



2023 10th International Conference on Electrical Engineering, Computer Science and Informatics (EECSI) Program

Wednesday, September 20 8:30 - 9:30 (Asia/Jakarta)

PLENARY: Plenary Speaker

8:30 *An Energy Efficient Smart Home Cooling System based on Fuzzy Control and IoT*

Javad Rezazadeh (Victoria University Sydney, Australia); Mohsen Houshmand (Islamic Azad University, North Tehran Branch, Iran); John Ayoade (Crown Institute of Higher Education, Australia)

Wednesday, September 20 9:30 - 12:00 (Asia/Jakarta)

S1-RA: Parallel Session 1 Room A

S1-RA.1 9:30 *Classification of Ischemic, Infectious, and Normal Diabetic Foot Ulcers Based on the EfficientNet Model*

Sri Mulyono (Universitas Islam Sultan Agung (UNISSULA), Indonesia); Nur Anna (Universitas Islam Sultan Agung & RSI Sultan Agung, Indonesia); Imam Much Ibnu Subroto, Bagus Satrio Waluyo Poetro and Sam F Chaerul Haviana (Universitas Islam Sultan Agung, Indonesia); Nur Muhammad Syaifuddin (Islamic University of Sultan Agung, Indonesia); Noor Suhana Sulaiman and Azliza Yacob (University College TATI, Malaysia)

S1-RA.2 9:45 *Implementation of Artificial Neural Network for Real-Time Blood Pressure Estimation using ECG Signal*

Kemalasarini M Syah (Indonesia, Indonesia); Kevin Novian Pramudia and Mochammad Rochmad (Politeknik Elektronika Negeri Surabaya, Indonesia)

S1-RA.3 10:00 *Enhancing Diabetic Retinopathy Classification for Small Sample Training Data Through Supervised Feature Attention: Transfer and Multitask Learning Approach*

Rattapon Sanguantrakool and Praisn Padungweang (Khon Kaen University, Thailand)

S1-RA.4 10:15 *Deep Neural Networks for Brain Tumor Image Segmentation and Detection*

Ritesh Chandra, Sadhana Tiwari and Shashi Shekhar Kumar (Indian Institute of Information Technology Allahabad, India); Sonali Agarwal (Indian Institute of Information Technology, Allahabad, India); Muhammad Syafrullah and Krisna Adiyarta (Universitas Budi Luhur, Indonesia)

S1-RA.5 10:30 *Predicting Kidney Failure using an Ensemble Machine Learning Model: A Comparative Study*

Md Sabbirul Haque (NA, USA); Md Shahedul Amin (University of Tennessee Chattanooga, USA); Sabbir Ahmad (University of South Dakota, USA); Md Abu Sayed Lemon (New Jersey, USA); Aqib Raihan (NJCU, USA); Mohammad Anwar Hossain (Ministry of Posts, Telecommunication and Information Technology, Bangladesh)

S1-RA.6 10:45 *Design of a Skin Cancer Detection Classification with Python GUI and Tensorflow*

Zufar Asyraf Al, Wahmisari Priharti, Fenty Alia, Afifah Risma Alfariyani and Rinaldi Pradhana Widhianto (Telkom University, Indonesia); Eva Krishna Sutedja (Padjajaran University, Indonesia)

S1-RA.7 11:00 *Evaluating Sign Error Correction for Approximate Adders Employing ECG Signal Processing*

Toshinori Sato and Hiroyuki Hama (Fukuoka University, Japan)

S1-RA.8 11:15 *A Novel Signal-to-Image Conversion Approach with Ensembles of Pretrained CNNs for Motor Imagery EEG Signals*

Cagatay Murat Yilmaz, Bahar Hatipoglu Yilmaz and Cemal Kose (Karadeniz Technical University, Turkey)

S1-RA.9 11:30 *Autism Spectrum Disorder Detection using Autistic Image Dataset*

Ritesh Chandra, Sadhana Tiwari and Ashutosh Kumar (Indian Institute of Information Technology Allahabad, India); Sonali Agarwal (Indian Institute of Information Technology, Allahabad, India); Muhammad Syafrullah and Krisna Adiyarta (Universitas Budi Luhur, Indonesia)

S1-RA.10 11:45 *MLP Based Speech Emotion Recognition for Audio and Visual Features*

Ganesan Kothai (KPR Institute of Engineering and Technology, India); Prabhasshanu Boora, S Muzammil, L Venkata Subhash and B Naga Raju (Kalasalingam Academy of Research and Education, India)

S1-RB: Parallel Session 1 Room B

S1-RB.1 9:30 *Digitized Smart Solar Powered Agriculture Implementation in Palembang, South Sumatra*

Yurni Oktarina (Polytechnic Sriwijaya Palembang-Indonesia, Indonesia); Bhakti Yudho Suprpto (University of Sriwijaya, Indonesia); Zainuddin Nawawi (Universitas Sriwijaya, Indonesia); Tresna Dewi (Politeknik Negeri Sriwijaya, Indonesia)

S1-RB.2 9:45 *A Comparative Case Study of Smart and Green Buildings and Their Impact on Power Quality*

Ruliyanta Ruliyanta (Universiti Teknikal Malaysia Malaka, FKEKK JI. Durian Tunggal Ayer Keroh Malaka & Universitas Nasional, Jakarta, Indonesia); Raden A. Suwodjo Kusumoputro (Universitas Nasional, Indonesia); Wismananto Setyadi (Unniversitas Nasional, Indonesia); Viktor Vekky Ronald Repi and Idris Kusuma (Universitas Nasional, Indonesia)

S1-RB.3 10:00 Smart Grid Pilot Project Evaluation and Recommendations in Indonesia: Case study of Semau Island [PDF](#)

