaborative Learning Environment Wannisa Matcha, Dayang Rohaya Awang Rambli	1123
Readiness Level of Adopting Customized Mobile Learning Management System (CMLMS)in Secondary School Ahmad Sobri Hashim, Wan Fatimah Wan Ahmad	1127