

2015 International Conference on Computer, Control, Informatics and its Applications (IC3INA 2015)

**Bandung, Indonesia
5-7 October 2015**



**IEEE Catalog Number: CFP15YAD-POD
ISBN: 978-1-4799-8774-0**

**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:	CFP15YAD-POD
ISBN (Print-On-Demand):	978-1-4799-8774-0

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

CURRAN ASSOCIATES INC.
proceedings
.com

Program Schedule

Day 1 - 5th October 2015

- 07:30 - 08:30 **Registration & Coffee Break**
- 08.30 - 08.45 **Safety Information from Hotel Management**
- 08:45 - 10:00 **Opening Session**
- 10:00 - 10.40 **Global Collaboration and Its Importance**
Dr. Paolo Giubellino (Switzerland)
- 10:40 - 11:20 **Advanced Functional Materials**
Prof. Nico Voelcker (Flinders University, Australia)
- 11:20 - 12:00 **Development and Application of an In-Situ High-Resolution Technique for Environmental High Voltage Electron Microscopy**
Prof. Ohnuki Somei (Hokkaido University, Japan)
- 12:00 - 13:00 **Lunch and Exhibition**
- 13:00 - 15:00 **Parallel Session 1A. Informatics Track - Room: Jasmines 1**
Chair: Hilman F Pardede
- 13:00 - 13:20 **Development of Sentiment Classification System for Indonesian Public Policy Tweet 1**
David Setyanugraha; Ayu Purwarianti (Bandung Institute of Technology, Indonesia)
- 13:20 - 13:40 **Predicting Localized Dengue Incidences Using Ensemble System Identification 6**
Loshini Thiruchelvam; Sarat Dass (Universiti Teknologi PETRONAS, Malaysia); Vijanth Sagayan Asirvadam (Center Intelligent Signal and Imaging Research (CISIR) & University Teknologi PETRONAS, Malaysia); Balvinder Gill (Ministry of Health, Malaysia)
- 13:40 - 14:00 **Business Process Anomaly Detection using Ontology-based Process Modeling and Multi-level Class Association Rule Learning 12**
Fernandes Sinaga; Riyanarto Sarno (Informatics Engineering ITS Surabaya, Indonesia)
- 14:00 - 14:20 **Automated Segmentation of Optic Disc Area using Mathematical Morphology and Active Contour 18**
Hanung Adi Nugroho; Latifah Listyalina; Noor Akhmad Setiawan; Sunu Wibirama; Dhimas Arief Dharmawan (Universitas Gadjah Mada, Indonesia)
- 14:20 - 14:40 **A Maximum Likelihood Estimation Framework for the Exponential Differential Equation Model 23**
Ahmed Adly Mahmoud (Universiti Teknologi PETRONAS & PETRONAS Company, Malaysia); Sarat Dass and Mohana Muthuvalu (Universiti Teknologi PETRONAS, Malaysia)
- 14:40 - 15:00 **Time Based Discovery of Parallel Business Processes 28**
Riyanarto Sarno and Kartini Kartini (Institut Teknologi Sepuluh Nopember, Indonesia)

2015 International Conference on Computer, Control, Informatics and Its Applications
Bandung, Indonesia, 5-7 October 2015

13:00 - 15:00 **Parallel session 1B. Computer and Informatics Tracks - Room: Jasmines 2**

Chair: Rifki Sadikin

13:00 - 13:20 **Finding Alternative Paths in City Bus Networks 34**

Vo Khoa; Nguyen Huynh Tuong; Pham Vu, Nguyen Nghia and Hoai Tran (Ho Chi Minh City University of Technology, Vietnam))

13:20 - 13:40 **Duelist Algorithm N/A**

Totok R. Biyanto (ITS Surabaya, Indonesia); Hari Santoso (LIPI, Indonesia)

13:40 - 14:00 **Examination Results of Leukocytes and Nitrites in the Early Detection of Urinary Tract Infection 45**

Kevin Christian and Riyanarto Sarno (Institut Teknologi Sepuluh Nopember, Indonesia)

14:00 - 14:20 **Business Process Optimization from Single Timestamp Event Log 50**

Fitrianing Haryadita, Kartini Kartini and Riyanarto Sarno (Institut Teknologi Sepuluh Nopember, Indonesia)

14:20 - 14:40 **Visualization of User-Learning Game Interaction Unveiling Learner's Learning Patterns 56**

Alfa R Yohannis and Yulius Denny Prabowo (Kalbis Institute, Indonesia)

15:00 - 15:30 **Coffee Break**

2015 International Conference on Computer, Control, Informatics and Its Applications
Bandung, Indonesia, 5-7 October 2015