Margo Pujiantara (Institut Teknologi Sepuluh Nopember, Indonesia); Novie Ayub Windarko (Politeknik Elektronika Negeri Surabaya, Indonesia); Hendy Briantoro (Institut Teknologi Telkom Surabaya, Indonesia); Dimas Anton Asfani (INSTITUT TEKNOLOGI SEPULUH NOPEMBER, Indonesia); Dimas Okky Anggriawan (Politeknik Elektronika Negeri Surabaya, Indonesia); Zainal Arifin (Institut Teknologi PLN, PLN Indonesia, Indonesia); Tri Hardimasyar (PT. PLN, Indonesia); Nugroho Adi Triyono (PT PLN (Persero), Indonesia)

S1-RB.4 10:15 Multi-Inverter Coordinated Control on AC Microgrid for Increased Load Power [PDF](#)

Adhi Kusmantoro (Universitas PGRI Semarang & UPGRIS, Indonesia)

S1-RB.5 10:30 Control Strategy for BESS-Fed Inverters in AC Microgrids with SoC Consideration [PDF](#)

Afaf Samer Allabadi (Princess Sumaya University for Technology, Jordan); Ibrahim Abuishmais (Princess Sumaya University for Technology (PSUT), Jordan)

S1-RB.6 10:45 External Lightning Protection System modeling on photovoltaic using ATP Draw [PDF](#)

Rohana Rohana (Universitas Muhammadiyah Sumatera Utara, Indonesia); Surya Hardi (Universitas Sumatera Utara, Indonesia); Nasaruddin Nasaruddin and Yuwaldi Away (Syiah Kuala University, Indonesia)

S1-RB.7 11:00 Efficiency Enhancement of The PV System Through Reconfiguration Strategies Under Non-Uniform Irradiance Conditions [PDF](#)

Salim Ahmed Ali Al-Azawy (Middle Technical University, Iraq); Ahmed Rashid (Middle Technical University & Electrical Engineering Technical College, Iraq); Safaa Abdulwahid Ghadhban (Middle Technical University, Iraq)

S1-RB.8 11:15 Techno-economic Analysis of PV-Battery Priority Grid Tie System with Diesel Genset Resilience

Dessalegn Bitew Aegggen (Pan African University Institute for Basic Sciences Technology and Innovation & Debre Markos University, Kenya)

S1-RB.9 11:30 Off-grid Solar Power Plant Prototype for Residential Loads [PDF](#)

Siti Bilqis (Sunan Gunung Djati State Islamic University of Bandung, Indonesia); Nike Sartika (UIN Sunan Gunung Djati Bandung, Indonesia); Agus Ramelan (Universitas Sebelas Maret, Indonesia)

S1-RB.10 11:45 Hysteresis Amplifier Model to eliminate Multi-switching on IGBT Work [PDF](#)

Indra Roza (Universitas Syiah Kuala, Indonesia); Ira Sara, Tarmizi Tarmizi and Nasaruddin Nasaruddin (Syiah Kuala University, Indonesia)

S1-RC: Parallel Session 1 Room C

S1-RC.1 9:30 Sensor Fusion with Seven Parameters for Indoor Air Quality Monitoring System [PDF](#)

Amalia Nur Hikmah and C. Bambang Dwi Kuncoro (National Chin-Yi University of Technology, Taiwan)

S1-RC.2 9:45 IoT Smart Kitchen Mobile Application Powered by Arduino Modules and Fuzzy Logic

Ahmad Luqman Nazrudin (Universiti Malaysia Pahang, Malaysia); Tole Sutikno (Universitas Ahmad Dahlan & Universiti Teknologi Malaysia, Indonesia); Anis Farihan Mat Raffei and Nur Shamsiah Abdul Rahman (Universiti Malaysia Pahang, Malaysia); Shahreen Kasim (University of Tun Hussein Onn Malaysia, Malaysia)

S1-RC.3 10:00 Internet-based Control System of Things on Cylinder Regulator for Safety from LPG Gas Leak Hazards [PDF](#)

Baihaqi Siregar and Habibi Alkhairi Daulay (Universitas Sumatera Utara, Indonesia); Dedy Arisandi (University of Sumatera Utara, Indonesia)

S1-RC.4 10:15 Design of Control and Data Acquisition for Smart Home Based on Smartphone [PDF](#)

Wahyudi Wahyudi (Departemen Teknik Elektro UNDIP, Indonesia)

S1-RC.5 10:30 Design of COIN Wifi Based on Microcontroller Embedded System NodeMCU [PDF](#)

Andi Muhammad Raihan Rimba Sose, Rizka Reza Pahlevi and Hilal H. Nuha (Telkom University, Indonesia)

S1-RC.6 10:45 CNN-BiLSTM for Power Consumption Prediction using Raspberry Pi 4 [PDF](#)

Gilang Nugraha Putu Pratama and Abdul Mujiburrohman Luthfi (Universitas Negeri Yogyakarta, Indonesia); Alfian Ma'arif (Universitas Ahmad Dahlan, Indonesia); Iswanto Iswanto, Is (Universitas Muhammadiyah Yogyakarta, Indonesia)

S1-RC.7 11:00 New Approach Monitoring System with ESP32 and MQTT for the Best Position of the Floating Net Cage [PDF](#)

Dedy Hermanto (Universitas Multi Data Palembang & Multi Data Palembang, Indonesia); Deris Stiawan and Bhakti Yudho Suprpto (University of Sriwijaya, Indonesia); Endi Permata (University of Sultan Ageng Tirtayasa, Indonesia); Eka Puji Widiyanto (Universitas Multi Data Palembang, Indonesia)

S1-RC.8 11:15 Precision Agriculture Through Stress Monitoring in crops with Multispectral Remote Sensing Data

