

Day 1: November 8, 2022

Invited Speaker

Topic Advanced Analog Integrated Circuits
Chair

Time	Invited Speaker	Title
11:00-11:30	Prof. Lu (Dean)	Micro-LED Display Driver Design
11:30-12:00	Prof. Poki Chen	Automatic Optimization for Analog Integrated Circuit Design

S1P1 Session 1, Parallel Room 1
Topic AI for Transportation
Chair Dr. Yoanes Bandung

Time	Paper #	Authors	Title
13:00-13:15	1087	Elan Lubihana and Yoanes Bandung	Design of a Tourism Recommendation System Based on Sentiment Analysis with LSTM
13:15-13:30	4265	Endang Wiwiet Kusumaningrum	Artificial Neural Network of Logistics Hub and Spoke Network
13:30-13:45	6809	Nana Sutisna, Andi M. Riyadhus Ilimy, Zulfikar Nima Arifuzzaki, Infall Syafalni, Daffa Maulana, Rahmat Mulyawan and Trio Adiono	Deep Q-Network Model for Intelligent Traffic Light
13:45-14:00	4771	Nana Sutisna, Zulfikar Nima Arifuzzaki, Infall Syafalni, Rahmat Mulyawan and Trio Adiono	Architecture Design of Q-Learning Accelerator for Intelligent Traffic Light Control System

S1P2 Session 1, Parallel Room 2
Topic Smart IoT for Farming
Chair Dr. Irman Idris

Time	Paper #	Authors	Title
13:00-13:15	1455	Muhammad Arbi Minanda and Irman Idris	Design and Implementation of Plant Growth Chamber System with Broad Spectrum and High Intensity Lighting: Chili Cultivations Case Study
13:15-13:30	1542	Risty Jayanti Yuniar, Andhika Giyantara and Akhmad Malik	Egg Quality Detection Conveyor System Design
13:30-13:45	2517	Triya Muthia, Sri Ratna Sulistyanti, Fx Arinto Selyawan, Ahi Yudansan, Sri Purwiyanti and Helmy Fitriawan	Egg Characteristic Identification System Using Thermal Imaging Camera Based on Image Processing
13:45-14:00	6736	Dedi Darwis, Abhishek Mehta, Novi Wati, Selamet Samsugi and Priya Swaminarayan	Digital Smart Collar: Monitoring Cow Health Using Internet of Things

S1P3 Session 1, Parallel Room 3
Topic Smart Robotics and Applications
Chair Prof. Ray-Guang Cheng

Time	Paper #	Authors	Title
13:00-13:15	8968	Hao-Wei Huang, Muhammad Fadli Achmad Kripton Nugraha, Chih-Wei Lin and Ray-Guang Cheng	AI DJ System for Electronic Dance Music
13:15-13:30	6059	Amalia Rizqi Utami, Risty Jayanti Yuniar, Andhika Giyantara and Alvin Dwi Saputra	Cohen-Coon PID Tuning Method for Self-Balancing Robot
13:30-13:45	6908	Infall Syafalni, Mohamad Imam Firdaus, Cahya Yugansyah, Nana Sutisna, Yutyan Wahyu Hadi and Trio Adiono	Design of Testing Environment for Line-Follower Robot with Obstacles
13:45-14:00	1179	Jalu Ahmad Prakosa, Edi Kurniawan, Purwobowo Purwobowo and Chitayah Astuti	Design of Robust H-infinity Flight Control for MIMO Model of Bi-copter Against Uncertainty

S2P1 Session 2, Parallel Room 1
Topic Optics and Photonics
Chair Ir. Akhmad Surawijaya, M. Eng.

