A. Personal Identity

1.	Full Name (includes academic title)	Dr. Indra Riyanto, S.T., M.T.
2.	Sex	Male
3.	Rank	Senior Lecturer
4.	National Lecturer Number	0313037802
5.	Place and date of birth	Yogyakarta 13 Maret 1978
6.	E-Mail	indra.riyanto@budiluhur.ac.id
7.	Personal Contact Phone	+62 815 900 2864
8.	Work Address	Jl Ciledug Raya, Petukangan Utara, Jakarta Selatan
9.	Work phone/fax	Tel +62 21-585 3753 ext 273 Fax +62 21-737-1164
10.	Number of Graduates under supervision	Bachelor = 42 students since 2010
11.	Work Experience	2003-Present: Lecturer at Dept. of Electrical Engineering, Faculty of Engineering, Universitas Budi Luhur, Jakarta
		2004-2008: Research Assistant at Center for Remote Sensing Study, Universitas Budi Luhur
		2011-2014: Non-permanent lecturer at Faculty of Information Technology, Universitas Respati Indonesia
		2014-2018: Research Staff at Center for Environmental Studies, Universitas Budi Luhur
		2015-2017: Complaint Handling Officer at Directorate of Quality Assurance, Universitas Budi Luhur
		2017-2018: Research Management Officer at Directorate of Research and Community Service, Universitas Budi Luhur
		2018-2019: Non-permanent Lecturer at Department of Electrical Engineering, Jakarta State Polytechnic
		2024-present: Non-permanent Lecturer at Department of Mechanical Engineering, Faculty of Technology, Universitas Indonesia

B. Brief Biography

Personal Information:

Indra Riyanto was born in Yogyakarta, Indonesia in 1978 and spent his childhood in Yogyakarta and Banten-West Java. Indra Riyanto attended Department of Engineering Physics, ITS Surabaya in 1995 and graduated as *Sarjana Teknik* (Bachelor of Engineering) in August 2002 majoring in Photonics Engineering. He then attending master course at Department of Electrical Engineering, University of Indonesia in 2006 and earned *Magister Teknik* (Master of Engineering) in January 2010 majoring in Remote Sensing, later continued into doctoral course in Image Processing and Remote Sensing in 2018, and graduated as Doctor of Engineering in 2023 repectively.

Professional Experience:

In 2003, Indra Riyanto joined Budi Luhur University as lecturer at the Department of Electrical Engineering, Faculty of Engineering. During the first two years he teaches Physics and Numerical Methods. Later on, he became teaching assistant for Opto-electronic Devices in 2004, Optical Communication Systems (2005), and Image Processing (2007) and eventually became the main lecturer on these subjects starting in 2010 up to present as of 2017.

Starting in 2004, Mr. Indra is also tasked as research assistant in the newly formed Center for Remote Sensing Studies Laboratory under the Faculty of Engineering which prepares the groundwork of the model for current research unit, the Center for Environmental Studies. The position is held until all computer-using laboratories are amalgamated into Budi Luhur University IT Laboratory in 2008.

During the 2007-2009 period, his main research theme is formed in flood prediction and mapping after experiencing the 2007 Jakarta Great Flood. The research is under guidance by Dr. Dodi Sudiana and collaborates with Prof. Josaphat Tetuko Sri Sumantyo of Chiba University; 2uccessfully predicted the extent of flood during 2012 Jakarta Great Flood. This research also contributes to the mapping of land subsidence in Jakarta, a joint research between University of Indonesia and Chiba University. Since 2018, the research also incorporated Artificial Intelligence on Remote Sensing data processing during doctoral study, and since January 2024 joined as fellow researcher at the newly established AIDE (Artificial Intelligence and Data Engineering) FTUI Research Center.

Other works include promoting sustainable society through cooperation with Kagoshima University, with activities in reusing waste materials as products and arts, especially made of decomposed leaf structure the process of decomposing the leaf is now under patent filing as of March 2017. This activity is implemented in Budi Luhur University's Green Kamal Project, a revitalization program on under-developed neighborhood sponsored by Municipal Government of West Jakarta to increase the living level of the aforementioned residents.