Mandava Venkata Sri Sai Surya (Velagapudi Ramakrishna Siddhartha Engineering College & JNTU Kakinada, India); Konumuri Kalyan Suhas and G Kalyani (Velagapudi Ramakrishna Siddhartha Engineering College, India)

S1-RC.9 11:30 Cognito: A Multipurpose Robotic Assistant for Higher Education Environment [PDF](#)

Fatimah Alali, Wed AlGhamdi, Noor Albasara and Abul Bashar (Prince Mohammad Bin Fahd University, Saudi Arabia)

S1-RC.10 11:45 Automated Fruit Maturity Classification System for Guava (Psidium Guajava) Using K-NN Method and TCS3200 Sensor [PDF](#)

Kurnia Sandi (UIN Sunan Gunung Djati, Indonesia); Lia Kamelia and Rin Rin Nurmalsari (UIN Sunan Gunung Djati Bandung, Indonesia); Asep Shodiqin (UIN Sunan Gunung Djati, Indonesia)

S1-RD: Parallel Session 1 Room D

S1-RD.1 9:30 Designing a Virtual Reality System for Organic Chemistry: Enhancing Learning


Aneesh Pradeep, Clemens Woywod, Shakhzoda Fakhritdinova and Yulduz Makhmudova (New Uzbekistan University, Uzbekistan)


S1-RD.2 9:45 User Experience on a Culture-Based Learning Management System: Students' Perspective


Regina G. Almonte (City College of Calamba, Philippines & None, Philippines)


S1-RD.3 10:00 Factors Influencing Mobile Banking Usage in Indonesia [PDF](#)


Chaterine Chaterine, Safira Amalia and Anderes Gui (Bina Nusantara University, Indonesia); Muhammad Shabir Shaharudin (Universiti Sains Malaysia, Malaysia)


S1-RD.4 10:15 *The Effect of Short Video Advertising on Online Shopping Using Pay-Later Based on Online Customer Experience* 
Surjandy Surjandy, Athalla Bratama Azra, Brilliant Brilliant and Nicholas Fernando (Bina Nusantara University, Indonesia)

S1-RD.5 10:30 *Development of Application for Conformance Measurement of Control Affordance Components with Functional Requirements based on Text Analysis on TESA Documentation* 
Ilmam Djil Iqram Thauriq, Yudi Priyadi and Ati Suci Dian Martha (Telkom University, Indonesia)

S1-RD.6 10:45 *Extending The Data Integration Model As The Foundation Of Business Intelligence: A Systematic Literature Review* 
Antonius Wahyu Sudrajat (Program Studi S3 Ilmu Teknik, Fakultas Teknik, Universitas Sriwijaya, Indonesia)


S1-RD.7 11:00 *Provisioning of Disaster Recovery with Terraform and Kubernetes: A Case Study on Software Defect Prediction* 
Rizal Broer Bahaweres (UIN Jakarta - IPB University, Indonesia & Computer-iEEE, Indonesia); Farhan Muhammad Najib (Syarif Hidayatullah State Islamic University Jakarta, Indonesia)


S1-RD.8 11:15 *Unveiling Insights: An In-Depth Analysis and Exploratory Study of Crowdfunding Data Using Kickstarter as a Case Study* 
Rizka Dhini Kurnia (Universitas Sriwijaya, Indonesia); Sarifah Putri Raflesia (Universitas Sriwijaya & Institut Teknologi Bandung, Indonesia); Dinda Lestari (Sriwijaya University, Indonesia)


S1-RD.9 11:30 *Functional Suitability Analysis of Indonesian Qur'an Applications Based on ISO 25010* 
Asiyah Nur Kholifah, Muhammad Nasry Ashar and Siti Rochimah (Institut Teknologi Sepuluh Nopember, Indonesia)


S1-RD.10 11:45 *Makespan And Tardiness of Indonesian Small Medium Business (SMBs)* 
Cut Fiarni and Yosi Yonata (ITHB, Indonesia)


S1-RE: Parallel Session 1 Room E


S1-RE.1 9:30 *Spatial-Based 2D Image Steganography using Josephus-Traversing Concentric Midpoint Circle Algorithm* 
Ace Amiel E Malicsi (Technological Institute of the Philippines, Philippines); Ariel Sison (Emilio Aguinaldo College, Philippines)


S1-RE.2 9:45 *Jammer Detection on Embedded Android Implementation: Blue Bird Group Case Study* 
Ekky Kharismadhany, Muchamad Zulkifli and Riza Alaudin Syah (PT. Blue Bird Tbk., Indonesia); Noverino Rifai (PT. Blue Bird Tbk, Indonesia)


S1-RE.3 10:00 *A Comparative Study On Image Compression in Cloud Computing* 
Tri Yulianto Nugroho, Ahmad Nur Hidayat, Mas Syahdan Filsafan, Yoehan Arif Ardiansyah and Bagus Jati Santoso (Institut Teknologi Sepuluh Nopember, Indonesia)


S1-RE.4 10:15 *Unmanned Aerial Vehicle for Remote Sensing Detection of Oil Palm Trees Using You Only Look Once and Convolutional Neural Network* 
M Rama Nopan Ariyadi, Muhammad Rizky Pribadi and Eka Puji Widiyanto (Universitas Multi Data Palembang, Indonesia)


S1-RE.5 10:30 *Advancements in Image Recognition for Urban Land Use: Multi-Scale CNN Extraction* 
Ching-Lung Fan (Republic of China Military Academy, Taiwan)

S1-RE.6 10:45 *Performance Evaluation of Rice Seed Classification System Based on The CNN with VGG-GoogleNet Architecture* 
Fanies Saufana Hanafi, Favian Dewanta and Gelar Budiman (Telkom University, Indonesia)