- 15:30 - 16:50 **Parallel Session 2A. Informatics Track - Room: Jasmines 1**
Chair: Hilman F Pardede
- 15:30 - 15:50 **Pattern Recognition of EMG Signal during Load Lifting Using Artificial Neural Network (ANN) N/A**
Mohd Hafiz Jali, Tarmizi Izzuddin and Zul Hasrizal Bohari (Universiti Teknikal Malaysia Melaka, Malaysia); Hazriq Izzuan Jaafar (Universiti Teknikal Malaysia Melaka & Universiti Teknologi Malaysia, Malaysia); Mohamad Na'im Mohd Nasir (Universiti Teknikal Malaysia, Melaka, Malaysia)
- 15:50 - 16:10 **Comparison of Different Neural Network Architectures for Software Cost Estimation 68**
Johannes Sidabutar; Riyanarto Sarno; Ms Sarwosri (Sepuluh Nopember Institute of Technology, Indonesia)
- 16:10 - 16:30 **Movement Intention Detection Using Neural Network for Quadriplegic Assistive Machine N/A**
Tarmizi Izzuddin and Zul Hasrizal Bohari (Universiti Teknikal Malaysia Melaka, Malaysia); Mohamad Na'im Mohd Nasir (Universiti Teknikal Malaysia, Melaka, Malaysia); Rozaimi Ghazali (Universiti Teknikal Malaysia Melaka & Center for Robotics and Industrial Automation, Malaysia); Mohd Hafiz Jali (Universiti Teknikal Malaysia Melaka, Malaysia)
- 16:30 - 16:50 **Chaos-based Modified EzStego Algorithm for Improving Security of the Secret Message Hiding in GIF Image 80**
Rinaldi Munir (Institut Teknologi Bandung, Indonesia)
- 15:30 - 16:50 **Parallel session 2B. Computer and Control Tracks - Room: Jasmines 2**
Chair: Rifki Sadikin
- 15:30 - 15:50 **Guaranteed Time Slot Allocation Method for IEEE 802.15.4 Wireless Sensor Network 85**
M. Udin Harun Al Rasyid; Amang Sudarsono; Idris Winarno and Dika Rupawan (Politeknik Elektronika Negeri Surabaya (PENS) - Indonesia, Indonesia)
- 15:50 - 16:10 **Design and Implementation of Wireless Sensor Network on Ground Movement Detection System 89**
Rahmat Salam (Institut Teknologi Bandung, Indonesia)
- 16:10 - 16:30 **An Implementation of Secure Data Sensor Transmission in Wireless Sensor Network for Monitoring Environmental Health 93**
Amang Sudarsono and Prima Kristalina; M. Udin Harun Al Rasyid; Rony Hermawan (Politeknik Elektronika Negeri Surabaya (PENS), Indonesia)
- 16:30 - 16:50 **Decision-based Link Scheduling Approximation Algorithm with SINR Relaxation for Wireless Mesh Network 99**
Nachwan Mufti Adriansyah (Universitas Telkom & Universitas Indonesia, Indonesia); M. Asvial; Bagio Budiardjo (University of Indonesia, Indonesia)

2015 International Conference on Computer, Control, Informatics and Its Applications
Bandung, Indonesia, 5-7 October 2015

Day 2 - 6th October 2015

- 07.30 - 08.30 **Registration & Coffee Break**
- 08.30 - 09.00 **Welcoming speech IC3INA**
- 09.00 - 12.00 **Leading Talks - Jasmines**
- 09.00 - 10.00 **Emerging Internet Of Things: Realizing And Policy Perspective**
Dr. Basuki Yusuf Iskandar - Ministry of Communication & Information Technology
- 10.00 - 10.30 **Shaping tomorrow with you by Heryadi Pamungkas - Product Manager Infrastructure Solution Service**
Fujitsu Indonesia
- 10.30 - 12.00 **Internet of Things to the Connected World**
Prof. Shuo-Yan Chou - Distinguished Professor of Industrial Management, Director of Center for IoT Innovation at National Taiwan University of Science and Technology
- 12:00 - 13:00 **Lunch and Exhibition**
- 13.00 - 14.40 **Parallel Session 3A. Informatics Track - Room: Jasmines 1**
Chair: Esa Prakasa
- 13.00 - 13.20 **Automated Microaneurysms (MAs) Detection in Digital Colour Fundus Images Using Matched Filter 104**
Hanung Adi Nugroho, Dhimas Arief Dharmawan, Indriana Hidayah and Latifah Listyalina (Universitas Gadjah Mada, Indonesia)
- 13.20 - 13.40 **Pattern Recognition Using Hierarchical Concatenation 109**
Irwan Ramli (Curtin University of Technology, Australia); Cesar Ortega-Sanchez (Curtin University & IEEE Western Australia Section Treasurer, Australia)
- 13.40 - 14.00 **Speech Recognition Features: Comparison Studies on Robustness Against Environmental Distortions 114**
Achmad F. Abka and Hilman F Pardede (Indonesian Institute of Sciences, Indonesia)
- 14.00 - 14.20 **Single Image Enhancement In Various Weather Conditions Using Intensity And Saturation Deterioration Ratio 120**
Ahmad Alajarmeh; Rosalina Abd. Salam; Khairi Abdulrahim; Mohd Fadzli Marhusin (Universiti Sains Islam Malaysia (USIM), Malaysia)
- 14.20 - 14.40 **Tuna Fish Classification using Decision Tree Algorithm and Image Processing Method 126**
Wijayanti Khotimah, Agus Arifin and Dini Navastara; Anny Yuniarti; Arya Wijaya and Muhammad Kalbuadi (Institut Teknologi Sepuluh Nopember Surabaya, Indonesia)

