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## Invited Speaker Session 3

Room: Amarta 2 and Amarta 3

### **IS3.1 Backward Compatible Low PAPR Preamble for Very High Throughput WLAN IEEE802.11ac**

Wahyul Amien Syafei, Achmad Hidayatno and Ajub Ajulian Zahra

*Presenter bio:* B.Eng 95 Electrical Engineering Faculty of Engineering Diponegoro University, Indonesia. M.Eng 02 Multimedia Telecommunication Faculty of Engineering Sepuluh Nopember Institute of Technology, Indonesia. Ph.D 09 Department of Electronics and System Engineering Computer Science and Electronics Kyushu Institute of Technology, Japan. Field: Wireless Telecommunication and Multimedia, MIMO, OFDM, Familiar with IEEE 802.11a/b/g/n/ac, 3rd-Dan in Karate, 3rd-Dan in Kobudo, Instructor of Okinawan Kobudo, Gold Medal Shorinji Kempo. Speaking: Bahasa Indonesia, Java, Sunda, English, Japanese, Arabic

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## Parallel Session 1 (Power Systems)

Room: Amarta 2

**PS1-PS.1 Performance Improvement of Scalar Feedback Control for Induction Motors by Using Third Harmony Injection SPWM**

Alif Nabel Luqman, Miftah Adiguna, Abdul Fandi, Mochammad Facta, Trias Andromeda, Hermawan Hermawan and Iwan Setiawan  
pp. 7-12

**PS1-PS.2 Dynamic Power Injection for Solar PV Constant Power Generation**

Muhammad Kuncoro, Rudi Darussalam, Chandra Budi Sukmono and Iwa Garniwa  
pp. 13-17

**PS1-PS.3 Fast-Charging LTO 18650 Batteries Using a DC PS-3005D Power Supply**

Anggakara Syahbi Syagata, Angga, Trias Andromeda, Iwan Setiawan, Hermawan Hermawan, Abd. Rahim Mat Sidek and Imam Sumpono  
pp. 18-22

**PS1-PS.4 Power Consumption Analysis in Resonant Converter**

Mochammad Facta, Hermawan Hermawan and Muhammad Amjad  
pp. 23-26

**PS1-PS.5 Design of Temperature and Humidity Control Devices in the Leakage Current Test Chamber of 20kV Insulator**

Lastoni Wibowo, Abdul Syakur and Trias Andromeda  
pp. 27-32

**PS1-PS.6 Design of Monitoring Remote Terminal Unit(RTU) Panel Supply Based on IOT Case Study at PLN**

Fikri Shalahudin and Budi Setiyono

*Presenter bio:* Born in Tegal, 24 June 1995, now become student at Electrical Engineering Diponegoro University

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# Parallel Session 1 (Telecommunication and Vehicular Technology and Green Applications and Interdisciplinary Topic)

Room: Amarta 3

## **PS1-TG.1 Centralized Dynamic Host Configuration Protocol and Relay Agent for Smart Wireless Router**

Wahyul Amien Syafei, Yosua Alvin Adi Soetrisno and Agung Prasetyo

*Presenter bio:* B.Eng 95 Electrical Engineering Faculty of Engineering Diponegoro University, Indonesia. M.Eng 02 Multimedia Telecommunication Faculty of Engineering Sepuluh Nopember Institute of Technology, Indonesia. Ph.D 09 Department of Electronics and System Engineering Computer Science and Electronics Kyushu Institute of Technology, Japan. Field: Wireless Telecommunication and Multimedia, MIMO, OFDM, Familiar with IEEE 802.11a/b/g/n/ac, 3rd-Dan in Karate, 3rd-Dan in Kobudo, Instructor of Okinawan Kobudo, Gold Medal Shorinji Kempo. Speaking: Bahasa Indonesia, Java, Sunda, English, Japanese, Arabic

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## **PS1-TG.2 Diabetes Prediction System Based on Iridology Using Machine Learning**

Ratna Aminah and Adhi Harmoko Saputro

pp. 44-49

## **PS1-TG.3 Analysis of the Effect of the Wax Coating on Firmness Prediction Model in Malang Apples Based on Visible and Near-Infrared (VNIR) Imaging**

Risti Dwi Putri and Adhi Harmoko Saputro

pp. 50-54

## **PS1-TG.4 Development Conceptual Model Smartphone Adoption for Use Mobile Banking**

Erick Fernando, Surjandy Surjandy and Meyliana Meyliana

pp. 55-59

## Parallel Session 2 (Information and Computer Technologies 1)

Room: Amarta 3

### **PS2-ICT1.1 *Understanding Digital Skill Use from the Technology Continuance Theory (TCT)***

Nurdin Nurdin, Sagaf S Pettalongi and Mansur Mangasing

*Presenter bio:* I am a senior Lecturer in Information System at IAIN Palu and the Director of STMIK Bina Mulia Palu- Indonesia. Currently I got a PhD degree in Information TeChnology at Swinburne University of Technology Australia. I have published a number of journal papers and proceedings. My skill related to information systems, e-government and social media.

