2015 International Conference on Advanced Computer Science and Information Systems (ICACSIS 2015)

Depok, Indonesia 10-11 October 2015



IEEE Catalog Number: ISBN: CFP1519R-POD 978-1-5090-0364-8

Copyright © 2015 by the Institute of Electrical and Electronic Engineers, Inc All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP1519R-POD
ISBN (Print-On-Demand):	978-1-5090-0364-8
ISBN (Online):	978-1-5090-0363-1

Additional Copies of This Publication Are Available From:

Curran Associates, Inc 57 Morehouse Lane Red Hook, NY 12571 USA Phone: (845) 758-0400 Fax: (845) 758-2633 E-mail: curran@proceedings.com Web: www.proceedings.com



Table Of Contents

Welcome Message from General Chairs	i
Welcome Message from Dean of the Faculty of Computer Science Universitas Indonesia	iii
Committee	v
Program at a Glance	ix
Table of Contents	xiii
Invited Papers	
Auto-adaptive Software Product Lines using the ABS Language	1
Radu Muschevichi	
Dynamics of NYSE Correlation Structure during Global Crisis in 2008: Evidence from	7
Complex Network Analysis	
Maman Abdurachman Djauhari	
Advanced targets association based on GPU computation of PHD function	13
Jan Pidanic, Tomas Shejbal, Zdenek Nemec, Heru Suhartanto	
Agent-Based Modelling for Developing Pervasive Persuasive Systems	23
Budhitama Subagdja	
Developing Smart Telehealth System in Indonesia : Progress and Challenge	29
Wisnu Jatmiko	
Computer Networks, Computer Architecture, and High Performance Computing	

Fetal State Classification from Cardiotography Based on Feature Extraction Using	37
Hybrid K-Means and Support Vector Machine	

Nurul Chamidah, Ito Wasito

Automatic Plant Watering Controller Component Using FPGA Device	43
Ima Primisima, Sunny Arief Sudiro, Bheta Agus Wardijono	
Optimization Process of Glycerol Esterification Using Real Time Adaptive Control	51
Iwan Aang Soenandi, Ani Suryani, Taufik Djatna, Irzaman	
Ontology Model Development based on Generic Object Oriented Smart Home Model	57
Yulistian Wardhana, Gladhi Guarddin, Bob Hardian	
Implementation of Adaptive Fuzzy Neuro Generalized Learning Vector Quantization	65
(AFNGLVQ) on Field Programmable Gate Array (FPGA) for Real World Application	
Irfan Nur Afif, Yulistian Wardhana, Wisnu Jatmiko	
Digital Learning & Distance Learning	

Analysis of Factors Affecting User Acceptance of the Implementation of ClassCraft E- 73 Learning: Case Studies Faculty of Information Technology of Tarmanagara University

Darius Haris, Elvina Sugito

Genetic Algorithm Based Multi-objective Optimization of Wheat Flour Supply Chain 79 Considering Raw Material Substitution

Trisna, Marimin, Yandra Arkeman, Titi Candra Sunarti

Enterprise Computing

Formulating Implementation Strategy for Enterprise Content Management System Using85Soft System Methodology: A Case of A Marine Logistics Company in Indonesia

Sunu Wicaksono, Muhammad Rifki Shihab, Puspa Sandhyaduhita

Enhancing Efficiency of Enterprise Digital Rights Management

91

Ahmed H. Soliman, Maged H. Ibrahim, Salwa H. El-Ramly

Formal Methods in Software Engineering

Robust Kurtosis Projection for Multivariate Outier Labeling	97
Dyah Erny Herwindiati	
Children and Adults Schemes in Categorization of Basic Objects and Mobile Applications	103
Lumpapun Punchoojit and Nuttanont Hongwarittorrn	
Information Retrieval	
Indonesian-Japanese Term Extraction from Bilingual Corpora Using Machine Learning	111
Ayu Purwarianti	
Tandem Repeat Analysis in DNA Sequences based on improved Burrows-Wheeler Transform Algorithm	117
Peter Juma Ochieng, Taufik Djatna	
Combination of SVD and K-means Method for Topic Detection in Twitter	123
Khumaisa Nur'aini, Ibtisami Najahaty, Lina Hidayati, Hendri Murfi, Siti Nurrohmah	
Spark-Gram: Mining Frequent N-grams Using Parallel Processing in Spark	129
Prasetya Ajie Utama, Bayu Distiawan	
Knowledge Representation System for Copula Sentence in Bahasa Indonesia Based on Web Ontology Language (OWL)	137
Denis Eka Cahyani, Ruli Manurung, and Rahmad Mahendra	
A Two-Stage Emotion Detection on Indonesian Tweets	143
Johanes Effendi The, Alfan Farizki Wicaksono, Mirna Adriani	
Stock Price Prediction using Linear Regression based on Sentiment Analysis	147
Yahya Eru Cakra, Bayu Distiawan Trisedya	

Phrase-based Clause Extraction for Open Information Extraction System 155

Ade Romadhony, Dwi H. Widyantoro, Ayu Purwarianti

An Automatic Health Surveillance Chart Interpretation System Based on Indonesian 163 Language

