

# **International Conference on Advances Science and Contemporary Engineering 2012**

**Procedia Engineering Volume 50**

**Jakarta, Indonesia  
24 – 25 October 2012**

**Editors:**

**F. L. Gaol**

**ISBN: 978-1-62748-620-0  
ISSN: 1877-7058**

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2012) by Elsevier B.V.  
All rights reserved.

Printed by Curran Associates, Inc. (2013)

For permission requests, please contact Elsevier B.V.  
at the address below.

Elsevier B.V.  
Radarweg 29  
Amsterdam 1043 NX  
The Netherlands

Phone: +31 20 485 3911  
Fax: +31 20 485 2457

<http://www.elsevierpublishingsolutions.com/contact.asp>

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

## TABLE OF CONTENTS

<b>Harvesting Real Time Traffic Information from Twitter Original Research Article .....</b>	<b>1</b>
<i>Raymondus Kosala, Erwin Adi, Steven</i>	
<b>System Dynamics Model of Wolbachia Infection in Dengue Transmission Original Research Article.....</b>	<b>12</b>
<i>A. K. Supriatna, N. Anggriani</i>	
<b>A Design of a Proxy Inspired from Human Immune System to Detect SQL Injection and Cross-Site Scripting Original Research Article.....</b>	<b>19</b>
<i>Erwin Adi</i>	
<b>Developing Information System Strategic Planning in the Directorate General of Animal Husbandry and Health, Ministry of Agriculture Original Research Article .....</b>	<b>29</b>
<i>Anggelina, Harisno</i>	
<b>Design of A Drug Testing Online Portal Original Research Article.....</b>	<b>38</b>
<i>Ricki Zulkifli, Bens Pardamean</i>	
<b>The Research on Modeling Reconstruction for Shoe-Last and Its Application in CAD/CAM System Original Research Article .....</b>	<b>45</b>
<i>Jie Zhang</i>	
<b>Web-Based Open Loop Remote Control Robot Original Research Article.....</b>	<b>52</b>
<i>Ucok Agus Pasific Silalahi, Rinda Hedwig</i>	
<b>Assessment of Hydrochemical and Isotopic Characteristics at Matang Landfill Site Using Multivariate Analysis Original Research Article .....</b>	<b>59</b>
<i>Mohd Hafiz Zawawi, Syafalni, Ismail Abustan, Mohd Ariff Ahmad Nazri</i>	
<b>Salak River Water Quality Identification and Classification According to Physico-Chemical Characteristics Original Research Article.....</b>	<b>69</b>
<i>Nor Azalina Rosli, Mohd Hafiz Zawawi, Rosmina Ahmad Bustami</i>	
<b>Improving Quality Product of a Motorcycle's Suspension at an Automotive Company Using Quality Function Deployment Value Analysis (QFDVA) (An Indonesian Case) Original Research Article.....</b>	<b>78</b>
