

2014 International Conference on Advanced Computer Science and Information Systems

(ICACISIS 2014)

**Jakarta, Indonesia
18-19 October 2014**



**IEEE Catalog Number: CFP1419R-POD
ISBN: 978-1-4799-8076-5**

Table of Contents

Welcome Message from General Chairs	i
Welcome Message from Dean of Faculty of Computer Science University of Indonesia	iii
Committees	v
Conference Information	ix
Program Schedule	x
Table of Contents	xiii
Computer Networks, Architecture & High Performance Computing	
Multicore Computation of Tactical Integration System in the Maritime Patrol Aircraft using Intel Threading Building Block	1
<i>Muhammad Faris Fathoni, Bambang Sridadi</i>	
Immersive Virtual 3D Environment based on 499 fps Hand Gesture Interface	7
<i>Muhammad Sakti Alvissalim</i>	
Improve fault tolerance in cell-based evolve hardware architecture	13
<i>Chanin Wongyai</i>	
A New Patients' Rights Oriented Model of EMR Access Security	19
<i>YB Dwi Setianto, Yustina Retno W. Utami</i>	
Element Extraction and Evaluation of Packaging Design using Computational Kansei Engineering Approach	25
<i>Taufik Djatna, Fajar Munichputranto, Nina Hairiyah, Elfira Febriani</i>	
Integrated Information System Specification to Support SSTC	33
<i>Ahmad Tamimi Fadhilah</i>	
A Real Time Simulation Model Of Production System Of Glycerol Ester With Self Optimization	41
<i>Iwan Aang Soenandi, Taufik Djatna</i>	

Development of University of Indonesia Next Generation Firewall Prototype and Access Control With Deep Packet Inspection 47

Harish Muhammad Nazief, Tonny Adhi Sabastian, Alfian Presekal, Gladhi Guarddin

Reliable Data Delivery Mechanism on Irrigation Monitoring System 53

Junaidy Budi Sanger, Heru Sukoco, Satyanto Saptomo

E-Government

Evaluation on People Aspect in Knowledge Management System Implementation: A Case Study of Bank Indonesia 57

Putu Wuri Handayani

Government Knowledge Management System Analysis: Case Study Badan Kepegawaian Negara 67

Elin Cahyaningsih, lukman -, Dana Indra Sensuse

Shared Service in E-Government Sector: Case Study of Implementation in Developed Countries 75

Ravika Hafizi, Suraya Miskon, Azizah Abdul Rahman

GIS-based DSS in e-Livestock Indonesia 84

Arief Ramadhan, Dana Indra Sensuse, Muhammad Octaviano Pratama, Vina Ayumi

Influence Of Presidential Candidates E-Campaign Towards Voters In 2014 Presidential Election In Republic Of Indonesia 90

Yani Nurhadryani, Anang Kurnia, Irsyad Satria

Information Security Risk Management Planning: A Case Study at Application Module of State Asset Directorate General of State Asset Ministry of Finance 96

Sigit Prasetyo, Yudho Giri Sucahyo

Campaign 2.0: Analysis of Social Media Utilization in 2014 Jakarta Legislative Election 102

Dean Apriana Ramadhan

Towards Maturity Model for E-Government Implementation Based on Success Factors	108
<i>Darmawan Baginda Napitupulu</i>	
The Critical Success Factors to Develop an Integrated Application of Tuna Fishing Data Management in Indonesia	113
<i>Devi Fitriannah, Nursidik Heru Praptono, Achmad Nizar Hidayanto, Aniati Murni Arymurthy</i>	
A Conceptual Paper on ICT as National Strategic Resources toward National Competitiveness} {Basuki Yusuf Iskandar and Fadhilah Mathar	119
<i>Basuki Yusuf Iskandar and Fadhilah Mathar</i>	
Enterprise Computing	
Quality Evaluation of Airline's E-Commerce Website, A Case Study of AirAsia and Lion Air Websites	125
<i>Farah Shafira Effendi, Ika Alfina</i>	
Hotspot Clustering Using DBSCAN Algorithm and Shiny Web Framework	129
<i>Karlina Khiyarin Nisa</i>	
Analysis of Trust Presence Within E-Commerce Websites: A Study of Indonesian E-Commerce Websites	133
<i>Muhammad Rifki Shihab, Sri Wahyuni, Ahmad Nizar Hidayanto</i>	
The Impact of Customer Knowledge Acquisition to Knowledge Management Benefits: A Case Study in Indonesian Banking and Insurance Industries	139
<i>Muhammad Rifki Shihab, Ajeng Anugrah Lestari</i>	
A System Analysis and Design for Sorghum Based Nano-Composite Film Production	145
<i>Belladini Lovely, Taufik Djatna</i>	
Moving Towards PCI DSS 3.0 Compliance: A Case Study of Credit Card Data Security Audit in an Online Payment Company	151
<i>Muhammad Rifki Shihab, Febriana Misdianti</i>	