Since 2021, started BLUE projects (Budi Luhur Engineering) engineering works in conjunction with YPAC Jakarta providing rooftop PV power generator for disabled children care home and also designing detachable electric motor sets for existing wheelchairs supported by various IEEE Project Grants.

C. Education

Grade	Bachelor	Master	Doctor
University	Institut Teknologi Sepuluh Nopember	Universitas Indonesia	Universitas Indonesia
Field	Engineering Physics	Opto-electrotechniques & Laser Application	Computer Engineering
Enroll-Graduation year	1995-2002	2006-2010	2018-2023
Thesis Title	Inter-Campus Fiber Optic Network Design for Budi Luhur University	Flood Potential Mapping with Watershed Segmentation on DEM Data	New Framework Development of Three-Dimensional Convolutional Neural Network Using Synthetic Aperture Radar Multi-Temporal Image for Urban Flood Classification
Supervisor/ Promotor	Dr. Ir. Sekartedjo, M.Eng. Drs. Suwasti Broto, M.T.	Dr. Ir. Dodi Sudiana, M.Eng.	Dr. Ir. Dodi Sudiana, M.Eng. Dr. Rahmat Arief, Dipl.-Ing.

D. Professional Activities

No.	Year	Organization	Position	Scope
1	2017-2018	IEEE Indonesia Section Young Professionals Affinity Group (YP-AG)	Vice Chair	Indonesia
2	2019-2020	IEEE Indonesia Section YP-AG	Chair	Indonesia
3	2019-2022	IEEE Region 10 Professional Activities Committee	Committee Member	Asia-Pacific
4	2020-2022	IEEE Indonesia Section Membership Development Committee	Coordinator	Indonesia
5	2023	IEEE Indonesia Section Humanitarian Activities Committee	Committee Member	Indonesia

| 6 | 2023-present | IEEE Humanitarian Technologies Board | Project Evaluator | Global |
| 7 | 2024-present | IEEE Humanitarian Technologies Board | Program Committee | Global |

E. Research Experience

No.	Year	Title	Source	Fund
1	2010	Flood Potential Areas Mapping Study in DKI Jakarta	Universitas Budi Luhur	IDR 5.000.000
2	2011	SPOT-4 Satellite Image Metadata Conversion Automatization Process	LAPAN	IDR 2.500.000
3	2012	Mobile System To Support Flood Area Information Distribution. Case Study : Central Jakarta Area	Universitas Budi Luhur	IDR 5.000.000
4	2013	Flood Potential Prediction and Early Warning System	Universitas Budi Luhur	IDR 5.000.000
5	2014	Environmental Monitoring on Dredging Activity at Sunda Kelapa Harbor	Asian Development Bank	IDR 35.000.000
6	2015	Wireless Access Point Positioning system for Indoor Navigation System	Universitas Budi Luhur	IDR 7.500.000
7	2017	Flood Potential Mapping for Pesanggrahan River Watershed Dense Urban Area in South and West Jakarta Municipality	Universitas Budi Luhur	IDR 22.500.000
8	2018	Development of Multi-Mission High Resolution Remote Sensing Data Processing for Digital Elevation Model Construction in Disaster Mitigation Support	INSINAS – IRPM	IDR 170.000.000
9	2019	Speckle Noise Reduction pada Citra Synthetic Aperture Radar menggunakan Metode Total Variation Regularization (TVR)	Universitas Indonesia	IDR 59.000.000
10	2020	SI COVID (Sistem Interaktif Covid-19) Interactive WebGIS-Based Pandemic Vulnerability Mapping	IEEE HAC-SIGHT	USD 2300