2015 International Conference on Computer, Control, Informatics and Its Applications
Bandung, Indonesia, 5-7 October 2015

13.00 - 14.40 **Parallel session 3B. Computer and Control Tracks - Room: Jasmines 2**

Chair: Agus Subekti

13.00 - 13.20 **System of Automatic Stabilization of Underwater Vehicle in Hang Mode with Working Multilink Manipulator 132**

Vladimir Filaretov (Far Eastern Federal University & Institute for Automation and Control Processes Far Eastern Branch of RAS, Russia)

13.20 - 13.40 **Improvement of Time Synchronization on OFDM based on Statistical Refinement on Auto-correlation and Cross-correlation 138**

Suyoto (Lembaga Ilmu Pengetahuan Indonesia & Institut Teknologi Bandung, Indonesia); Koredianto Usman (Telkom University, Indonesia)

13.40 - 14.00 **Parameter Estimation for Nonlinear Disease Dynamical System using Particle Filter 143**

Muhammad Javvad ur Rehman and Sarat Dass (Universiti Teknologi PETRONAS, Malaysia); Vijanth Sagayan Asirvadam (Center Intelligent Signal and Imaging Research (CISIR) & University Teknologi PETRONAS, Malaysia)

14.00 - 14.20 **The Method of Cutting of Flexible Parts Using Manipulators and Information Multiplexing From 3D Vision System and CAD Model 148**

Alexander Zuev (Institute of Automation and Control Processes FEB RAS & Far Eastern Federal University, Russia); Dmitriy Yukhimets and Anton Gubankov (Institute of Automation and Control Processes FEB RAS, Russia); Eduard Mursalimov and Vladimir Filaretov (Far Eastern Federal University, Russia)

14.20 - 14.40 **Cluster-Smoothed with Random Neighbor Selection for Collaborative Filtering 154**

Aulia Rahmawati; Agung Toto Wibowo; Gia Wulandari (Telkom University, Indonesia)

14.40 - 15.00 **Coffee Break**

2015 International Conference on Computer, Control, Informatics and Its Applications
Bandung, Indonesia, 5-7 October 2015

15.00 - 16.00 **Parallel Session 4A. Informatics and Computer Tracks - Room: Jasmines 1**

Chair: Esa Prakasa

15.00 - 15.20 **Image Face Recognition Using Hybrid Multiclass SVM (HM-SVM) 159**

Muhammad Hakeem Selamat (Universiti Teknologi PETRONAS, Malaysia)

15.20 - 15.40 **A Watermarking Scheme Based on DCT using HVS Characteristic 165**

Asri Yuliani; Didi Rosiyadi (Indonesian Institute of Sciences, Indonesia)

15.00 - 16.00 **Parallel Session 4B. Computer and Control Tracks - Room: Jasmines 2**

Chair: Agus Subekti

15.00 - 15.20 **Deterministic and Fuzzy Logic Control of Split-Parallel Through-the-Road Hybrid Electric Vehicle 169**

Saiful A Zulkifti; Nordin saad; A. Rashid A. Aziz (Universiti Teknologi PETRONAS, Malaysia)

15.20 - 15.40 **Comparison of AHP based and Fuzzy based Mechanisms for Ranking Cloud Computing Services 175**

Supriya M and Sangeeta K (Amrita Vishwa Vidyapeetham & Amrita School of Engineering, India); Gopal Patra (CSIR Centre for Mathematical Modelling and Computer Simulation, India)

15.40 - 16.00 **A Method for Detecting the Oscillation in Control Loops based on Variational Mode Decomposition 181**

Awang N. I. Wardana (Universitas Gadjah Mada, Indonesia)

16.00 - 16.15 **Closing**

2015 International Conference on Computer, Control, Informatics and Its Applications
Bandung, Indonesia, 5-7 October 2015

Day 3 - 7th October 2015

08:00 - 17:00 One day tour (optional)