S1-RE.7 11:00 *Region-Based Convolutional Neural Network and Tesseract Optical Character Recognition for Recognising Entity Relationship Diagram* 
Mas Rina Mustafa and Ang Guang Zheng (Universiti Putra Malaysia, Malaysia)


S1-RE.8 11:15 *Pre-Processing Of Resize And Region Of Interest (ROI) To Improve The Accuracy Of Batik Detection Based On VGG-16* 
Jani Kusanti (Universitas Surakarta & Teknik Elektro dan Informatika, Indonesia)


S1-RE.9 11:30 *Digital Forensics for Ancient Manuscripts Using Local Thickness and Independent Component Analysis* 
Imam Yuadi (Airlangga University, Indonesia); Desfina Fatma Zetia (Universitas Airlangga, Indonesia); Ullin Nihaya (Tatung University, Taiwan)

S1-RE.10 11:45 *The Effect of Augmentation on Classification Algorithm to Determine Photo Angle* 
Bima A Riyadi (University of Amikom Yogyakarta, Indonesia); Sumarni Adi and Arif Dwi Laksito (Universitas Amikom Yogyakarta, Indonesia); Mardhiya Hayaty (Universitas AMIKOM Yogyakarta, Indonesia); Oki Arifin (Politeknik Negeri Lampung, Indonesia); Agus Fatkhurohman (Universitas Amikom Yogyakarta & Universitas Gadjah Mada, Indonesia)

S1-RF: Parallel Session 1 Room F

S1-RF.1 9:30 *Analysis of Social Media Data Using Contextual Embedding Leverage Models with Convolutional Neural Networks* 
Arif Ridho Lubis (Politeknik Negeri Medan, Indonesia); Yulia Fatmi (Politeknik Negeri Medan Indonesia, Indonesia); Deden Winarsyah (Telkom University, Indonesia)

S1-RF.2 9:45 *Perception of privacy concerns in using instagram among students (Case study: Sriwijaya State Polytechnic)* 
Ferizka Tiara Devani and Ebtaria Nadeak (Politeknik Negeri Sriwijaya, Indonesia); Sulistiyanto Sulistiyanto (Sriwijaya State Polytechnic, Indonesia); Malahayati Malahayati (Politeknik Negeri Sriwijaya, Indonesia)

S1-RF.3 10:00 *Decision Support System For Sustainable Development In An Organisations: Models and Approaches* 
Azliza Jacob (University College TATI, Malaysia); Aimi Dalila Roslim and Syahrul Fahmy Abdul Wahab (UCTATI, Malaysia); Noor Suhana Sulaiman (University College TATI, Malaysia); Sri Mulyono (Universitas Islam Sultan Agung (UNISSULA), Indonesia); Badieah Badieah and Imam Much Ibnu Subroto (Universitas Islam Sultan Agung, Indonesia)

S1-RF.4 10:15 Comparative Phishing Attack Simulations: A Case Study of Critical Information Infrastructure Organization Using Two Different Contents [PDF](#)

Patsita Sirawongphatsara (Rajamangala University of Technology Tawan-ok, Thailand); Soawanee Prachayagrangkai (Dhonburi Rajabhat University, Thailand); Phisit Pornpongtechanich (Rajamangala University of Technology Rattanakosin, Thailand & Industry and Technology, Thailand); Tipmanee Rompun (RMUTP, Thailand); Kamolrak Chaowmak (Samutprakan Technical College, Samutprakan, Thailand); Nattapong Phanthuna and Therpong Daengsi (Rajamangala University of Technology Phra Nakhon, Thailand)

S1-RF.5 10:30 Classification of Text on Social Media Data Using the TF-IDF Approach, Word2Vec and Transfer Learning [PDF](#)

Arif Ridho Lubis and Santi Prayudani (Politeknik Negeri Medan, Indonesia); Muhammad Luthfi Hamzah (Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia)

S1-RF.6 10:45 Natural Disaster Monitoring Information System From Social Media Data Using Naïve Bayes Algorithm [PDF](#)

Casi Setianingsih (Telkom University, Indonesia)

S1-RF.7 11:00 Predicting Specific Heat Capacity of Nanofluids Using Artificial Neural Network for Al₂O₃ particle with EG/Water based solution [PDF](#)

Amit Kumar Gupta (Manipal University Jaipur, India); Priya Mathur (Poornima Institute of Engineering and Technology Rajasthan India, India)

S1-RF.8 11:15 Exploiting Content-Based Filtering for Publication Venue Recommendations [PDF](#)

Badieah Badieah and Sam F Chaerul Haviana (Universitas Islam Sultan Agung, Indonesia); Sri Mulyono (Universitas Islam Sultan Agung (UNISSULA), Indonesia); Imam Much Ibnu Subroto (Universitas Islam Sultan Agung, Indonesia); Noor Suhana Sulaiman and Azliza Jacob (University College TATI, Malaysia)

S1-RF.9 11:30 Carbon Price Prediction in the European Market using Deep Learning [PDF](#)

Yan Aditya Pradana (Institut Teknologi Sepuluh Nopember & Universitas Muhammadiyah Madiun, Indonesia); Imam Mukhlash (Institut Teknologi Sepuluh Nopember Surabaya, Indonesia); Mohammad Isa Irawan (Institut Teknologi Sepuluh Nopember, Indonesia); Endah Rokhmati Merdika Putri (Institut Teknologi Sepuluh Nopember Surabaya, Indonesia)

S1-RF.10 11:45 Dynamic deployment prediction and configuration in hybrid cloud / edge computing environments using influence-based learning [PDF](#)

