2014 International Conference on Computer, Communications, and Control Technology

(I4CT 2014)

Langkawi, Malaysia 2-4 September 2014



IEEE Catalog Number: ISBN: CFP1452X-POD 978-1-4799-4554-2

TABLE OF CONTENTS

ABOUT THE CONFERENCE		xi
FOREWORD Chairman of I4CT 2014		xii
PROGRAM SCHEDULE		xi]]
KEYNOTE SPEAKERS		хххі
FULL PAPERS		xxx]ji
Title	Page	
Pulse Amplitude and Delay Modulation for Indoor Optical Wireless Communications	1	
Ultra-Low Phase Noise Compact Down-converter with Frequency Coverage of 18-40 GHz	5	
Markov-modulated Bernoulli-based Performance Analysis for BLUE Algorithm Under Bursty and Correlated Traffics	9	
Evaluation of Prosody-Related Features and Word Frequency for Malay Speeches	15	
Performance of PTS Techniques with Varied Partition Size in PAPR Reduction of OFDM System	21	
An Efficient Structure of Variable Fractional-Delay Filter for Digital Time- Delay Beamformer	26	
Deployment of Wireless Sensor Network At Titi Serong Paddy Field Crop, Malaysia	30	
M3DITRACK3R:A Design of an Automated Patient Tracking and Medicine Dispensing Mobile Robot for Senior Citizens	36	
Mobile Sensor Node Traversal Schemes Using Coverage Based Pattern Movement with Uniform Energy Depletion	42	
Indoor Positioning Method Based on Inertial Data, RSSI and Compass From Handheld Smart-Device	48	
Symmetry Based Perceptually Lossless Compression of 3D Medical Images in Spatial Domain	53	
The Cross Platform Application Development Adapted Spring Framework to Support Front-End Tendering Services	58	

Advantage and Drawback of Support Vector Machine Functionality	63
The Role of Mobile Advertising Technology Towards Millennial Social Behavior	66
Form Design Development Study on Autistic Counting Skill Learning Application	70
A Process Warehouse Based Resource Suitability Evaluation Method for Business Process Improvement	75
Determinants Status of Patient After Receiving Treatment At Intensive Care Unit: A Case Study in Johor Bahru	80
PD Controller for Three-Axis Satellite Attitude Control Using Discrete Kalman Filter	83
Simple Model Following Control Design Methods for a Stable and an Unstable Plant	86
Integrated Remote Insulation Condition Monitoring of Generators and Motors Using Traditional and Wireless Sensor Technologies	91
Efficient Low Voltage Amplification Using Self Starting Voltage Regulator for Storage System	97
H Infinity Filtering for Networked Control Systems	101
Enhancing Group Activities with Multidimensional Communication in Collaborative Workspace	105
The Design and Implementation of IEEE 802.15.7 Module with Ns2 Simulator	111
Efficient Acoustic Echo Cancellation Joint with Noise Reduction Framework	116
A Weight-based Greedy Algorithm for Target Coverage Problem in Wireless Sensor Networks	120
Inter-rater Reliability of Accessing the Intelligibility of Band-limited Transformed Speech Using Nonlinear Frequency Compression	126
Desynchronization-based Weighted Scheduling Adaptive to Traffic Load for Wireless Networks	130
An Energy-Efficient Game Theoretic Approach Towards Resource Block and Power Allocation in Femtocell Networks	135
Physical Layer Secrecy Performance with Transmitter Antenna Selection Over Dissimilar Fading Channels	140

Analysis of Soil Moisture Detection Using Ground Penetrating Radar	145
A Novel Baseband UWB Narrow Pulse Generator for Microwave and Through-wall Imaging	151
A Reconfigurable Multiband Antenna for WLAN and WiMAX Applications	156
Energy-limited Ant Colony Optimization with Cooperative Transmission	161
Architecture of Software Tools for Domain-Specific Mathematical Modelling	166
Medical Image Compression Using Block-based PCA Algorithm	171
Data Warehouse for Human Resource by Ministry of Higher Education and Scientific Research	176
Follow Up System for Directorate of Scholarship and Cultural Relations in Iraq	182
A Review of Reversible Medical Image Watermarking Scheme with Tamper Localization and Recovery Capability	188
Using Molecular Algorithm in Keystroke Dynamics	193
Authentication System for Medical Images Using Hilbert Numbering	198
Interactive Augmented Reality Art Book to Promote Malaysia Traditional Game	203
Knowledge Management Health Status Assessment: A South African Government Department Case Study	209
Performance Study and Evaluation of a Solar PV Testbed System in Brunei Darussalam	214
Design of a RFID-based Speed Monitoring System for Road Vehicles in Brunei Darussalam	219
Situational Requirement Engineering Framework for Global Software Development	224
Using a Biometric System to Control Access and Exit of Vehicles At Tshwane University of Technology	230
Workstations Uptime Analysis Framework to Identify Opportunity for Forming Ad-Hoc Computer Clusters	234
SQL Injection Vulnerability General Patch Using Header Sanitization	239
Analysis of Retrieval Result on Ontology-Based Query Reformulation	244