<i>Jonny, Ilham Zaelani Kurnia</i>	
<b>Effect of Pouring Temperature and Casting Thickness on Fluidity, Porosity and Surface Roughness in Lost Foam Casting of Gray Cast Iron Original Research Article .....</b>	<b>88</b>
<i>Suyitno, Sutiyoko</i>	
<b>Extended Deming's Model and Linear Programming Approach for Agriculture Land Use for Energy Crops Management: A Case Study of Nakhon Ratchasima, Thailand Original Research Article .....</b>	<b>95</b>
<i>W. Dejianon, J. Lopandung, P. Pimpam, P. Keeratiurai, S. Patamatamkul, T. Prempredi, W. Iaprasert</i>	
<b>Thermal Analysis and Pozzolanic Index of Rice Husk Ash at Different Grinding Time Original Research Article.....</b>	<b>101</b>
<i>P. J. Ramadhanisyah, A. W. Mahyuni, M. Z. M. Salwa, B. H. Abu Bakar, M. A. Megat Johari, M. H. Wan Ibrahim</i>	
<b>Modified Bolotin Method to Obtain the Natural Frequency of Stiffened Plate with Semirigid Support Original Research Article .....</b>	<b>110</b>
<i>Meilani</i>	
<b>Investigation of Melting Heat Transfer Characteristics of Latent Heat Thermal Storage Unit with Finned Tube Original Research Article.....</b>	<b>122</b>
<i>Hamdani, Irwansyah, T. M. I. Mahlia</i>	
<b>Design and Analysis of Dynamics Compression Plate by Finite Element Analysis Original Research Article .....</b>	<b>129</b>
<i>Muslim Mahardika, Budi Arifianto, Suyitno, Anton Wibowo, Gunawan Setia Prihandana</i>	
<b>Renewable Methane from Ammonium Bicarbonate Supplemented Petrochemical Wastewater Treatment During Anaerobic Co-Digestion in CSTR Original Research Article .....</b>	<b>134</b>
<i>Nurul Islam Siddique, A. W. Zularisam</i>	
<b>Effect of Slag Ball Blasting Treatment on Surface Structure, Roughness and Wettability of 316LVM Stainless Steel Original Research Article.....</b>	<b>142</b>
<i>B. Arifianto, G. A. Pohan, Suyitno, M. Mahardika</i>	
<b>The Influence of Al Dopant Precursors on the Characteristics of ZnO Fine Particles Prepared by Ultrasonic Spray Pyrolysis Original Research Article.....</b>	<b>152</b>
<i>W. Widiyastuti, Adhi Setiawan, Sugeng Winardi, Tantular Nurtono, Suci Madhania, Diah Susanti</i>	
<b>Platform/Framework Modeling for Weather Information Services Original Research Article .....</b>	<b>159</b>
<i>Dong-Hun Son, Ho-Keun Song, Jin-Tae Kim</i>	
<b>Marked Petri Net for Water Cycle Original Research Article .....</b>	<b>165</b>
<i>B. J. Balamurugan, K. Thirusangu, D. G. Thomas</i>	