Time	Paper #	Authors	Title
14:30-14:45	2098	Akhmad Surawijaya, Muhammad Amin Sulthoni, Irman Idris and Trio Adiono	Optical Power Absorption Simulation of Silicon 2D-Grating Nanostructure fabricated using MACE Method
14:45-15:00	3796	Safayat-At Imam, Khandakar Mohammad Ishtiak and Quazi D. M. Khoaru	Ultra-narrowband dual absorber on single polymer defect based one-dimensional graphene embedded octonacci quasi-photonic crystals
15:00-15:15	9332	Amilla Puspadhita, Dadin Mahmudin and Isa Anshori	Localized Surface Plasmon Resonance Biosensor Design Optimization with Metal-Insulator-Metal Nanodisk/Nanoring
15:15-15:30			

S2P2 Session 1, Parallel Room 2
Topic Circuits and Embedded Systems
Chair Dr. Eng. Wahyu Amien Syaefi

Time	Paper #	Authors	Title
14:30-14:45	6627	Wahyul Amien Syaefi, Sulistyadi Sulistyadi, Trias Andromeda and Achmad Hidayatno	Improving the Communication Network Reliability at Electric Submersible Pump Wells Offshore using SCADA
14:45-15:00	6129	Yahwista Salomo, Infall Syafalni, Nana Sutisna, Rahmat Mulyawan and Trio Adiono	Analysis of Cache Associativity and Replacement Policy on Matrix Multiplication Performance in RISC-V
15:00-15:15	8607	Wahyu Setyo Pambudi, Adi Soeprijanto and Mat Sya'In	Smart-Meter Non-Intrusive Load Monitoring using Low Complexity Filter to Reduce Transient Spike
15:15-15:30	4647	Arief Nur Rahman, Dian Andriana and Carmadi Machbub	Comparison between Grad-CAM and EigenCAM on YOLOv5 detection model

S2P3 Session 2, Parallel Room 3
Topic AI and Security Applications
Chair Dr. Eng. Infall Syafalni

Time	Paper #	Authors	Title
14:30-14:45	8235	Infall Syafalni, Daniel Mario, Rinaldi Munir, Trio Adiono, Nana Sutisna, and Rahmat Mulyawan	Complexity Analysis of Encoding in CKKS-Fully Homomorphic Encryption Algorithm
14:45-15:00	5272	Denny Nugroho, Trio Adiono, Infall Syafalni and Nana Sutisna	WingCore: Pipeline Convolutional Neural Network Accelerator for Object Detection Using the Wingrad Algorithm
15:00-15:15	5587	Devi Noor Endrawati, Infall Syafalni, Nana Sutisna and Trio Adiono	Weight-Based Convolutional Neural Network with Sparse Optimization
15:15-15:30	2744	Clarence Amadeus, Infall Syafalni, Nana Sutisna, and Trio Adiono	Digit-Number Speech-Recognition using Spectrogram-Based Convolutional Neural Network

Day 2: November 9, 2022

S3P1 Session 3, Parallel Room 1
Topic Smart Wireless Applications
Chair Nur Ahmadi, Ph.D.

Time	Paper #	Authors	Title
10:00-10:15	1821	Diyah Widiyastri, Nur Ahmadi, Trio Adiono, Ayu Purwarianti, Ariana Tulus Purnomo and Ding-Bing Lin	Contactless Respiratory Rate Monitoring Using FMCW Radar
10:15-10:30	2871	Adhyta Dhava Shalea Putra and Octarina Nur Samijayani	Simulation of Visible Light Communication and Free Space Optic For IoT Using Optosystem
10:30-10:45	7646	Rosa Eliviani and Yoanes Bandung	Throughput Prediction for Multimedia IoT in Wireless Network
10:45-11:00	7155	Aska Zharfan Hafah, Muhammad Oglin Hasaunuddin and Gotawa Aryo Prakoso	Design and Implementation of RF to DC Converter for Low Power IoT Device Using RF Energy Harvesting

S3P2 Session 3, Parallel Room 2
Topic AI for Detections and Classifications
Chair Ir. Ihsan Hariadi, M.Sc.