pp. 60-65

### **PS2-ICT1.2 *Analysis Social Media Application Message Trust Factor a Case Study University Student in Indonesia***

Surjandy Surjandy, Wanda Wandoko, Meyliana Meyliana and Erick Fernando

*Presenter bio:* Phd Student and researcher, Reserach Topic area - Blockchain for Enterprise System Solution (e.g. SCM) - Technology Risk Management - Financial Technology - IT Governance

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### **PS2-ICT1.3 *Early Warning System of Landslide Disaster Using Generalized Neural Network Algorithm***

Aghus Sofwan and Sumardi Sumardi

pp. 71-74

### **PS2-ICT1.4 *Intelligent Multiple-Vehicular-Attributes (iMVA) Broadcast Protocol for VANETs***

Agung Prasetijo

pp. 75-80

### **PS2-ICT1.5 *Data Privacy Factor of Female Passenger's Data in Indonesia Online Transportation System***

Surjandy Surjandy, Erick Fernando, Meyliana Meyliana, Yuli Eni, Alexandra Joya and Dimitrij Dharma

*Presenter bio:* Phd Student and researcher, Reserach Topic area - Blockchain for Enterprise System Solution (e.g. SCM) - Technology Risk Management - Financial Technology - IT Governance

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### **PS2-ICT1.6 *Success Factor of the Implementation Blockchain Technology in Pharmaceutical Industry: A Literature Review***

Erick Fernando, Meyliana Meyliana and Surjandy Surjandy

pp. 86-90

### **PS2-ICT1.7 *Hierarchical Multi-label Classification to Identify Hate Speech and Abusive Language on Indonesian Twitter***

Faizal Adhitama Prabowo, Muhammad Okky Ibrohim and Indra Budi

pp. 91-96

## Parallel Session 2 (Telecommunications and Vehicular Technologies)

Room: Amarta 2

### **PS2-TVT.1 Uplink Boost Eliminate User in Massive MIMO System Using Reinsch Algorithm**

Soraya Mustika, Eko Noerhayati, Anik Nur Handayani, Siti Sendari and Langlang Gumilar

*Presenter bio:* • Name : Soraya Norma Mustika • Place/ Date of Birth: Malang, Indonesia. August 9th1992 • Resident Address: Jalan Cikaso 16 Malang, East Java, Indonesia 65122 Mobile. +6281944811922.

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### **PS2-TVT.2 Accuracy Comparison of Radio Direction Finder with 6 and 4 of Log Periodic Dipole Array Antennas**

Kartiko Nugroho, Azli Yahya, Nor Hisham Khamis, Nuramirah M Nor, M Razman Shaari and Abd. Rahim Mat Sidek

pp. 101-104

### **PS2-TVT.3 Design and Construction of Helical Antenna in GSM 900**

Yuli Christyono

pp. 105-109

### **PS2-TVT.4 Bandwidth Enhancement Using Stacked Patch MIMO Antenna with Low Mutual Coupling for 3.5 GHz**

Subuh Pramono

pp. 110-114

### **PS2-TVT.5 The Track Characteristics and the Propagation Model in Train Traffic for Automatic Traffic Door System**

Elfira Nureza Ardina

pp. 115-120

### **PS2-TVT.6 Multi-hop Uplink for Low Power Wide Area Networks Using LoRa Technology**

Misbahuddin Misbahuddin, Muhamad Syamsu Iqbal and Giri Wahyu Wiriasto

pp. 121-125

### **PS2-TVT.7 Automatic Sprinkler System for Water Efficiency Based on LoRa Network**

Arif Nursyahid, Tholud Aprilian, Thomas Agung S, Helmy Helmy, Ari Sriyanto Nugroho and Deddy Susilo

pp. 126-131

## Parallel Session 3 (Control and Circuits)

Room: Amarta 2

### **PS3-CC.1 Design of Fabric-Based Soft Robotic Glove for Hand Function Assistance**

Rifky Ismail

*Presenter bio:* An assistant professor in Department of Mechanical Engineering, Diponegoro University, Indonesia. A researcher in Center for Biomechanics, Biomaterial, Biomechatronics and Biosignal Processing (CBIOM3S) Diponegoro University. I conduct a research on biomechanics, biomaterial, biomechatronics, tribology and engineering design.