11	2020	Flood Potential Mapping with Multi-Temporal TerraSAR-X Digital Elevation Model Data Segmentation on River Watersheds in Jakarta	Universitas Indonesia	IDR 25.000.000
12	2021	BLUE KURODA (Budi Luhur Electric Kursi Roda)	IEEE Region-10 HAC Covid-19 Challenge	USD 464
13	2022	Cahaya Budi Luhur	IEEE HAC-SIGHT	USD 4981
14	2023	BLUE PEW (Budi Luhur Engineering Portable Electric Wheelchair)	EPICS in IEEE	USD 7700
15	2023	Cahaya Budi Luhur Phase-2	IEEE HTB-SIGHT	USD 4706
16	2023	Disaster Mitigation-Spatial Planning Based on Analysis of Land Conditions and Post-earthquake land cover 2021-2022 in Mamuju Regency, West Sulawesi	RIIM-BRIN (Year-1)	IDR 172.000.000
17	2024	Disaster Mitigation-Spatial Planning Based on Analysis of Land Conditions and Post-earthquake land cover 2021-2022 in Mamuju Regency, West Sulawesi	RIIM-BRIN (Year-2)	IDR 345.000.000
18	2024	Cahaya Budi Luhur Phase-3	IEEE HTB-SIGHT	IDR 162.000.000

F. Selected Scientific Article Publications

No.	Title	Journal Name / Publisher	Volume/Number/Year
1	Mapping of Dredging Material Dispersion Pattern	Journal of Instrumentation and Autonomous Systems (JIAS) / International Society for Intelligent and Unmanned Systems (ISIUS)	Volume 3 Issue 2 April 2016
2	Local Area Positioning System (LAPS) for Indoor Navigation System and Building Energy Efficiency	International Journal for Simulation and Systems Science and Technology (IJS3T) / UK Simulation Society (UKSim)	Volume 17 Issue 32 September 2016

No.	Title	Journal Name / Publisher	Volume/Number/Year
3	An Effort to Lower Electricity Bill in University Building by Automatic Lighting Switches Application	PERTANIKA Journal of Social Sciences & Humanities / Universiti Putra Malaysia	Volume 26 March 2018
4	Motion sensor application on building lighting installation for energy saving and carbon reduction joint crediting mechanism	Applied System Innovation / MDPI	Volume 1 Issue 3 July 2018
5	Pesanggrahan River Watershed Flood Potential Mapping in South and West Jakarta with LiDAR Data Segmentation	Journal of Physics Conference Series / Institute of Physics	Volume 1201 Issue 1 May 2019
6	Three-dimensional convolutional neural network on multi-temporal synthetic aperture radar images for urban flood potential mapping in Jakarta	Applied Sciences / MDPI	Volume 12 Issue 3 February 2022
7	Burnt-Area Quick Mapping Method with Synthetic Aperture Radar Data	Applied Sciences / MDPI	Volume 12 Issue 23 November 2022
8	A Hybrid Convolutional Neural Network and Random Forest for Burned Area Identification with Optical and Synthetic Aperture Radar (SAR) Data	Remote Sensing / MDPI	Volume 15 Issue 3 January 2023
9			

G. Scientific Oral Presentations

No.	Conference Name	Title Presented	Location
1	International Conference on Information Technology and Electrical Engineering (ICITEE) 2012	PACS Performance Analysis on Hospital Radiology Unit	Universitas Gadjah Mada, July 2012