Indra Aulia, Ari Moesriami Barmawi

Information Quality Assessment for User Perception on Indonesia Kreatif Web Portal 171

Arfive Gandhi, Muhammad Rifki Shihab, Satrio B. Yudhoatmojo, Achmad Nizar Hidayanto

IT Governance & E-Government

Factors Affecting Knowledge Sharing and Its Effect on Performance of Higher Education 177 Technical and Vocational Agriculture in Java

Sofiyanti Indriasari, Dana Indra Senuse, Elin Cahyaningsih

Personal Traits as Antecedents Towards Intention to Use: A Perspective of a Government 183 EDMS Adoption in Indonesia

Karyanto Wijaya, Betty Purwandari, Muhammad Rifki Shihab

E-Audit System Acceptance in the Public Sector: An Indonesian Perspective 189

Ferry Purwantoro, Betty Purwandari, Muhammad Rifki Shihab

Image Processing, Pattern Recognition, and Content-Based Image Retrieval

Road Detection System based on RGB Histogram Filterization and Boundary Classifier 195

M.D. Enjat Munajat, Dwi H. Widyantoro, Rinaldi Munir

A Monsoon Onset and Offset Prediction Model Using Backpropagation and Moron 201 Method A case in Drought Region

Syeiva Nurul Desylvia, Taufik Djatna, Agus Buono

Mangifera indica Real-Time Quality Classifications Using Codebook Segmentation and 207 Mass-Size Correlation Equations

Timotius Devin, Muhammad Ashyar Agmalaro

A Classification System for Jamu Efficacy Based on Formula Using Support Vector 215 Machine and K-Means Algorithm as a Feature Selection

Melyinda Nur Puspita, Wisnu Ananta Kusuma, Aziz Kustiyo, Rudi Heryanto

Clustering Protein-Protein Interaction Network of TP53 Tumor Suppressor Protein using 221 Markov Clustering Algorithm

Thia Sabel Permata, Alhadi Bustamam

Online Marginalized Linear Stacked Denoising Autoencoders for Streaming Big Data 227 Arif Budiman, Mohamad Ivan Fanany, Chan Basaruddin

An Adaptive Selective Background Learning-Hole Filling Algorithm to Improve Vehicle 237 Detection

Machmud R Alhamidi, Qurrotin Ayunina, Ari Wibisono, Petrus Mursanto, and Wisnu Jatmiko

Genetic Algorithm Optimization for Extreme Learning Machine based Microalgal Growth 243 Forecasting of Chlamydomonas sp.

D. M. J. Purnomo, S. C. Purbarani, A. Wibisono, D. Hendrayanti, A. Bowolaksono, P. Mursanto, D. H. Ramdhan, W. Jatmiko

Evolutionary-based Segment Selection for Higher-order Conditional Random Fields in 249 Semantic Image Segmentation

> Novian Habibie, Vektor Dewanto, Jogie Chandra, Fariz Ikhwantri, Harry Budi Santoso, Wisnu Jatmiko

ECG Signal Compression by Using Predictive Coding And Set Partitioning in 257 Hierarchical Trees (SPIHT)

Grafika Jati , Aprinaldi, Wisnu Jatmiko

Multi Codebook LVQ-Based Artificial Neural Network Using Clustering Approach	263
M. Anwar Ma'sum, Hadaiq R. Sanabila, Aprinaldi, Wisnu Jatmiko	
Development of Travel Speed Detection Method in Welding Simulator using Augmented Reality	269
Ario Baskoro	
Leaf Vein Segmentation of Medicinal Plant Using Hessian Matrix	275
Adzkia Salima, Yeni Herdiyani, Stephane Douady	
Weather Forecasting using Deep Learning Techniques	281
Afan Galih Salman, Bayu Kanigoro, Yaya Heryadi	
Landmark Analysis of Leaf Shape Using Dynamic Threshold Polygonal Approximation	287
Wisard W Kalengkongan, Yeni Herdiyeni, Bib P Silalahi, Stephane Douady	
Periodic Update and Automatic Extraction of Web Data for Creating a Google Earth Based Tool	293
Taufik Fuadi Abidin, M. Subianto, T. A. Gani, R. Ferdhiana	
Sleep Stage Classification using Simple Popular Classifier	297
Endang Purnama Giri, Aniati Murni Arymurthy, Mohammad Ivan Fanany, Sastra Kusuma Wijaya	
Segmenting and Targeting Customers Through Clusters Selection & Analysis	303
Ilung Pranata, Geoff Skinner	
Learning the search heuristic for combined task and motion planning	309
Vektor Dewanto	
Application of Hierarchical Ordered Partitioning and Collapsing Hybrid Method to Analyzing Phylogenetically on Ebola Virus	317
Hengki Muradi, Alhadi Bustamam, Dian Lestari	

Gestalt Geometric CAPTCHA	325
Suttikiat Meelap, Nuttanont Hongwarittorrn	
Index	331