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### **PS3-CC.2 Spark Gap System of Electrical Discharge Machining (EDM)**

Betantya Nugroho, Azli Yahya, Trias Andromeda, Abd. Rahim Mat Sidek and Nor Hisham Khamis

pp. 138-142

### **PS3-CC.3 Development of Omni-Wheeled Mobile Robot Based-on Inverse Kinematic and Odometry**

Aghus Sofwan, Hafidz Mulyana, Hadha Afrisal and Abdul Goni

pp. 143-148

### **PS3-CC.4 Three-Fingered Soft Robotic Gripper Based on Pneumatic Network Actuator**

Mochammad Ariyanto and Rifky Ismail

*Presenter bio:* I am working on the area of dynamics system and control in Department of Mechanical Engineering, Diponegoro University. My expertises are: - Biomechatronics and biomedical Engineering - Unmanned vehicles, VTOLs and rotorcraft - Flight dynamic modeling, simulation, Navigation, and control - Hardware in-the loop simulation (HILS) & Pilot in-the loop simulation (PILS) - Flying Robot/Aerial robot - object interaction - Control system design, optimization design, Artificial Neural Network (ANN), & Genetic Algorithm (GA) - Biorobotics, robotic hand, supernumerary robotic limbs, exoskeleton robot

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### **PS3-CC.5 MFCC Feature Extraction and KNN Classification in ECG Signal**

Siti Agrippina Alodia Yusuf and Risanuri Hidayat

pp. 154-158

### **PS3-CC.6 Design Semi-Automatic Control System Using PLC for Stalling Materials in the Forming Machine**

Syahril Ardi

pp. 159-162

### **PS3-CC.7 Designing a Fuzzy Controller of Crude Oil Dilution in Palm Oil Mills**

Enda Wista Sinuraya

pp. 163-168

### **PS3-CC.8 Inertial Navigation System of Quadrotor Based on 10-DOF IMU and GPS Sensors**

Sumardi Sumardi, Taufik Rahmadani and Hadha Afrisal

*Presenter bio:* Taufik Rahmadani was born on August 19th, 1997 in Semarang city, Middle Java province, Indonesia. In 2015, he joined the Department of Electrical Engineering, University Diponegoro, as a student specially in Control and instrumentation. His current research interests include inertial measurement unit, quadcopter, IoT, and power electronics. he has collaborated actively with researchers in several other disciplines of science and technology.

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### **PS3-CC.9 Design of Data Acquisition System for Position and Attitude Quadcopter**

Aris Triwiyatno, Sumardi Sumardi, Hadha Afrisal, Dhamastya Adhi Putra and Taufik Rahmadani

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## Parallel Session 3 (Information and Computer Technologies 2)

Room: Amarta 3

### **PS3-ICT2.1 Towards Smart LMS to Improve Learning Outcomes Students Using LenoBot with Natural Language Processing**

Dina Fitria Murad, Dfm, Adhi Iskandar, [Erick Fernando](#), Deryan Maured and Tica Octavia  
pp. 179-184

### **PS3-ICT2.2 Using Minimum Distance to Classify Uttered Arabic Words into Subject - Object Name**

[Salam Hamdan](#), Arafat A. Awajan and Akram Al-kouz

*Presenter bio:* I am a PhD candidate in Computer Science at Princess Sumaya University for Technology. I received my bachelor's degree in Computer Engineering from Al-Balqa Applied University, 2012. I received my master's degree in Information System Security and Digital Criminology from PSUT, 2015. My research interests include hardware security, network security and vehicular ad hoc networks.

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### **PS3-ICT2.3 MEC Deployment with Distributed Cloud in 4G Network for 5G Success**

[Andika Hairuman](#), Amalia Zahra, I Gede Putra Kusuma Negara and Dina Fitria Murad, Dfm

*Presenter bio:* Andika Hairuman received his Bachelor degree in Information Systems from Bina Nusantara University, Indonesia in 2019. He is currently pursuing the Master degree in Computer Science at Bina Nusantara University, Indonesia. He is working as a consultant for 15 years and been working in Telecommunication and IT Industry for 18 years. Deep knowledge of GSM, WCDMA, LTE, 5G Technology as a domain expert of RF, RAN and Virtualized RAN, Cloud and Edge Computing, NFV, Automation and Machine Learning.

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### **PS3-ICT2.4 LC-MS Analysis: Mini Review Frequently Used Open Source Softwares**

[Iwan Binanto](#), Bahtiar Saleh Abbas, Harco Leslie Hendric Spits Warnars and Nesti Sianipar

*Presenter bio:* Lecturer at Department of Informatics, Sanata Dharma University, Yogyakarta, Indonesia.

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### **PS3-ICT2.5 Geometric Verification Method of Best Score Increasing Subsequence for Object Instance Recognition**

[I Gede Putra Kusuma Negara](#), Kristopher David Harjono and Muhammad Taufik Dwi Putra

pp. 202-206

### **PS3-ICT2.6 Augmented Reality Technology as One of the Media in Therapy for Children with Special Needs**

[Kurniawan Martono](#)

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### **PS3-ICT2.7 Implementation of Neural Network Classification for Diabetes Mellitus Prediction System Through Iridology Image**

[Rievanda Putri](#) and Adhi Harmoko Saputro

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## Additional Paper

### **Inertial Navigation System of Quadrotor Based on IMU and GPS Sensors**

Sumardi, W. D. Nugroho, H. Afrisal, D. A. Putra, T. Rahmadani

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