<b>Experimental Study on the Propagation of a Pulsed Jet</b> Original Research Article .....	174
<i>Hariyo P. S. Pratomo, Klaus Bremhorst</i>	
<b>3D Catalog of Rare Medicinal Plants</b> Original Research Article .....	188
<i>Qurrotul Aini, Elys Rahajeng, Luluk Mitasari</i>	
<b>Fuzzy Logic Applications to Power Transformer Fault Diagnosis Using Dissolved Gas Analysis</b>	
Original Research Article .....	195
<i>Yann-Chang Huang, Chao-Ming Huang, Kun-Yuan Huang</i>	
<b>Modeling of Sedimentation Pattern in Bukit Merah Reservoir, Perak, Malaysia</b> Original Research Article .....	201
<i>Siti Hidayah Abu Talib, Mohd Suffian Yusoff, Zorketfee Abu Hasan</i>	
<b>Spur Gear Tooth Design with S-Shaped Transition Curve using T-Bézier Function</b> Original Research Article .....	211
<i>Muhammad Abbas, S. H. Yahaya, Ahmad Abd Majid, Jamaludin Md. Ali</i>	
<b>Probability Based Improved Broadcasting for AODV Routing Protocol</b> Original Research Article .....	222
<i>Parma Nand, S. C. Sharma</i>	
<b>A Computational Fluid Dynamics (CFD) Study into a Hydrodynamic Factor that Affects a Bio-Hydrogen Production Process in a Stirred Tank Reactor</b> Original Research Article .....	232
<i>T. Nurtono, W. O. C. Nirwana, N. Anwar, Kusdianto, S. M. Nia, A. Widjaja, S. Winardi</i>	
<b>Improving the Efficiency of C-si Solar Cells Through the Optimization of Emitter Profile and Low Resistance Ohmic Metal Contact</b> Original Research Article .....	246
<i>Ali Assi, Mohammad Al-Amin</i>	
<b>Brain Process: Hardware/Software Complex System Using Logic Circuits in FPGA Array Named Vocalise</b> Original Research Article .....	253
<i>M. Sekine, H. Tamukoh, J. Li, K. Manabe, T. Suzuki, K. Okamot, B. Ogasawara, R. Uegaki, K. Fujita, Y. Atsumari</i>	
<b>Bearing and Gear Fault Diagnosis Using Adaptive Wavelet Transform of Vibration Signals</b> Original Research Article .....	265
<i>D. P. Jena, S. N. Panigrahi</i>	
<b>High Resolution Successive Approximation ADC for Low Power Biomedical Applications</b> Original Research Article .....	275
<i>Hwang-Cherng Chow, Wan-Tin Lin</i>	
<b>Authentication Relation between Surface-Groundwater in Kerian Irrigation Canal System, Perak Using Integrated Geophysical, Water Balance and Isotope Method</b> Original Research Article .....	284
<i>Mohd Ariff Ahmad Nazri, Syafalni, Ismail Abustan, Mohd Tadza Abdul Rahman, Mohd Hafiz Zawawi, Najihah Dor</i>	
<b>An Intelligence-Based Fuzzy Inference System for Smart Home Real-Time Load Forecasting</b> Original Research Article .....	297
<i>Chao-Ming Huang, Yann-Chang Huang, Chi-Jen Huang</i>	
<b>Properties of Concrete Containing Rice Husk Ash Under Sodium Chloride Subjected to Wetting and Drying</b> Original Research Article .....	305
<i>P. J. Ramadhansyah, M. Z. M. Salwa, A. W. Mahyun, B. H. Abu Bakar, M. A. Megat Johari, C. W. Che Norazman</i>	
<b>Application Hiding Messages in JPEG Images with the Method of Bit-Plane Complexity Segmentation on Android-Based Mobile Devices</b> Original Research Article .....	314
<i>Afan Galih Salman, Bayu Kanigoro, Rojali, Kevin, Santy</i>	
<b>Validation of GPS PWV over UKM Bangi Malaysia for Climate Studies</b> Original Research Article .....	325
<i>Wayan Suparta</i>	
<b>Assessment of Hydrochemical and Isotopic Characteristics at Matang Landfill Site Using Multivariate Analysis</b> Original Research Article .....	333
<i>Mohd Hafiz Zawawi, Syafalni, Ismail Abustan, Mohd Ariff Ahmad Nazri</i>	
<b>Pitch Angle Effect for Horizontal Axis River Current Turbine</b> Original Research Article .....	343
<i>Ridway Balaka, Aditya Rachman</i>	
<b>Visual Traffic Surveillance Using Feature Point Approach</b> Original Research Article .....	354
<i>Victor B. Wewengkang, Alexander A. S. Gunawan, Erwin Kusnandar, Fergyanto E. Gunawan</i>	
<b>Material Engineering for Nano Structure Formation: Fabrication and Characterization</b> Original Research Article .....	361
<i>Tijjani Adam, U. Hashim, Sutikno, Th. S. Dhahi, T. Nazwa</i>	
<b>Solid State Sintering of Nanostructured Ceramics</b> Original Research Article .....	369
<i>Rahmat Saptono</i>	
<b>Fine-grained Log Auditing based on Secure OS, User Command and SQL Query</b> Original Research Article .....	381
<i>Tae-Kyou Park, Ha-Sung Koo</i>	