Time	Paper #	Authors	Title
10:00-10:15	3701	Ita Mubarakah, Pujo Laksono, Cepi Ramadhani Saffin and Irman Idris	Detection of Begonovirus Disease for Identification of Disease Severity Level in Tomato's Leaves Using Convolutional Neural Network (CNN)
10:15-10:30	5467	Meinanto Tri Yurawan, Fauzan Ragiya Anggaraksa, Khalifah Luzzardi Firmansyah, Lenna Yulianti and Ahmad Izzuddin	Thermal Infrared Tracking System with YOLOv4 Algorithm and Visual Servicing Method
10:30-10:45	7391	Muhammad Taqiyuddin, Wahyul Syaefi, Agung Budi Prasetyo, Yudi Eko Windarto and Ke Perwati Windasari	Accuracy Improvement of CNN MobileNet-V1 and Residual Network 50 Layers Models using Adam setting for Car Type Classification
10:45-11:00	7397	Muhammad Iqbal and Rahadian Yusuf	Optimizing Security based on Face Recognition in Small Spaces

S3P3 Session 3, Parallel Room 3
Topic Smart Health Applications
Chair Dr. Eng. Nico Surantha

Time	Paper #	Authors	Title
10:00-10:15	8088	Eko Simanjuntak, Nico Surantha and Sani M Ilsa	Evaluation of time-series database on microservice architecture for health monitoring system
10:15-10:30	1090	I Gusti Made Ngrah Desnarjaya and I Made Aditya Nugraha	Design and Build Body Temperature Detection and Personal Identity Recognition Through E-ID Card and Photo Based on IoT
10:30-10:45	6452	Elsa Sari Hayunah Nurdinayah and Hasbullah Zakaria	Bundle Branch Block Classification Based on Two Leads ECG using Random Forest
10:45-11:00	8693	Adji Willy Mubarak and Octarina Nur Samijayani	IoT Based Smart Room With Face Mask Detection For Post COVID-19 New-Normal Activity

S4P1 Session 4, Parallel Room 1
Topic Smart Information Technology and Simulation
Chair Dr. Eng. Rahadian Yusuf

Time	Paper #	Authors	Title
13:30-13:45	9339	Ayraf Athariq Putra Gary, Widodo Widodo, Hamidillah Aje and Rahadian Yusuf	Utilization of Association Rules for Specialization Recommendations in Informatics and Computer Engineering Education Study Programs, State University of Jakarta
13:45-14:00	8436	Yusa Inderapermana, Dangi Dang, Fitri Nurli Sari and Dwi Kusumawati	Designing Local Government Information Quality Measures on Covid-19 Information System
14:00-14:15	3808	Dori Purnama Alamsyah, Yudi Ramdhani and Resza Dendi Nurbeni	Implementation of the Fuzzy Inference System Tsukamoto Method in the Decision Support System
14:15-14:30	1038	Muhammad Fakhrudin, Nana Sutisna, Infall Syafalni and Trio Adiono	Path Planning Modeling and Architecture Design for Q-Learning Algorithm

S4P2 Session 4, Parallel Room 2
Topic Machine Learning Algorithms
Chair Aji Gautama Putrada, M.T.

Time	Paper #	Authors	Title
13:30-13:45	6954	Liya Yuni Astuti and Rahadian Yusuf	Comparing Different Supervised Machine Learning Accuracy for Weather Analysis on CubeSat Simulation
13:45-14:00	4708	Aji Gautama Putrada, Nur Alamsyah, Syafrial Fachri Pane and Mohamad Nurkamel Fauzan	XGBoost for IDS on WSN Cyber Attacks with Imbalanced Data
14:00-14:15	9089	Hasna Rohan Nafisah and Fariska Zakratriativa Ruskanda	Content-based Multiclass Classification on Indonesian SMS Messages
14:15-14:30	2500	Philippians Manurung, Pranoto Hidayat Rusmin and Rahadian Yusuf	Custom Pallet Detection Using YOLOv5 Deep Learning Architecture