Effect of Chronic Obstructive Pulmonary Disease on Airflow Motion Using Computational Fluid Dynamics Analysis	249
A Conceptual Framework for Securing Connected or Federated Clouds	255
Impact of Personality and Gender Diversity on Software Development Teams' Performance	261
Quality of Service (QoS) Model for Web Service Selection	266
Reliable Wireless Obstacle Detection System for Elderly and Visually Impaired People with Multiple Alarm Units	271
Pronunciation Errors of Non-Arab Learners of Arabic Language	277
Determination of Optimal Service Level in Cloud E-Marketplaces Based on Service Offering Delay	283
Design and Synthesis of Reversible Arithmetic and Logic Unit (ALU)	289
0 dB Coupler Employing Slot Technique on Planar Microstrip	294
Quad Ring Patch Antenna Design for VHF/UHF Application	300
DSP Techniques for Reducing Chromatic Dispersion in Optical Communication Systems	305
CAWIS: Context Aware Wireless Irrigation System	310
Impact of Test Area in Antenna Gain Measurement Using Image Theory	316
A Neural Network Based Model for Radiated Emissions Prediction From High Speed PCB Traces	320
Recent Open Source Wireless Sensor Network Supporting Simulators: A Performance Comparison	324
Selective Update Euclidean Direction Search Algorithm for Adaptive Filtering in Indoor Wireless Rake-Receiver	329
Sentiment Analysis Using Support Vector Machine	333
SQL Injections Attack and Session Hijacking on E-Learning Systems	338
Forensic Challenges in Mobile Cloud Computing	343
i-Wirid: Construction of Digital Wirid Via Mobile Platform	348
Region of Adaptive Threshold Segmentation Between Mean, Median and OTSU Threshold for Dental Age Assessment	353
The Cost of Virtualization Implementation in Volunteer Computing	357

Study of S-box Properties in Block Cipher	362
A Study in Data Security in Cloud Computing	367
Development of Android Based On-Line Monitoring and Control System for Renewable Energy Sources	372
Contactless Energy Transfer Using Acoustic Approach - A Review	376
Altitude Controller Design for Multi-Copter UAV	382
Design of Robust Controller for Networked Control System	388
Time Series Method for Machine Performance Prediction Using Condition Monitoring Data	394
Dual Braille Code Translator: Basic Education Tool for Visually Impaired Children	399
Comparison the Performance of OFDM System Based on Multi-Wavelet Transform with Different Modulation Schemes	403
Behavior of LSSVM and SVM Channel Equalizers in Presence of Non- Gaussian Noise	407
3GHz Hairpin Filter with Defected Ground Structure (DGS) for Microwave Imaging Application	411
Classification Model for Multi-Sensor Data Fusion Apply for Human Activity Recognition	415
iWire - A Broken Wire Detector for Electrical Appliances	420
Development of CAPTCHA System Based on Puzzle	426
Developing an Architectural Visualization Using 3D for Photo Tourism	429
Sound Analyser for Bioacoustic Monitoring System Using LabVIEW	434
User Satisfaction Based Quantification of Direct Trust in T-Grid Computational Model	438
Driver's Health Management System Using Nanosecond Pulse Near-field Sensing Technology	443
Model of Competency for Personalized Training in B2B for Sports Industry	447
A Case Study for the Cloud Computing Security Threats in a Governmental Organization	452
Artificial Neural Network Based Arousal Detection From Sleep Electroencephalogram Data	458

Reversible Watermarking Based on Sorting Prediction Scheme	463	
A New Orthogonal - Diamond Search Algorithm for Motion Estimation	467	
Secured Web Application Using Combination of Query Tokenization and Adaptive Method in Preventing SQL Injection Attacks	472	
Digital Image Compression Using Block Truncation Coding and Walsh Hadamard Transform Hybrid Technique	477	
COMMITTEE Organizing Committee		xxxiv
AUTHORS INDEX LIST OF REVIEWERS		xxxv xlii
ACKNOWLEDGEMENT Organizer and Supporters		xlvii