<b>The Transverse Modal Properties of VCSEL with Photonic Crystal Cladding of Rectangular Lattice Pattern</b>	<b>Original Research Article.....</b>	388
<i>Sherwin R. Sompie, Henri P. Uranus</i>		
<b>Design, Development and Performance Analysis of Deadline Based Priority Heuristic for Job Scheduling on a Grid</b>	<b>Original Research Article.....</b>	397
<i>Haruna Ahmed Abba, Nordin Zakaria, Syed Nasir Mehmood Shah, Anindya Jyoti Pal</i>		
<b>A Study on Particle Segregation Processes in Debris Flow</b>	<b>Original Research Article.....</b>	406
<i>M. A. Z. Mohd Remy Rozainy, Yosuke Yamashiki, Taku Matsumoto, Tamotsu Takahashi, Kaoru Takara</i>		
<b>Simulation of Passive Fluid Driven Micromixer for Fast Reaction Assays in Nano Lab-on-chip Domain</b>	<b>Original Research Article.....</b>	416
<i>Tijjani Adam, U. Hashim, Sutikno</i>		
<b>Developing Controller Area Network Management Application Based on Modbus in Multi Generator Set Controller through Local Network and Internet</b>	<b>Original Research Article.....</b>	426
<i>Derwin Suhartono, Aryan Wibowo, Setiady Wiguna, Robby Saleh</i>		
<b>The Relationship between Balinese Regional Culture and Software Construction</b>	<b>Original Research Article .....</b>	436
<i>Luh Gede Surya Kartika, Kridanto Surendro</i>		
<b>Effect of Fiber Orientation on the Structural Response of a Smart Composite Structure</b>	<b>Original Research Article.....</b>	445
<i>D. L. Majid, E. J. Abdullah, N. F. Harun, G. Y. Lim, B. T. H. T. Baharudin</i>		
<b>Dynamic Analysis of a Cantilevered Woven Composite Plate-Like Wing</b>	<b>Original Research Article.....</b>	453
<i>D. L. Majid, F. Mustapha, M. T. Hameed Sultan, E. J. Abdullah, Hafiz Hanafi</i>		
<b>Determining Factors on Purchasing Decision Through e-Commerce: A Structural Equations Modelling Framework</b>	<b>Original Research Article .....</b>	463
<i>Okky Kartavianus, Togar Alam Napitupulu</i>		
<b>Mean Square Error Convergence of Kernel Type Estimator of the Intensity Function for Periodic Poisson Process</b>	<b>Original Research Article .....</b>	474
<i>Ro'Fah Nur Rachmawati, Widodo Budiharto</i>		
<b>Development of 5-bit, 4-Inputs PWM Generator on FPGA through VHDL Programming</b>	<b>Original Research Article.....</b>	486
<i>M. F. M. Sabri, M. H. Husin, I. N. Othman</i>		
<b>Novitect; a Novelty Detection Soft-Computing Algorithm for Structural Health Monitoring (SHM) System</b>	<b>Original Research Article .....</b>	494
<i>F. Mustapha, K. T. Ng, D. L. A. Majid</i>		
<b>Prediction of Fatigue Life in Cold Forging Punch Design for Fastener Using Integrated FEA and Stress Life Approach</b>	<b>Original Research Article.....</b>	505
<i>A. R. Ab-Kadir, A. R. Othman, A. B. Abdullah, Mohd Riduan Ibrahim, Mohd Suyerdi Omar, Mohd Hairizal Osman</i>		
<b>Seismic Refraction Investigation on Near Surface Landslides at the Kundasang Area in Sabah, Malaysia</b>	<b>Original Research Article .....</b>	516
<i>Mohd Hazreek Zainal Abidin, Rosli Saad, Fauziah Ahmad, Devapriya Chitrav Wijeyesekera, Mohamad Faizal Tajul Baharuddin</i>		
<b>Land Suitability Map Development for Central Java and Daerah Istimewa Yogyakarta Provinces Based on WebGIS</b>	<b>Original Research Article.....</b>	532
<i>Fahdil Ahady Hazain, Harisno, Nilo Legowo</i>		
<b>Analyzing Systems Dependent on Execution Speed with Model Checker</b>	<b>Original Research Article .....</b>	544
<i>Takahisa Mizuno, Shin-Ya Nishizaki</i>		
<b>Game Artificial Intelligence Based Using Reinforcement Learning</b>	<b>Original Research Article .....</b>	555
<i>Albertus Agung, Ford Lumban Gaol</i>		
<b>Mechanical Behavior of Vynylon Fiber Chip Reinforced Concrete Cylindrical Shells</b>	<b>Original Research Article.....</b>	566
<i>Masafumi Tanaka, Ryo Nakai, Kuzuhiko Mashita</i>		
<b>Shear Capacity of Reinforced Concrete Beam with Different Cross Section Types of Lateral Reinforcement on Minimum Ratio</b>	<b>Original Research Article .....</b>	576
<i>Agus Setiawan, Kiki Saptono</i>		
<b>Microcontroller-based Seismic-ShakingIntensity Meter</b>	<b>Original Research Article .....</b>	586
<i>Frank Filbert, Daniel Karunia Wijaya, Darius Sandatinus, Wiedjaja Atmadja, Agus Tri Sutanto, Rinda Hedwig</i>		
<b>On the Nonlinearity Compensation in Permanent Magnet Machine Using a Controller Based on a Controlled Invariant Subspace</b>	<b>Original Research Article .....</b>	592
<i>Paolo Mercorelli</i>		
<b>DT-CWT And Neural Network For Face Recognition</b>	<b>Original Research Article.....</b>	601
<i>Diaz. D. Santika, David, Dennise Adrianto, Ferdinand Ariandy Luwinda</i>		