Chrysostomos Symvoulidis, Athanasios Kiourtis, Argyro Mavrogiorgou, Jean-Didier Totow Tom-Ata, George Manias and Dimosthenis Kyriazis (University of Piraeus, Greece)

S1-RG: Parallel Session 1 Room G

9:30 Resource Utilization Comparison of KubeEdge, K3s, and Nomad for Edge Computing [PDF](#)

Muhammad Bintang Bahy, Nur Rahmat Dwi Riyanto, Muhammad Zain F N Siswanto and Bagus Jati Santoso (Institut Teknologi Sepuluh Nopember, Indonesia)

9:45 File Access Characteristics of Deep Learning Workloads and Cache-Friendly Data Management [PDF](#)

Jeongha Lee and Hyokyung Bahn (Ewha University, Korea (South))

10:00 Analysis of DDoS Attacks on IoT Architecture [PDF](#)

John Ayoade (Crown Institute of Higher Education, Australia); Kulwinder Kaur (Victoria University, Australia)

10:15 Mobile Application Malware Self-Diagnosis

Asim Abdul Hamaid Al-Abri (University of Buraimi, Oman)

10:30 Comparative Study of Leveraging Big Data Processing Techniques for Sentiment Analysis [PDF](#)

Chris-Ern-Zer Wong, Lee-Yeng Ong and Meng-Chew Leow (Multimedia University, Malaysia)

10:45 Optimized Feature Selection Approach Based on Entropy for Multi-Class Data Classification [PDF](#)

Krisyesika Krisyesika (Institut Teknologi Sepuluh Nopember & Universitas Widya Dharma Pontianak, Indonesia); Joko Lianto Buliali and Ahmad Saikhu (Institut Teknologi Sepuluh Nopember, Indonesia)

11:00 Rule Extraction using Machine Learning Classifiers for Complex Event Processing [PDF](#)

Shashi Shekhar Kumar, Ashutosh Kumar and Ritesh Chandra (Indian Institute of Information Technology Allahabad, India); Sonali Agarwal (Indian Institute of Information Technology, Allahabad, India); Muhammad Syafrullah and Krisna Adiyarta (Universitas Budi Luhur, Indonesia)

11:15 Utilizing Clustering Algorithms to Provide VARK Learning Style Recommendations [PDF](#)

Muhammad Said Hasibuan (University Gadjah Mada & IBI Darmajaya, Indonesia); Rz ABDUL Aziz and Sigit Andriyanto (Institute Informatics and Business Darmajaya, Indonesia)

11:30 Implementation of Object Recognition Integrated with Mixed Reality [PDF](#)

Ridho Fathoni Prasetya (PENS & Current, Indonesia); Sritrusta Sukaridhoto, Maretha Ruswiansari and Cahyo Arissabarno (Politeknik Elektronika Negeri Surabaya, Indonesia); Achmad Fatrian Romadhoni (Electronic Engineering Polytechnic Institute of Surabaya & Current, Indonesia); Agus Prayudi (Politeknik Elektronika Negeri Surabaya, Indonesia); Rizqi Putri Nourma Budiarti (Universitas Nahdlatul Ulama Surabaya, Indonesia)

11:45 Algorithm for generating robust S-Boxes using adjacency matrix parameters [PDF](#)

Javokhir Rustamovich Abdurazzokov (Digital Technologies and Artificial Intelligence Research Institute, Uzbekistan); Bakhtiyor Abdurakhimov and Ilkhom Boykuziev (National University of Uzbekistan, Uzbekistan); Orif Allanov (Tashkent University of Information Technologies, Uzbekistan)

Wednesday, September 20 13:00 - 15:00 (Asia/Jakarta)

PLENARY: Plenary session 2

13:00 Current status and future perspective of Intelligent Transportation Systems

Giovanni Pau (Faculty of Engineering and Architecture, Kore University of Enna, Italy)

14:00 *Smart Energy and Electric Power Systems: Current Trends and New Intelligent Perspectives*

Padmanaban Sanjeev Kumar (Faculty of Technology, Natural Sciences and Maritime Sciences. Department of Electrical engineering, Information Technology and Cybernetics, University of South-Eastern Norway)

Wednesday, September 20 15:00 - 17:00 (Asia/Jakarta)

S2-RA: Parallel Session 2 Room A

15:00 *Discovering Novel Pharmaceutical Molecules with Generative Adversarial Networks*

Leena Chandrashekar (RNSIT, India); Namratha K (R N S Institute of Technology, India)

15:15 *Securing IoMT Healthcare Systems with Energy-Efficient Data Transmission and Joint Security Measures*

Ali Sami Sosa (Baghdad University, Iraq); Saja Majeed Mohammed (Al Khwarizmi Engineering Collage, Iraq); Intisar A.M Al-Sayed (Uruk University-Iraq, Iraq); Israa Al Barazanchi (College of Computing and Informatics & Universiti Tenaga Nasional (UNITEN), Malaysia); Jamal Fadhil Tawfeq (Al-Farahidi University, Iraq); Ahmed Dheyaa Radhi (University of Al-Ameed, Iraq)

15:30 *A biometric fingerprint recognition system utilizing the Scale Invariant Feature Transform (SIFT) algorithm for border crossing*

Noor Amer (Alnahrain, Iraq); Zahraa A. Jaaz (Al-Nahrain University, Iraq & Universiti Tenaga Nasional (UNITEN), Iraq); Nadia Fadhil AL-Bakri (AL-Nahrain University, Iraq); Jamal Fadhil Tawfeq (Al-Farahidi University, Iraq); Ahmed Dheyaa Radhi (University of Al-Ameed, Iraq)

15:45 *Speech Emotion Recognition Using Deep Learning Techniques and Augmented Features*

