

2016 1st International Conference on Biomedical Engineering (IBIOMED 2016)

**Yogyakarta, Indonesia
5 – 6 October 2016**



**IEEE Catalog Number: CFP16G68-POD
ISBN: 978-1-5090-4143-5**

**Copyright © 2016 by the Institute of Electrical and Electronics 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 is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP16G68-POD
ISBN (Print-On-Demand):	978-1-5090-4143-5
ISBN (Online):	978-1-5090-4142-8

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

Table of Contents

Plenary Sessions

Key #1	Limitless Possibilities of Pervasive Computing on Biomedical Engineering	1
	Prof. Dr. Mauridhi Hery Purnomo (Institut Teknologi Sepuluh Nopember, Indonesia)	
Key #2	KANSEI Detection and its Application Using a Simple EEG Device	2
	Prof. Dr. Yasue Mitsukura (Keio University, Japan)	
Key #3	e-Health System Developments for Developing Countries: Integrated Activities in Research – Education and Community Services	3
	Prof. Dr. Soegijardjo Soegijoko (IEEE Indonesia EMB Chapter)	
Key #4	Study on a Computer Assisted Diagnostic Support System for Teeth Conditions	4
	Prof. Dr. Kazuhiko Hamamoto (Tokai University, Japan)	

Technical Sessions

TS_IBIOMED-01	A prototype of SSVEP-based BCI for home appliances control	5
	Sinantya Feranti Anindya (Institut Teknologi Nasional Bandung, Indonesia); Hendi Handian Rachmat (Institut Teknologi Nasional Bandung, Indonesia); Ediana Sutjiredjeki (Politeknik Negeri Bandung, Indonesia)	
TS_IBIOMED-02	Simple Control Design using Double Feedback Structure for Reducing Tumor Size	11
	Samiadji Herdjunanto (Universitas Gadjah Mada, Indonesia)	
TS_IBIOMED-03	Development of Robotic System with Optical Position Sensing for Ultrasound Theranostics	17
	Kohji Masuda (Tokyo University of Agriculture and Technology, Japan); Kaoru Natsume (Tokyo University of Agriculture and Technology, Japan); Yoshihisa Wada (Tokyo University of Agriculture and Technology, Japan); Sachie Irisawa (Tokyo University of Agriculture and Technology, Japan); Shinya Onogi (Tokyo University of Agriculture and Technology, Japan)	
TS_IBIOMED-04	The biomechanics of walking symmetry during gait cycle in various walking condition	21
	Kadek Heri Sanjaya (Indonesian Institute of Sciences (LIPI) Bandung, Indonesia); Suherman (Indonesian Institute of Sciences (LIPI) Bandung, Indonesia); Soomin Lee (Chiba University, Japan); Yoshihiro Shimomura (Chiba University, Japan); Tetsuo Katsuura (Chiba University, Japan)	
TS_IBIOMED-05	A New Approach for Rehabilitation and Upper-Limb Prosthesis Control Using Optomyography (OMG)	27
	Hamed Hamid Muhammed (Royal Institute of Technology KTH, Sweden); Raghavendra Jammalamadaka (Royal Institute of Technology KTH, Sweden)	
TS_IBIOMED-06	ARIMA Implementation to Predict the Amount of Antiseptic Medicine Usage in Veterinary Hospital	33
	Hans Pratyaksa (Universitas Gadjah Mada, Indonesia); Adhistya Erna Permanasari (Universitas Gadjah Mada, Indonesia); Silmi Fauziati (Universitas Gadjah Mada, Indonesia); Ida Fitriana (Universitas Gadjah Mada, Indonesia)	

