2013 International Conference on **Computer, Control, Informatics** and Its Applications

(IC3INA 2013)

Jakarta, Indonesia 19-21 November 2013



IEEE Catalog Number:

CFP13YAD-POD **ISBN**: 978-1-4799-1077-9

Contents

[Plenary Speaker] Biological "blind-tracking" task through artificial Intelligence Md. Mahmud Hasan	1
[Plenary Speaker] KE AS AFFECTIVE DESIGN METHODOLOGY Anitawati Mohd Lokman	7
[Plenary Speaker] What do Machine Learning and Particle Swarm Optimization have to do with Content-Based Search in Large Multimedia Databases? Moncef Gabbouj	15
[Plenary Speaker] Remote Sensing: Searching Better Accuracy for Greenhouse Gasses Monitoring Bernadetta Kwintiana Ane	17
Fuzzy-Based Spectrum Handoff and Channel Selection for Cognitive Radio Networks Ejaz Ahmed, Liu Yao, Salman Ali, Muhammad Shiraz and Abdullah Gani	23
PEGAS: Partitioned GTS Allocation Scheme for IEEE 802.15.4 Networks M. Udin Harun Al Rasyid, Lee Bih-Hwang and Amang Sudarsono	29
Goal Programming based Multi-criteria Decision-making for Distributed Denial of Service Attacks in Wireless Sensor Networks Rolla Alomary and Salman Khan	33
Proposed Analysis of Dust and Sand Storms Effects on Satellite Links in Saudi Arabia Abdulaziz Alyami, Kamal Harb, Samir Abduljauwad, Omair Butt, Abdullah, and Amin Suharjono	
Performance Analysis of Coordinated Distributed Data Scheduling Schemes in Wireless Mesh Network Dwi Rochma Agustiningsih, Nachwan Mufti Adriansyah and Tody Ariefianto	43
Hop Distances Optimization for Balancing The Energy Consumption of Multi-hop Clustered Wireless Sensor Networks Amin Suharjono, Wirawan Wirawan and Gamantyo Hendrantoro	49
Identification of Orchid Species Using Content-Based Flower Image Retrieval Diah Harnoni Apriyanti, Aniati Murni Arymurthy and Laksana Tri Handoko	53
Semi Automatic Detector of Plasmodium Falciparum on Microscope Image Based Iis Hamsir Ayub Wahab, Adhi Susanto, P. Insap Santosa and Maesadji Tjokronegoro	
Weaving Effects in Metamorphic Animation of Tree-like Fractal based on a Family of Multi-transitional Iterated Function System Code Tedjo Darmanto, Iping Supriana Suwardi and Rinaldi Munir	65

Portable Smart Sorting and Grading Machine for Fruits Using Computer Vision Hadha Afrisal, Muhammad Faris, Guntur Prasetyo, Lafiona Grezelda, Indah Soesanti and Mochammad Firdaus	71
Paddy Diseases Identification with Texture Analysis using Fractal Descriptors Based on Fourier Spectrum Auzi Asfarian, Yeni Herdiyeni and Aunu Rauf	77
Hybrid K-Means Clustering With Region Growing Algorithm For Acute Leukemia Blood Cells Image Segmentation Farah Hanim Abdul Jabar, Waidah Ismail, Rosalina Abdul Salam and Rosline Hassan	
Optimal Energy Control of DC Motor Speed Control: A Comparative Study Hari Maghfiroh, Oyas Wahyunggoro and Adha Imam Cahyadi	89
Control of a Magnetic Levitation System Using Feedback Linearization Rudi Uswarman, Adha Imam Cahyadi and Oyas Wahyunggoro	95
Stable Extended Predictive Control Daniel Viudez-Moreiras, Angelo Raimondi, Isaias Martin and Juan Martin-Sanchez	
A Robust Feedback Gains for Linear Systems with Multiple Delay Components Adha Cahyadi and Yoshio Yamamoto	105
Auto-Tuning Quadcopter Using Loop Shaping Hilton Tnunay, Muhammad Abdurrohman, Yuliyanto Nugroho, Reka Inovan, Adha Cahyadi and Yoshio Yamamoto	111
A Comparative Study of PID, ANFIS and Hybrid PID-ANFIS Controllers for Speed Control of Brushless DC Motor Drive Hidayat Tanjung, Sasongko Pramonohadi, Sarjiya and Suharyanto	117
Adaptive Prefetching of Podcasts in a Limited Bandwidth Network Windhya Hansinie Rankothge and Gihan Dias	
Performance Evaluation of Coarse Time Synchronization on OFDM under Multipath Channel Suyoto, Agus Subekti and Sugihartono	129
Application of Extremal Optimization Algorithm to Multi-objective Topology Design of Enterprise Networks Salman Khan	135
Design and implementation of an Internet of Things based Quality Control System Yuhao Deng, Haiping Zhu, Guojun Zhang and Hui Yin	141
Delta Encoding Based Data Compression for Coastal Radar Nuryani and Hendrawan	147
Comparison Proactive and Reactive Routing Protocol in Mobile Adhoc Network Based on Ant Algorithm Istikmal, Leanna Vidya Yovita and Basuki Rahmat	153
Whitefly (Bemisia tabaci) Calculation Based on Image Processing using Triangle Method Doddy Tri Hytomo and Veni Herdineni	