Shahed Mohammadi (Ayandegan University Mazandaran, Iran); Niloufar Hemati (Islamic Azad University Central Tehran Branch, Iran); Ali Hashemi (Qom University of Technology, Iran); Haniye Zandiye (Islamic Azad University Central Tehran Branch, Iran)

16:00 *Denoising Autoencoder - Extreme Learning Machine for Improving the Classification Performance Integrated with IoT Water Quality Systems*

Muhammad Thoriq Arkaan Susila, Ilham Nadiyahsyah Firdaus, Muhammad Farid Chuzairi, Ig. Prasetya Dwi Wibawa and Meta Kallista (Telkom University, Indonesia)

16:15 *Intelligent IoT-based Combined Crop-type and Disease Prediction System with Different Machine Learning & Deep Learning Techniques*

Md. Ishan Arefin Hossain, Ahmed Kiser, Israt Jahan Mitu and Syeda Mahin Binta Haque (North South University, Bangladesh)

16:30 *Implementation of Smart Lab Using Speech Recognition in Indonesian Language to Control IoT Devices Integrated with Mixed Reality*

Furqonudin Toreh and Maretha Ruswiansari (Politeknik Elektronika Negeri Surabaya, Indonesia); Rizqi Putri Nourma Budiarti (Universitas Nahdlatul Ulama Surabaya, Indonesia); Sritrusta Sukaridhoto, Cahyo Arissabarno and Agus Prayudi (Politeknik Elektronika Negeri Surabaya, Indonesia)

S2-RB: Parallel Session 2 Room B

15:00 *A Simple Battery Management System for Solar Powered Triangle Communication Tower*

Syafii Syafii, Irfan El Fakhri and Farah Azizah (Universitas Andalas, Indonesia)

15:15 *Design of An Electrical Regenerative Braking System for E-Bike Applications*

Tole Sutikno (Universitas Ahmad Dahlan & Universiti Teknologi Malaysia, Indonesia); Nuryono Widodo and Budi Santosa (Universitas Ahmad Dahlan, Indonesia); Rizky Ajie Aprilianto (Universitas Negeri Semarang, Indonesia); Tri Wahono (Ahmad Dahlan University, Indonesia); Anggit Pamungkas (Embedded Systems & Power Electronics Research Group, Indonesia)

15:30 *Design and Implementation of a Piezoelectric-Based Energy Harvesting in Shoes*

Rangga Resistianto (Sunan Gunung Djati State Islamic University Bandung, Indonesia); Nike Sartika (UIN Sunan Gunung Djati Bandung, Indonesia); Agus Ramelan (Universitas Sebelas Maret, Indonesia)

15:45 *Analysis of Channel Estimation Techniques for MIMO Wireless Channel Models*

Swaroop A, Medam Brendha, Abhishek Simha, Vipula Singh and Sanjay M Belgaonkar (RNSIT, India)

16:00 *Performance Comparison Between VoLTE and non-VoLTE Voice Calls During Mobility in Commercial Deployment: A Drive Test-Based Analysis*

Rashed Hasan Ratul (Islamic University of Technology (IUT), Bangladesh); Muhammad Iqbal and Jen-Yi Pan (National Chung Cheng University, Taiwan); Mohammad Mahadi Al Deen (Islamic University of Technology (IUT), Bangladesh); Mohammad T. Kawser and Mohammad Masum Billah (Islamic University of Technology, Bangladesh)

16:15 *Maximizing Mobile Communication Efficiency with Smart Antenna Systems using Beam forming and DOA Algorithms*

Ehsan Qahtan Ahmed (University of Nahrain, Iraq); Zainab Haider Ameen and Farah Saad Al-Mukhtar, Fs (Al-Nahrain University, Iraq); Zahraa A. Jaaz (Al-Nahrain University, Iraq & Universiti Tenaga Nasional (UNITEN), Iraq)

16:30 *Reliable Receiving Strategies in Diffusion-Based Molecular Communication with Drift Velocity*

Prisca Charles Maro (School of Information and Communication Engineering & University of Electronic Science and Technology of China, China); Qiang Liu (University of Electronic Science and Technology of China, China)

S2-RC: Parallel Session 2 Room C

15:00 *Development of PLC Trainer Kit as a Teaching Aid for Electric Motor Practice*

Maria Mahardini Sakanti and Adhan Efendi (National Chin-Yi University of Technology, Taiwan); M Anda Falahuddin and Nur Khakim (Politeknik Negeri Bandung, Indonesia); C. Bambang Dwi Kuncoro (National Chin-Yi University of Technology, Taiwan); Ary Surjanto (Politeknik Negeri Bandung & Teknik Fisika ITB, Indonesia)

15:15 *DC Motor Control Using Type-2 Fuzzy Logic Controller*

Bustanul Arifin (Universitas Islam Sultan Agung, Indonesia); Agus Adhi Nugroho (Universitas Islam Sultan Agung (UNISSULA), Indonesia); Bhakti Yudho Suprpto (University of Sriwijaya, Indonesia); Sri Artini Dwi Prasetyowati (Universitas Islam Sultan Agung, Indonesia); Zainuddin Nawawi (Universitas Sriwijaya, Indonesia)

15:30 Prototype Design of an Electricity Power Monitoring System Based on Internet of Things 

Vina Nurvianti (UIN Sunan Gunung Djati, Indonesia); Aan Setiawan, Nike Sartika, Rina Mardiaty and Dini Utami Mulyaningsih (UIN Sunan Gunung Djati Bandung, Indonesia); Agus Ramelan (Universitas Sebelas Maret, Indonesia)

15:45 Analyzing and Optimizing Fixed-Point Operations on a MATLAB Simulink based Motion Control System 