<b>Rank MatrixOptimization on NMF, LNMF and nsNMF for Feature Extraction on Mammogram Classification Original Research Article.....</b>	606
<i>Ferdinand Ariandy Luwinda, Diaz D. Santika</i>	
<b>FHSWebEE: An Effort Estimation Model for Web Application Original Research Article .....</b>	613
<i>Rosmina, Suharjito</i>	
<b>Image Restoration Employing a Local Structural Adaptive Total Variation Model Original Research Article .....</b>	623
<i>W. L. Zeng, X. B. Lu</i>	
<b>Generating Chromatic Number of a Graph using Ant Colony Optimization and Comparing the Performance with Simulated Annealing Original Research Article.....</b>	629
<i>Anindya J. Pal, Biman Ray, Nordin Zakaria, Ken Naono, Samar Sen Sarma</i>	
<b>Improvement of the High Temperature Oxidation of 1.10Cr-0.25Mo Steel at 850 °C by Hot-dip Al Coating Original Research Article .....</b>	640
<i>Mohammad Badaruddin, Harnowo Supriadi, Erwin</i>	
<b>Influence of Water-Vapor on the Isothermal Oxidation Behavior of Aluminized AISI 1020 Steel at Elevated Temperatures Original Research Article.....</b>	649
<i>Mohammad Badaruddin, Sugiyanto, Ahmad Suudi</i>	
<b>Infiltration Characteristic Modeling Using Flow3D within a Modular Pavement Original Research Article .....</b>	658
<i>Mohd Aminur Rashid, Ismail Abustan, Meor Othman Hamzah</i>	
<b>Study on the Feature Extraction of Face using Color Space Original Research Article .....</b>	668
<i>Hasung Koo, Hogeun Song</i>	
<b>Optimal Resource Clustering for FDTD Computation Using Genetic Algorithm With and Without Seed Original Research Article.....</b>	675
<i>Nordin Zakaria, Anindya Jyoti Pal, Ken Naono</i>	
<b>A Hybrid Hydraulic Piezo Actuator for Camless Internal Combustion Engines Controlled with an MPC and An Affine Feedforward Structure Original Research Article .....</b>	685
<i>Paolo Mercorelli, Nils Werner</i>	
<b>Application of Radio Frequency Identification (RFID) in Manufacturing in Malaysia Original Research Article.....</b>	697
<i>S. Sulaiman, Umar Ali Umar, S. H. Tang, N. Fatchurrohman</i>	
<b>NMF Coefficient and Bilinear Space Projection as Features For Human Facial Expression Recognition Original Research Article .....</b>	707
<i>William Salim, Albertus Agung</i>	
<b>Computational Study on Modeness of Silicon on Insulator Photonic Wire with Water Cladding Original Research Article .....</b>	717
<i>Henri P. Uranus</i>	
<b>Fluidity Dan Roughness During Lost-Foam Casting of AA356.1 Original Research Article.....</b>	726
<i>Suyitno, I. J. Abdul Karim</i>	
<b>Priority-Based Genetic Algorithm for Conflict-Free Automated Guided Vehicle Routing Original Research Article.....</b>	732
<i>U. A. Umar, M. K. A. Ariffin, N. Ismail, S. H. Tang</i>	
<b>Modified Line-Maze Algorithm for Mobile Robot Navigation Original Research Article.....</b>	740
<i>Johannes Mae, Andy Hazor, Nina Karina Wiryanto, Endra Oey, Rinda Hedwig</i>	
<b>Theoretical Assessment on the Accuracy of Phase Shift Method in Measuring the Group Delay of Optical Two-Port Ring-Resonator Circuit Original Research Article .....</b>	748
<i>Libianko Sianturi, Henri P. Uranus</i>	
<b>Human Facial Expression Recognition Using Two-dimensional Non-negative Matrix Factorization Original Research Article .....</b>	758
<i>William Salim, Diaz D. Santika</i>	
<b>A Robust Face Recognition and Tracking System using Bayesian Filtering and ANFIS Controller for Service Robots Original Research Article .....</b>	768
<i>Widodo Budiharto, Ro'Fah Nur Rachmawati</i>	
<b>A Priority Based Job Scheduling Algorithm in Cloud Computing Original Research Article .....</b>	778
<i>Shamsollah Ghanbari, Mohamed Othman</i>	
<b>Optimisation of Pyrene Removal by a Mixed Culture in a Soil-Slurry Bioreactor using Response Surface Methodology (RSM) Original Research Article.....</b>	786
<i>B. S. U. Ibn Abubakar, N. Abdullah, A. Idris, M. P. Zakaria, M. Y. Abdul Shokur</i>	
<b>Design &amp; Implementation of Home Security System using Verilog-HDL Original Research Article .....</b>	800
<i>M. H. Husin, E. B. Tening, M. F. M. Sabri</i>	
<b>The Improvement of Photovoltaic/Wind Hybrid System in Perlis Original Research Article.....</b>	808
<i>Y. M. Irwan, I. Daut, S. Ibrahim, N. Gomesh, M. Irwanto, M. Fitra</i>	

