

2020 3rd International Conference on Biomedical Engineering (IBIOMED 2020)

**Yogyakarta, Indonesia
6-8 October 2020**



**IEEE Catalog Number: CFP20G68-POD
ISBN: 978-1-7281-7157-9**

**Copyright © 2020 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:	CFP20G68-POD
ISBN (Print-On-Demand):	978-1-7281-7157-9
ISBN (Online):	978-1-7281-7156-2

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

Technical Sessions

IB-1	Towards Applicability of Motor Imagery BCI: Study on Artificial EEG Data Generation Methods for Calibration Time Reduction	1
	Sinantya Feranti Anindya (Institut Teknologi Bandung, Indonesia); Reza Darmakusuma (Institut Teknologi Bandung, Indonesia)	
IB-2	Triclustering Analysis Using Extended Dimension Iterative Signature Algorithm (EDISA) on Lung Disease Gene Expression Data	7
	Dwi Aji Apriana (Universitas Indonesia, Indonesia); Titin Siswantining (Universitas Indonesia, Indonesia); Devvi Sarwinda (Universitas Indonesia, Indonesia); Saskya Mary Soemartojo (Universitas Indonesia, Indonesia)	
IB-3	Electroencephalographic Spectral Analysis to Help Detect Depressive Disorder	13
	Ratna A. Apsari (Universitas Indonesia, Indonesia); Sastra K. Wijaya (Universitas Indonesia, Indonesia)	
IB-4	PharmaCV: A Cloud Vision Approach on Generating Labels of Pharmaceutical Drugs	19
	Rodolfo C. Salvador Jr. (De La Salle University, Philippines); Clarissa Jane S. Lagmay (De La Salle University, Philippines); Renann G. Baldovino (De La Salle University, Philippines)	
IB-5	RF Transceivers for Health Care Monitor Systems: A Review	23
	Mona El Abbasi (American University of Beirut, Lebanon); Karim Y. Kabalan (American University of Beirut, Lebanon); Mervat Madi (American University of Beirut, Lebanon)	
IB-6	Enhancing Detection of Pathological Voice Disorder Based on Deep VGG-16 CNN	28
	Agustinus Bimo Gumelar (Institut Teknologi Sepuluh Nopember, Indonesia; Universitas Narotama, Indonesia); Eko Mulyanto Yuniarno (Institut Teknologi Sepuluh Nopember, Indonesia); Wiwik Anggraeni (Institut Teknologi Sepuluh Nopember, Indonesia); Indar Sugiarto (Petra Christian University, Indonesia); Vincentius Raki Mahindara (Institut Teknologi Sepuluh Nopember, Indonesia); Mauridhi Hery Purnomo (Institut Teknologi Sepuluh Nopember, Indonesia)	
IB-7	Chitosan Coated Niosomes: A Potential Nanosystem for Photothermal Therapy of Skin Cancer	34
	Anil Jogdand (Indian Institute of Technology Hyderabad, India); Syed Baseeruddin Alvi (Indian Institute of Technology Hyderabad, India); Rajalakshmi PS (Indian Institute of Technology Hyderabad, India); Aravind Kumar Rengan (Indian Institute of Technology Hyderabad, India)	

IB-8	Level of Motion Sickness Based on Heart Rate Variability When Reading Inside a Fully Automated Vehicle	39
	Juffrizal Karjanto (Universiti Teknikal Malaysia Melaka, Malaysia; Eindhoven University of Technology, Netherlands); Nidzamuddin Md. Yusof (Universiti Teknikal Malaysia Melaka, Malaysia; Eindhoven University of Technology, Netherlands); Jacques Terken (Eindhoven University of Technology, Netherlands); Frank Delbressine (Eindhoven University of Technology, Netherlands); Matthias Rauterberg (Eindhoven University of Technology, Netherlands)	
IB-9	An Automated Controls for the Liver Transplant Preservation Machine	45
	Tristan Joseph C. Limchesing (De La Salle University, Philippines); Madon L. Arcega (De La Salle University, Philippines); Marie Bernadette A. Tuazon (De La Salle University, Philippines); Joshua Paul L. Manalili (De La Salle University, Philippines); Samantha June M. Rice (De La Salle University, Philippines); Renann G. Baldovino (De La Salle University, Philippines); Nilo T. Bugtai (De La Salle University, Philippines)	
IB-10	Joint Dice and Intersection over Union Losses for Deep Optical Disc Segmentation	49
	Latifah Listyalina (Universitas Respati Yogyakarta, Indonesia); Ikhwan Mustiadi (Universitas Respati Yogyakarta, Indonesia); Dhimas Arief Dharmawan (Universitas Muhammadiyah Yogyakarta, Indonesia)	
IB-11	Detection of Malaria Parasites in Thin Red Blood Smear Using a Segmentation Approach with U-Net	55
	Adrien Nautre (Ecole des Mines de Saint-Etienne, France); Hanung Adi Nugroho (Universitas Gadjah Mada, Indonesia); Eka Legya Frannita (Universitas Gadjah Mada, Indonesia); Rizki Nurfauzi (Universitas Gadjah Mada, Indonesia)	
IB-12	Non Invasive Anemia Detection in Pregnant Women Based on Digital Image Processing and K-Nearest Neighbor	60
	Yunendah Nur Fuadah (Telkom University, Indonesia); Sofia Sa'idah (Telkom University, Indonesia); Inung Wijayanto (Telkom University, Indonesia); Raditiana Patmasari (Telkom University, Indonesia); Rita Magdalena (Telkom University, Indonesia)	
IB-13	Enhance Computing Performance Through Deep Learning and Blockchain Integration for Public Health Problems	65
	Mauridhi H Purnomo (Institut Teknologi Sepuluh Nopember, Indonesia); Iman Fahrudi (Institut Teknologi Sepuluh Nopember, Indonesia); Politeknik Negeri Batam, Indonesia); Wiwik Anggraeni (Institut Teknologi Sepuluh Nopember, Indonesia)	
IB-14	Custom Convolutional Neural Network with Data Augmentation to Predict Pneumonia COVID19	71

Budi Dwi Satoto (Trunojoyo University, Indonesia); Mohammad Imam Utoyo (Airlangga University, Indonesia); Riries Rulaningtyas (Airlangga University, Indonesia); Eko Budi Koendhori (Airlangga University, Indonesia)

- IB-15 **Prediction of Protein-Protein Interactions between HIV-1 and Human using Support Vector Machine Combined with Multivariate Mutual Information** 77

Mohamad Irlin Sunggawa (Universitas Indonesia, Indonesia); Alhadi Bustamam (Universitas Indonesia, Indonesia); Devvi Sarwinda (Universitas Indonesia, Indonesia); Patuan Pangihutan Tampubolon (Universitas Indonesia, Indonesia); Wibowo Mangunwardoyo (Universitas Indonesia, Indonesia)

- IB-16 **Gait Event-Related Spectral Perturbation of Parkinson's Disease Patients with or without Freezing of Gait: A Case Report** 82

Lingxiao Yu (Shanghai Jiao Tong University, China); He Wang (Shanghai Jiao Tong University, China); Zawar Khan Khattak (Shanghai Jiao Tong University, China); Yifei Yao (Shanghai Jiao Tong University, China); Dongyun Gu (Shanghai Jiao Tong University, China); Xiaoli Guo (Shanghai Jiao Tong University, China)