Thomas Linner, Markus Maerkl and Florian Künzner (Technical University of Applied Sciences Rosenheim, Germany); Rainer Hagl (Technische Hochschule Rosenheim, Germany)

16:00 Improving Tamper-Resistance Exploiting Clock Phase Shifter Embedded in FPGAs 

Yui Koyanagi and Tomoaki Ukezono (Fukuoka University, Japan)


16:15 Optimized Kalman Filter using Genetic Algorithm for IoT Sensor 

Gilang Nugraha Putu Pratama and Saddam Putra Kunsina (Universitas Negeri Yogyakarta, Indonesia); Iswanto Iswanto, Is (Universitas Muhammadiyah Yogyakarta, Indonesia); Alfian Ma'arif (Universitas Ahmad Dahlan, Indonesia)

16:30 Real Time System Handling Using Multi Fixed Weight Artificial Neural Network 

Eka Nuryanto Budisusila and Sri Artini Dwi Prasetyowati (Universitas Islam Sultan Agung, Indonesia); Muhammad Khosy'i'in (Universitas Sriwijaya & Universitas Islam Sultan Agung, Indonesia); Bhakti Yudho Suprpto (University of Sriwijaya, Indonesia); Zainuddin Nawawi (Universitas Sriwijaya, Indonesia); Bustanul Arifin (Universitas Islam Sultan Agung, Indonesia); Agus Adhi Nugroho (Universitas Islam Sultan Agung (UNISSULA), Indonesia); Jenny Putri Hapsari (Faculty of Industrial Engineering, Universitas Islam Sultan Agung, Indonesia); Munaf Ismail (Universitas Islam Sultan Agung, Indonesia)

S2-RD: Parallel Session 2 Room D

15:00 Expert System for Screening of Borderline Personality Disorder 


Ramadiani Ramadiani, Evica Awanda Hendoq, Muhammad Labib Jundillah, Tamrin Rahman, Azainil Azainil and Budi Nining (Mulawarman University, Indonesia)

15:15 Gap Analysis Between Personal Data Protection Law and Regional Government Regulations in Indonesia For API Service Providers 

Gugum Gumilar, Charles Lim, Eka Budiarto and Maulahikmah Galinium (Swiss German University, Indonesia)

15:30 The Effects of Stopwords, Stemming, and Lemmatization on Pre-trained Language Models for Text Classification: A Technical Study 

Sam F Chaerul Haviana (Universitas Islam Sultan Agung, Indonesia); Sri Mulyono (Universitas Islam Sultan Agung (UNISSULA), Indonesia); Badieah Badieah (Universitas Islam Sultan Agung, Indonesia)

15:45 Leveraging regression models for rule based complex event processing 

Shashi Shekhar Kumar, Ashutosh Kumar and Ritesh Chandra (Indian Institute of Information Technology Allahabad, India); Sonali Agarwal (Indian Institute of Information Technology, Allahabad, India); Muhammad Syafurullah and Krisna Adiyarta (Universitas Budi Luhur, Indonesia)

16:00 Validation of Questionnaires towards the Enhancement of Information Technology Hardware Services based on Expert Review 

Azham Ahmad (University College Terengganu Advance Technical Institute, Malaysia); Adzhar Kamaludin (Universiti Malaysia Pahang, Malaysia)

16:15 A Review of the Mobile Augmented Reality Framework in STEM Education

Asa Ismia Bunga Aisyahrani (Universiti Teknologi Malaysia, Malaysia); Tole Sutikno (Universitas Ahmad Dahlan & Universiti Teknologi Malaysia, Indonesia); Lina Handayani (Universitas Ahmad Dahlan, Indonesia)

16:30 Development of Clinical Clerkship Rotation Information System 

Hery Dian Septama (University of Lampung, Indonesia); Lukmanul Hakim (Universitas Lampung, Indonesia); Meizano Ardhi Muhammad, Fidha Rahmayani and Dwi Indria Anggraini (University of Lampung, Indonesia); Siska Lania (Abdul Moeloek General Hospital, Indonesia)

16:45 Clustering Digital Transformation of Small and Medium Enterprises (SMEs) Using Fuzzy K-means Method

Andi Riansyah (Universitas Islam Sultan Agung, Indonesia & Universitas Diponegoro, Indonesia)


S2-RE: Parallel Session 2 Room E

15:00 Combining conditional random fields and word embeddings to improve Amazigh part-of-speech Tagging 

Samir Amri (National Superior School of Arts and Crafts, University of My Ismail, Morocco); Bani Rkia (Mohammadia School of Engineering, University Mohammed 5, Rabat, Morocco); Lahbib Zenkouar (Mohammadia Engineering School, Morocco); Zouhair Guennoun (Ecole Mohammadia d'Ingenieurs, Morocco & Mohammed V University in Rabat, Morocco)

15:15 Wind Tunnel Data Classification A Comparison of Performance Between K-Nearest Neighbor and Artificial Neural Network Algorithm 

Purwadi Purwadi (National Research and Innovation Agency, Indonesia); Syafaruddin Syafaruddin (Universitas Hasanuddin Makassar, Indonesia); Andani Ahmad (Hasanuddin of University, Indonesia); Ivransa Pane (Universitas Multimedia Nusantara, Indonesia)

15:30 Improving Decision Tree Accuracy through AdaBoost Ensemble with SMOTE Oversampling and ExtraTreeClassifier Feature Selection 

Syifa Melinda Nafan, Ivana Meiska, Meta Kallista, Ig. Prasetya Dwi Wibawa and Brilliant Friezka Aina (Telkom University, Indonesia)

15:45 Music Recommendation System using Machine Learning Methods 

Marvel Lemuel Junaidi, Kevin Lo, Filippo Jonathan Lie, Ivan Sebastian Edbert and Derwin Suhartono (Bina Nusantara University, Indonesia)