<b>Fuzzy Genetic Versus PSO Algorithms for the Synthesis of Linear Antenna Array Original Research Article</b>	817
<i>B. Kadri, M. Brahimi, I. Elawady, I. K. Bousserhane, M. Bousahla, F. T. Bendimerad, S. M. Meriah</i>	
<b>Logistic Regression Methods with Truncated Newton Method Original Research Article</b>	827
<i>Santi Puteri Rahayu, Jasni Mohamad Zain, Abdullah Embong, Juwari, Santi Wulan Purnami</i>	
<b>Modeling Dengue Cases Using Poisson INAR Original Research Article</b>	837
<i>Wiwiek Setya Winahju, Adatul Mukarromah</i>	
<b>Kinematic and Aerodynamic Modelling of Flapping Wing Ornithopter Original Research Article</b>	848
<i>Harjono Djojodihardjo, Alif Syamim Syazwan Ramli, Surjatin Wiriadidjaja</i>	
<b>Computer Aided Diagnosis System for Digital Mammogram Based on Neural Network and Dual Tree Complex Wavelet Transform Original Research Article</b>	864
<i>David Diaz D. Santika</i>	
<b>Trend Prediction for Computer Science Research Topics Using Extreme Learning Machine Original Research Article</b>	871
<i>Novita Sari, Suharjito, Agus Widodo</i>	
<b>Competent Building Elevation for Incorporating Base Isolation in Aseismic Structure Original Research Article</b>	882
<i>A. B. M. Saiful Islam, Mohammed Jameel, Md. Alhaz Uddin, Mohd Zamin Jumaat</i>	
<b>Automatic Building Extraction from Satellite Images using Artificial Neural Networks Original Research Article</b>	893
<i>Lizy Abraham, M. Sasikumar</i>	
<b>Palm Oil Mill Effluent as an Additive with Cattle Manure in Biogas Production Original Research Article</b>	904
<i>I. M. Nasir, T. I. Mohd Ghazi, R. Omar, A. Idris</i>	
<b>Seismic Strengthening of Low-rise Steel Structures: A Case Study in Mashhad Original Research Article</b>	913
<i>Saeed Azizi, Kambiz Narmashiri, Mohsen Gholizadeh, K. Hossein Mehmandoost</i>	
<b>Hybrid Record Linkage Model for Integrating Marine Data Original Research Article</b>	926
<i>Devi Fitrianah, Ito Wasito</i>	
<b>Experimental Investigation of HSS Face Milling to AL6061 using Taguchi Method Original Research Article</b>	933
<i>B. T. H. T. Baharudin, M. R. Ibrahim, N. Ismail, Z. Leman, M. K. A. Ariffin, D. L. Majid</i>	
<b>Modeling the Impact of Winter Maintenance on Pavement Marking Retroreflectivity Original Research Article</b>	942
<i>Ghassan Abu-Lebdeh, Bashar Al-Omari, Kamran Ahmed, David Long</i>	
<b>Fabrication of Nanotitanium Dioxide Solar Cells Without Dye-Sensitized</b>	957
<i>I. Daut, M. Fitra, M. Irwanto, N. Gomesh, Y. Irwan</i>	