An Analysis and Design of Traceability In FrozenVannname Shrimp Product based on Digital Business Ecosystem 157

Taufik Djabatna, Aditia Ginantaka

Bayesian Rough Set Model in Hybrid Kansei Engineering for Beverage Packaging Design 165

Azrifirwan, Taufik Djabatna

Predicting Smart Home Lighting Behaviour from Sensors and User Input using Very Fast Decision Tree with Kernel Density Estimation and Improved Laplace Correction 171

Ida Bagus Putu Peradnya Dinata, Bob Hardian

Visual Usability Design for Mobile Application Based On User Personality 177

Riva Aktivia, Taufik Djabatna, and Yani Nurhadryani

Formal Method Software Engineering

Interaction between users and buildings: results of a multicriteria analysis 183

Audrey Bona, Jean-Marc Salotti

Digital watermarking in audio for copyright protection 189

Hemis Mustapha, Boudraa Bachir

An Extension of Petri Network for Multi-Agent System Representation 195

Pierre Sauvage

Enhancing Reliability of Feature Modeling with Transforming Representation into Abstract Behavioral Specification (ABS) 201

Muhammad Irfan Fadhillah

Making "Energy-saving Strategies": Using a Cue Offering Interface 207

Yasutaka Kishi, Kyoko Ito, Shogo Nishida

Extending V-model practices to support SRE to build Secure Web Application 213

Ala Ali Abdulrazeg

Social Network Analysis for People with Systemic Lupus Erythematosus using R4 Framework	219
<i>Arin Karlina, Firman Ardiansyah</i>	
Experiences Using Z2SAL	225
<i>Maria Ulfah Siregar, John Derrick, Siobhan North, Anthony J.H. Simons</i>	
Information Retrieval	
Relative Density Estimation using Self-Organizing Maps	233
<i>Denny</i>	
Creating Bahasa Indonesian - Javanese Parallel Corpora Using Wikipedia Articles	239
<i>Bayu Distiawan Trisedya</i>	
Classification of Campus E-Complaint Documents using Directed Acyclic Graph Multi-Class SVM Based on Analytic Hierarchy Process	247
<i>Imam Cholissodin, Maya Kurniawati, Indriati, Issa Arwani</i>	
Framework Model of Sustainable Supply Chain Risk for Dairy Agroindustry Based on Knowledge Base	255
<i>Winnie Septiani</i>	
Physicians' Involvement in Social Media on Dissemination of Health Information	262
<i>Pauzi Ibrahim Nainggolan</i>	
A Spatial Decision Tree based on Topological Relationships for Classifying Hotspot Occurrences in Bengkalis Riau Indonesia	268
<i>Yaumil Miss Khoiriyah, Imas Sukaesih Sitanggang</i>	
Shallow Parsing Natural Language Processing Implementation for Intelligent Automatic Customer Service System	274
<i>Ahmad Eries Antares, Adhi Kusnadi, Ni Made Satvika Iswari</i>	
SMOTE-Out, SMOTE-Cosine, and Selected-SMOTE: An Enhancement Strategy to Handle Imbalance in Data Level	280

<i>Fajri Koto</i>	
Adaptive Information Extraction of Disaster Information from Twitter	286
<i>Ralph Vincent Javellana Regalado</i>	
Citation Sentence Identification and Classification for Related Work Summarization	291
<i>Dwi Hendratmo Widyantoro, Imaduddin Amin</i>	
Experiments on Keyword List Generation By Term Distribution Clustering For Social Media Data Classification	297
<i>Wilson Fonda, Ayu Purwarianti</i>	
Tourism Recommendation Based on Vector Space Model and Social Recommender Using Composite Social Media Extraction	303
<i>Husnul Khotimah, Taufik Djatna, Yani Nurhadryani</i>	
Learning to Rank for Determining Relevant Document in Indonesian-English Cross Language Information Retrieval using BM25	309
<i>Syandra</i>	
Pattern Recognition & Image Processing	
Forecasting the Length of the Rainy Season Using Time Delay Neural Network	315
<i>Agus Buono, Muhammad Asyhar Agmalara, Amalia Fitranty Almira</i>	
Hybrid Sampling for Multiclass Imbalanced Problem: Case Study of Students' Performance Prediction	321
<i>Wanthanee Prachuabsupakij, Nuanwan Soonthornphisaj</i>	
Multi-Grid Transformation for Medical Image Registration	327
<i>Porawat Visutsak</i>	
Model Prediction for Accreditation of Public Junior High School in Bogor Using Spatial Decision Tree	333
<i>Endang Purnama Giri, Aniati Murni Arymurthy</i>	