16:00 Masked Face Recognition and Identification Using Convolutional Neural Networks 

Pavat Poonpinij, Nattawat Na Lumpoon, Sansiri Tarnpradab and Naruemon Wattanapongsakorn (King Mongkut's University of Technology Thonburi, Thailand)

16:15 Violation Detection on the Roadside of the Toll Roads using Cascade R-CNN Algorithm 

Casi Setianingsih (Telkom University, Indonesia)

16:30 Lightweight and Efficient Deep Learning Model for Fire Detection 

Faisal Dharma Adhinata, Bitu Parga Zen and Abednego Dwi Septiadi (Institut Teknologi Telkom Purwokerto, Indonesia)

S2-RF: Parallel Session 2 Room F

15:00 Implementation and Evaluation of Self-learning Topic for SQLite Integration in Flutter Programming Learning Assistance System 

Yan Watequlis Syaifudin (State Polytechnic of Malang, Indonesia); Mustika Mentari (Politeknik Negeri Malang, Indonesia); Andi Baso Kaswar (State University of Makassar, Indonesia); Yuri Ariyanto (State Polytechnic of Malang, Indonesia); Ulla Delfana Rosiani (Politeknik Negeri Malang, Indonesia); Dwi Puspitasari (Politeknik Negeri Malang & Polinema, Indonesia)

15:15 SCALE-IT: Distributed and Realistic Simulation Frameworks for Testing Cloud-Based Software 

Pratik T (SUNY Binghamton & IEEE USA, USA)

15:30 Sentiment Analysis in social media: Handling Noisy Data and Detecting Sarcasm Using a Deep Learning Approach 

Arif Ridho Lubis (Politeknik Negeri Medan, Indonesia); Yulia Fatmi (Politeknik Negeri Medan Indonesia, Indonesia); Deden Witasryah (Telkom University, Indonesia)

15:45 Validity of Measurable Expertise on Publication Recognition 

Ali Firdaus (Politeknik Sriwijaya, Indonesia); Deris Stiawan (University of Sriwijaya, Indonesia); Samsuryadi Samsuryadi (Universitas Sriwijaya, Indonesia)

16:00 Accurate Density Prediction of Nanofluids using an Optimized Artificial Neural Network for Enhanced Heat Transfer and Energy Systems 

Amit Kumar Gupta (Manipal University Jaipur, India); Priya Mathur (Poonima Institute of Engineering and Technology Rajasthan India, India)

16:15 Optimization of Feature Selection to Improve Order Transaction Performance in the Manufacturing Industry 

Ery Hartati (Sriwijaya University, Indonesia); Deris Stiawan (University of Sriwijaya, Indonesia); Wijang Widhiarso (Universitas Multi Data Palembang, Indonesia)

16:30 Segmentation of Aerial Images using Different Clustering Techniques 

Maha Rajab (Baghdad University & College of Education for Pure Sciences /Ibn AL-Haitham, Iraq); Firas A. Abdullatif (University of Baghdad, Iraq); Tole Sutikno (Universitas Ahmad Dahlan & Universiti Teknologi Malaysia, Indonesia)

S2-RG: Parallel Session 2 Room G

15:00 Research Trends in Software Development Effort Estimation 


Yulia Swandari, Ridi Ferdiana and Adhista Erna Permanasari (Department of Electrical and Information Engineering, Universitas Gadjah Mada, Indonesia)

15:15 Validity of Cosine Similarity Measurement of Functional Requirements and Steps Performed Using Cohen Kappa on SRS Scenery Artifacts 

Zakia Syahrini and Yudi Priyadi (Telkom University, Indonesia); Anisa Herdiani (Telkom University, Indonesia)

15:30 Effect of TF-IDF Extraction and Application of SMOTE on Model Performance in Detecting Spam Email 


Vannes Wijaya, Muhammad Fadli, Muhammad Rizky Pribadi and Wijang Widhiarso (Universitas Multi Data Palembang, Indonesia)

15:45 Software Development for Object Formation for Sequence Diagrams Based on Use Case Description Extraction: Case Study SRS Scenery 

Rahmatia Primadiati and Yudi Priyadi (Telkom University, Indonesia); Donni Richasdy (Telkom University & Bandung Techno Park, Indonesia)

16:00 Hybrid Model for Topic Classification of English Learning Accounts on Instagram Using LDA and SVM 

Fellyca Effendi, Muhammad Rizky Pribadi, Wijang Widhiarso and Sherly Devyanes (Universitas Multi Data Palembang, Indonesia)

16:15 Comparative Analysis of Monolith, Microservice API Gateway and Microservice Federated Gateway on Web-based application using GraphQL API 

Kendricko Adrio, Clementius Nicklaus Tanzil, Michael Christian Lianto and Zulfany Rasjid (Bina Nusantara University, Indonesia)

16:30 Integration Mixed Reality with Internet of Things by Using Magic Leap 

Zacky Maulana Achmad, Sritrusta Sukaridhoto, Maretha Ruswiansari and Cahyo Arissabarno (Politeknik Elektronika Negeri Surabaya, Indonesia); Achmad Fatrian Romadhoni (Electronic Engineering Polytechnic Institute of Surabaya & Current, Indonesia); Agus Prayudi (Politeknik Elektronika Negeri Surabaya, Indonesia); Rizqi Putri Nourma Budiarti (Universitas Nahdlatul Ulama Surabaya, Indonesia)

16:45 Enhancing Supply Chain Management A Blockchain-Based Approach for Data Privacy and Transparency in the IoT Era 

Mohammed Rashid Said AL Qatbi and Gopal Rathinam (University of Buraimi, Oman)