2	The 5th Indonesia-Japan Joint Scientific Symposium (IJJSS 2012)	Mobile System To Support Flood Area Information Distribution. Case Study: Central Jakarta Area	Chiba University Japan, October 2012
3	The 5th Indonesia-Japan Joint Scientific Symposium (IJJSS 2012)	SPOT-4 Metadata Conversion	Chiba University Japan, October 2012
4	The 5th Indonesia-Japan Joint Scientific Symposium (IJJSS 2012)	Encrypting Text Into Image With MatLab	Chiba University Japan, October 2012
5	The 6th Indonesia-Japan Joint Scientific Symposium (IJJSS 2014)	Flood Early Warning and Prediction System	Universitas Gadjah Mada, October 2014
6	The 6th Indonesia-Japan Joint Scientific Symposium (IJJSS 2014)	Image Processing-based Flood Early Warning System	Universitas Gadjah Mada, October 2014
7	IEEE 9th Asia Modelling Symposium (AMS2015)	Local Area Positioning System (LAPS) for Indoor Navigation System	Kuala Lumpur, Malaysia, September 2015
8	The 3rd International Symposium on Microsatellites and Microwave Remote Sensing (SOMIRES-3)	Mapping of Jakarta Bay Current for Sunda Kelapa Dredging Project (non-proceeding)	Chiba University, Jepang, December 2015
9	IEEE 1st Micro and Nano Technologies Modelling and Simulation (MNTMSim2016)	4G LTE Network Design for Budi Luhur Campus and Surrounding Area	Kuala Lumpur, Malaysia, March 2016
10	The 7th Indonesia-Japan Joint Scientific Symposium (IJJSS 2016)	Portable Photovoltaic Powerplant with Solar Tracker for Disaster Affected Area Emergency Power Supply	Chiba University, Japan, November 2016
11	The 2017 Progress in Electronics Engineering, Computer Engineering and Information Technology (PIECT 2017)	Web-based Geographic Information System for Electric Transmission Equipment Mapping	Bandung, Indonesia, May 2017
12	4th IEEE International Conference on Applied System Innovation (ICASI2018)	Increasing disaster awareness of the community by flood potential mapping of	Chiba, Japan, April 2018

No.		Activity Name	
		densely-populated urban river watershed in south and west 8akarta with LIDAR data segmentation	
13	The 2019 IEEE International Geoscience and Remote Sensing Symposium (IGARSS2019)	Web Camera Sensor Coupled with Lidar Data Flood Map for Flood Warning System	Yokohama, Japan, August 2019
14	2023 8th Asian and Pacific Conference on Synthetic Aperture Radar (APSAR)	Development of Three-Dimensional Convolutional Neural Network for Urban Flood Classification Using Synthetic Aperture Radar Multi-Temporal Image	Bali, Indonesia, October 2023

H. Academic Social Activity

No.	Year	Activity Name	Funding*
1	2014	Petukangan Utara District Citizen Empowerment to Support Sustainable Society	Budi Luhur University
2	2014	Recycle Workshop & Contest for Petukangan Utara Citizens (with Kagoshima University)	Budi Luhur University
3	2015	Citizen Assitance Service on Non-Organic Waste Recycle	Budi Luhur University & Kagoshima University
4	2015	Enjoyable Physics and Basic Electronics Workshop for High School Students	Budi Luhur University
5	2016	Kamal Village Life Standard Rising Assistance	Budi Luhur University
6	2020	How to Obtain Community Funding from IEEE	IEEE Young Professionals
7	2020	SICOVID-19 WebGIS-based Interactive Pandemic Vulnerability Mapping	IEEE HAC-SIGHT
8	2021	SICOVID-19 Introduction for Covid-19 Community Task Force	IEEE Young Professionals
9	2021	BLUE KURODA (Budi Luhur Electric Portable Wheelchair) to	IEEE Ragion-10 Humanitarian

		Minimise Touch by Disabled People During Pandemic Time	Activities Challenge

I. Awards

No.	Award	Awarded by	Year
1	Distinguished Lecturer	Universitas Budi Luhur	2013
2	Best Performance Lecturer	Faculty of Engineering, Universitas Budi Luhur	2015
3	Best Student Research Paper	UK Simulation Society during AMS 2015	2015
4	Best Research Performance	Budi Luhur University	2017
5	Senior Member Elevation	Institute of Electrical and Electronics Engineers (IEEE)	2018
6	Outstanding Young Professional Volunteer	IEEE Region 10 (Asia Pacific) & IEEE MGA (Global)	2021
7	Outstanding Membership Development Volunteer	IEEE MGA (Global)	2023