Application of Decision Tree Classifier for Single Nucleotide Polymorphism Discovery from Next-Generation Sequencing Data	339
<i>Muhammad Abrar Istiadi, Wisnu Ananta Kusuma, I Made Tasma</i>	
Alternative Feature Extraction from Digitized Images of Dye Solutions as a Model for Algal Bloom Remote Sensing	345
<i>Roger Luis Uy, Joel Ilao, Eric Punzalan, Prane Mariel Ong</i>	
Iris Localization using Gradient Magnitude and Fourier Descriptor	351
<i>Stewart Sentanoe, Anto S Nugroho, Reggio N Hartono, Mohammad Uliniansyah, Meidy Layooari</i>	
Multiscale Fractal Dimension Modelling on Leaf Venation Topology Pattern of Indonesian Medicinal Plants	357
<i>Aziz Rahmad</i>	
Fuzzy C-Means for Deforestation Identification Based on Remote Sensing Image	363
<i>Setia Damawan Afandi</i>	
Quantitative Evaluation for Simple Segmentation SVM in Landscape Image	369
<i>Endang Purnama Giri, Aniati Murni Arymurthy</i>	
Identification of Single Nucleotide Polymorphism using Support Vector Machine on Imbalanced Data	375
<i>Lailan Sahrina Hasibuan</i>	
Development of Interaction and Orientation Method in Welding Simulator for Welding Training Using Augmented Reality	381
<i>Ario Sunar Baskoro</i>	
Tracking Efficiency Measurement of Dynamic Models on Geometric Particle Filter using KLD-Resampling	385
<i>Alexander Agung Santoso Gunawan</i>	
Nonlinearly Weighted Multiple Kernel Learning for Time Series Forecasting	390
<i>Agus Widodo, Indra Budi, Belawati Widjaja</i>	

Distortion Analysis of Hierarchical Mixing Technique on MPEG Surround Standard	396
<i>Ikhwana Elfitri</i>	
A Comparison of Backpropagation and LVQ : a case study of lung sound recognition	624
<i>Fadhilah Syafria</i>	
ArcPSO: Ellipse Detection Method using Particle Swarm Optimization and Arc Combination	408
<i>Ikhsanul Habibie</i>	
3D Virtual Pet Game “Moar” With Augmented Reality to Simulate Pet Raising Scenario on Mobile Device	414
<i>Cliffen Allen, Jeanny Pragantha, Darius Andana Haris</i>	
Automatic Fetal Organs Segmentation Using Multilayer Super Pixel and Image Moment Feature	420
<i>M. Anwar Ma'sum</i>	
Integration of Smoke Dispersion Modeling with Earth’s Surface Images	428
<i>Albertus Sulaiman</i>	
Performance of Robust Two-dimensional Principal Component for Classification	434
<i>Diah E. Herwindiati, Sani M. Isa, Janson Hendryli</i>	
Pareto Frontier Optimization in Soccer Simulation Using Normalized Normal Constraint	442
<i>Darius Andana Haris</i>	
Fully Unsupervised Clustering in Nonlinearly Separable Data Using Intelligent Kernel K-Means	450
<i>Teny Handayani, Ito Wasito</i>	
Robust Discriminant Analysis for Classification of Remote Sensing Data	454
<i>Wina, Dyah E. Herwindiati, Sani M. Isa</i>	
Automatic Fetal Organs Detection and Approximation In Ultrasound Image Using Boosting Classifier and Hough Transform	460

M. Anwar Ma'sum, Wisnu Jatmiko, M. Iqbal Tawakal, Faris Al Afif

Particle Swarm Optimization based 2-Dimensional Randomized Hough Transform for Fetal Head Biometry Detection and Approximation in Ultrasound Imaging 468

Putu Satwika, Ikhsanul Habibie, M. Anwar Ma'sum, Andreas Febrian, Enrico Budianto

Digital Library & Distance Learning

Gamified E-Learning Model Based on Community of Inquiry 474

Andika Yudha Utomo, Afifa Amriani, Alham Fikri Aji, Fatin Rohmah Nur Wahidah, Kasiyah M. Junus

Knowledge Management System Development with Evaluation Method in Lesson Study Activity 482

Murein Miksa Mardhia, Armein Z.R. Langi, Yoanes Bandung

Designing Minahasa Toulour 3D Animation Movie as Part of Indonesian e-Cultural Heritage and Natural History 488

Stanley Karouw

Learning Content Personalization Based on Triple-Factor Learning Type Approach in E-learning 494

Mira Suryani, Harry Budi Santoso, Zainal A. Hasibuan

Adaptation of Composite E-Learning Contents for Reusable in Smartphone Based Learning System 502

Herman Tolle

The Case Study of Using GIS as Instrument for Preserving Javanese Culture in a Traditional Coastal Batik, Indonesia 508

Tji beng Jap and Sri Tiatri