Application Image Processing to Predict Personality Based on Structure of Handwriting and Signature Esmeralda Contessa Djamal, Sheldy Nur Ramdlan and Risna Darmawati	163
Sugarcane Leaf Color Classification in Sa*b* Color Element Composition Hari Ginardi, Riyanarto Sarno and Tri Adhi Wijaya	
Spline and Color Representation for Batik Design Modification Nanik Suciati, Anny Yuniarti, Chastine Fatichah and Rizky Januar Akbar	173
An improvement technique of fragile watermarking to assurance the data integrity on vector maps Shelvie Nidya Neyman, Fransisca Cahyono and Benhard Sitohang	179
A Lithium-ion Battery Modeling For A HIL-Battery Simulator Grace Pebriyanti	185
A Comprehensive Characterization of A Linear Deformation Sensor for Applications in Triaxial Compression Tests Riska Ekawita, Khairurrijal Khairurrijal, Hasbullah Nawir, Suprijadi Suprijadi and Muhammad M. Munir	191
Design Mini SCADA For Furnace Induction Reactor of Kernel Coating Adi Abimanyu, Sukarman Sukarman, Gina Kusuma, Jumari Jumari, Triyono Triyono and Dwi Yuliansari Nurazizah	195
Breaking Through Memory Limitation in GPU Parallel Processing Using Strassen Algorithm Pujianto Yugopuspito, Sutrino Cahya and Robertus Hudi	201
Experimental Study of DC Motor Control via Communication Network using Markovian Jump System Approach Indra Sakti, Bambang Riyanto Trilaksono and Asep Najmurrokhman	207
Comparison the Insertion Attack Effects on Randomness Property of Dragon and Rabbit Stream Cipher Desi Wulandari, Aries Kumala, Setyo Nugroho and Santi Indarjani	213
Implementation of Insertion Attack on Pseudorandom Number Generator ANSI X9.17 and ANSI X9.31 based on Statistical Distance Tests and Entropy Difference Tests Kuni Inayah, Bondan Estuwira Sukmono, Rahmat Purwoko and Santi Indarjani	219
Supporting Decision Making in Situational Crime Situation using Fuzzy Association Rule Noor Maizura Mohamad Noor, Wan Mohd Farhan Wan Nawawi and Ahmad Faiz Ghazali	225
Dengue Notification System using Fuzzy Logic Rajul Rosli Razak, Rosmawati Abd. Wahab, and Muhammad Hermi Ramli	231
Linear-Quadratic Cost Function for Dynamic System Modelling Using Recurrent Neural Networks Erwin Sitompul	237

Commodity Price Prediction Using Neural Network, Case Study: Crude Palm Oil Price Robert Gunawan, Masayu Leylia Khodra and Harlili	243
A Web-Based IT Asset Management Application Using Fuzzy Logic in Vendor Selection Process Valencia Wijaya, Ririn Ikana Desanti and Samuel Lukas	24 9
$ \begin{array}{c} \textbf{Linear Function and Inverse Function with Weight Ratio for Improving Learning Speed of Multi-layer Perceptrons Feed-forward Neural Networks \\ \textit{Dian Andriana} \end{array} $	25 5
Application Distribution Model In Volunteer Computing Environment Using Peerto-Peer Torrent Like Approach Yustinus Soelistio	261
Weighted Ontology and Weighted Tree Similarity Algorithm for Diagnosing Diabetes Mellitus Sugiyanto, Widhy Hayuhardhika Nugraha Putra, Riyanarto Sarno and Mohamad Sidiq	267
An Empirical Study of Unethical Behavior in a Tertiary Institution in Malaysia Azhar Abd Aziz, Arwin Idham Mohamad, Anitawati Mohd Lokman and Zawiyah Mohammad Yusof	
Data Center for Integrating Weather Monitoring Systems Purnomo Husnul Khotimah and Devi Munandar	27 9
Indonesian Hadith Retrieval System using Thesaurus Ikhsan Rasyidi, Ade Romadhony and Agung Toto Wibowo	285
Predict Fault-Prone Classes using the Complexity of UML Class Diagram $Arwin\ Halim$	289
Text Message Categorization of Collaborative Learning Skills in Online Discussion Using Support Vector Machine Erlin, Unang Rio and Rahmiati	295
PRODML Performance Evaluation as SOT Data Exchange Standard Bobby Suryajaya and Charles Lim	301
Support Vector Regression for Service Level Agreement Violation Prediction Ahmad Fadzil M Hani, Irving Vitra Paputungan, and M Fadzil Hassan	307
A Collaborative Portal for Integrating Resources in Grids Al Farisi and Irving Paputungan	313
Clustering of ERP Business Process Fragments Riyanarto Sarno, Hari Ginardi, Endang Wahyu Pamungkas and Dwi Sunaryono	319
Integration of Genetic And Tabu Search Algorithm Based Load Balancing for Heterogenous Grid Computing Irfan Darmawan, Kuspriyanto, Yoga Priyan and Ian Joseph M	325
Multi Agents based Traditional Market Customers Behavior Design	331

Decision Mining for Multi Choice Workflow Patterns	337
Riyanarto Sarno, Putu Linda I. Sari, Hari Ginardi, Dwi Sunaryono and Imam Mukhlash	
Accelerating Genetic Schema Processing Through Local Search	343
Tarek El-Mihoub, Adrian Hopgood and Ibrahim Aref	
7	