TS_IBIOMED-07	Emergency Alert Prediction for Elderly Based on Supervised Learning	37
	Kurnianingsih (Universitas Gadjah Mada & Politeknik Negeri Semarang, Indonesia); Lukito Edi Nugroho (Universitas Gadjah Mada, Indonesia); Widyawan (Universitas Gadjah Mada, Indonesia); Lutfan Lazuardi (Universitas Gadjah Mada, Indonesia); Anton Satria Prabuwno (King Abdulaziz University, Saudi Arabia)	
TS_IBIOMED-08	Comparison of Radialis Sphygmomanometer in Evaluating the Blood Pressure of Healthy Volunteers	43
	Hendi Handian Rachmat (Institut Teknologi Nasional Bandung, Indonesia)	
TS_IBIOMED-09	Multimodal Image Registration for Potential Diagnosis and Monitoring of Morphoea using a Hybrid NGC Method	47
	Lila Iznita Izhar (Universiti Teknologi PETRONAS, Malaysia); Irraivan Elamvazuthi (Universiti Teknologi PETRONAS, Malaysia); Tania Stathaki (Imperial College London, United Kingdom); Kevin Howell (University College London, United Kingdom); Zaid Omar (Universiti Teknologi Malaysia, Malaysia)	
TS_IBIOMED-10	A Clustering Model for Identification of Time Course Gene Expression Patterns	51
	Peter Juma Ochieng (IPB University, Indonesia); Sri Ita Tarigan (IPB University, Indonesia); Hendrik Didik (IPB University, Indonesia)	
TS_IBIOMED-11	Feature Extraction For Palmprint Recognition Using Kernel-PCA With Modification in Gabor Parameters	57
	Muhammad Kusban (Universitas Gadjah Mada, Indonesia); Adhi Susanto (Universitas Gadjah Mada, Indonesia); Oyas Wahyunggoro (Universitas Gadjah Mada, Indonesia)	
TS_IBIOMED-12	Comparison of Pre- and Post-Reconstruction Denoising Approaches in Positron Emission Tomography	63
	Sicong Yu (Royal Institute of Technology KTH, Sweden); Hamed Hamid Muhammed (Royal Institute of Technology KTH, Sweden)	
TS_IBIOMED-13	Localization of White Blood Cell Images using Haar Cascade Classifiers	69
	Rezha Aditya Maulana Budiman (Universitas Gadjah Mada, Indonesia); Balza Achmad (Universitas Gadjah Mada, Indonesia); Faridah (Universitas Gadjah Mada, Indonesia); Agus Arif (Universitas Gadjah Mada, Indonesia); Nopriadi (Universitas Gadjah Mada, Indonesia); Luthfi Zharif (Universitas Gadjah Mada, Indonesia)	
TS_IBIOMED-14	Pulmonary Crackle Feature Extraction using Tsallis Entropy for Automatic Lung Sound Classification	74
	Achmad Rizal (Universitas Gadjah Mada & Telkom University, Indonesia); Risanuri Hidayat (Universitas Gadjah Mada, Indonesia); Hanung Adi Nugroho (Universitas Gadjah Mada, Indonesia)	
TS_IBIOMED-15	Segmentation of Malaria Parasite Candidates from Thick Blood Smear Microphotographs Image Using Active Contour Without Edge	78
	Sekar Rini Abidin (Sebelas Maret University, Indonesia); Umi Salamah (Sebelas Maret University, Indonesia); Anto Satriyo Nugroho (Agency for the Assessment and Application of Technology, Indonesia)	
TS_IBIOMED-16	Classification of Breast Ultrasound Images based on Texture Analysis	84
	Made Rahmawaty (Universitas Gadjah Mada, Indonesia); Hanung Adi Nugroho (Universitas Gadjah Mada, Indonesia); Yuli Triyani (Universitas Gadjah Mada, Indonesia); Igi Ardiyanto (Universitas Gadjah Mada, Indonesia); Indah Soesanti (Universitas Gadjah Mada, Indonesia)	

TS_IBIOMED-17	A Comparison of Plasmodium Falciparum Identification from Digitalization Microscopic Thick Blood Film	90
	Farah Zakiyah Rahmanti (Dian Nuswantoro University, Indonesia); Novita Kurnia Ningrum (Dian Nuswantoro University, Indonesia); Prajanto Wahyu Adi (Dian Nuswantoro University, Indonesia); Mauridhi Hery Purnomo (Institut Teknologi Sepuluh Nopember, Indonesia)	
TS_IBIOMED-18	Comparative Study on Data Mining Classification Methods for Cervical Cancer Prediction Using Pap Smear Results	96
	Yulia Ery Kurniawati (Universitas Gadjah Mada, Indonesia); Adhistya Erna Permanasari (Universitas Gadjah Mada, Indonesia); Silmi Fauziati (Universitas Gadjah Mada, Indonesia)	
TS_IBIOMED-19	Noise Type Evaluation in Positron Emission Tomography Images	101
	Sicong Yu (Royal Institute of Technology KTH, Sweden); Hamed Hamid Muhammed (Royal Institute of Technology KTH, Sweden)	
TS_IBIOMED-20	Management Information Systems Development for Veterinary Hospital Patient Registration Using First In First Out Algorithm	107
	Dian Aryanti Hapsari (Universitas Gadjah Mada, Indonesia); Adhistya Erna Permanasari (Universitas Gadjah Mada, Indonesia); Silmi Fauziati (Universitas Gadjah Mada, Indonesia); Ida Fitriana (Universitas Gadjah Mada, Indonesia)	
TS_IBIOMED-21	Pattern of Accesibility Level of Health Facilities in Yogyakarta	112
	Kukuh Yuliasih Putri (Universitas Gadjah Mada, Indonesia); Adhistya Erna Permanasari (Universitas Gadjah Mada, Indonesia); Silmi Fauziati (Universitas Gadjah Mada, Indonesia)	
TS_IBIOMED-22	Cost-Benefits, NPV, IRR and QoS Analysis of the Dynamic Telecytology System in Indonesia	118
	Nge Beni Santoso (Universitas Mercu Buana, Indonesia); Rizal Broer Bahaweres (Universitas Islam Negeri Syarif Hidayatullah); Mudrik Alaydrus (Universitas Mercu Buana, Indonesia)	
TS_IBIOMED-23	Molecular Docking Simulation of Mangostin derivatives and Curcuminoid on Maltase-Glucoamylase Target for Searching Anti-diabetes Drug Candidates	124
	Tony Sumaryada (Bogor Agricultural University & Tropical Biopharmaca Research Center, Indonesia); Arwansyah (Bogor Agricultural University & Universitas Cokroaminoto Palopo, Indonesia); A.W. Roslia (Bogor Agricultural University); L. Ambarsari (Bogor Agricultural University & Tropical Biopharmaca Research Center, Indonesia); Agus Kartono (Bogor Agricultural University & Tropical Biopharmaca Research Center, Indonesia)	