

# **2021 17th International Conference on Quality in Research (QIR 2021): International Symposium on Electrical and Computer Engineering**

**Virtual Conference  
13 – 15 October 2021**



**IEEE Catalog Number: CFP21QIR-POD  
ISBN: 978-1-6654-9697-1**

**Copyright © 2021 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:	CFP21QIR-POD
ISBN (Print-On-Demand):	978-1-6654-9697-1
ISBN (Online):	978-1-6654-9696-4

**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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

## Table of Contents

Paper ID	Title and Authors	Pages
018	The Effect of CuSCN Concentration Variations in Activated Carbon Electrode on the Perovskite Solar Cells Performance <i>Elang Barruna, Junivan Sulistianto, Nji Raden Poespawati</i>	1-4
031	Evaluation of Approximation And Reduction Method for Fractional Order Transfer Function <i>Suryadi Suryadi, Abdul Halim</i>	5-10
041	Performance Analysis of YOLOv4 and SSD Mobilenet V2 for Foreign Object Debris (FOD) Detection at Airport Runway Using Custom Dataset <i>Muhammad Reza Fairuzi, Fitri Yuli Zulkifli</i>	11-16
045	Shear horizontal surface acoustic wave sensor measurement system for liquid toward wireless and passive applications <i>Jun Kondoh, Naoki Maekawa, Takaki Aoyama</i>	17-20
048	Color Correction Technique using an Artificial Color Board and Root-polynomial Color Correction for Smartphone-Based Urinalysis <i>Mutiara Nurul Sakinah, Adhi Harmoko Saputro</i>	21-26
059	Dual-band localized surface plasmon resonance spectrum using gold nanoparticles fabricated on anisotropic crystalline 36XY-LiTaO3 substrate <i>Teguh Firmansyah, Gunawan Wibisono, Eko Tjipto Rahardjo, Jun Kondoh</i>	27-31
066	Obstacle Awareness System In Indoor UAV Controlling Using Multi Sensor Fusion Algorithm <i>Lisa Kristiana, Nurjana Ariffilah Idris, Auralius Oberman Manurung, Arsyad Ramadhan Darlis, Irma Amelia Dewi, Lita Lidyawati</i>	32-37
067	Implementation of Deep Learning on Smoker's Tongue Detection System using Visible-Near Infrared Imaging <i>Tiara De Arifani, Adhi Harmoko Saputro, Bramma Kiswanjaya</i>	38-42
087	Design an Intrusion Detection System, Multiple Honeypot and Packet Analyzer Using Raspberry Pi 4 for Home Network <i>Febrian Rachmad Hariawan, Septia Ulfa Sunaringtyas</i>	43-48
088	Performance Evaluation of Infrared Thermal Sensors based on Distance, Room Temperature, and Physical Activity on Objects <i>Alif M. Hafizh, Tomy Abuzairi, Ahli Irfan</i>	49-54
092	Development of Greedy Power Allocation Round Robin Scheduling For 5.5 G Traffic Management <i>Nanda Aulia Ilmatas Sakdiyah, Muhamad Asvial</i>	55-59
093	Website Development with Laravel and Scrum Method: A Study case of Stasiun Mebel Jepara Store Case <i>Hernawati Samosir, Tegar Arifin Prasetyo, Sintong Lumbantobing, Diana Octaviana Naibaho, Christy Riris T Situmorang</i>	60-65
096	Applying Data Mining of Association Rules as Decision Making at 8th Bean Cafe <i>Elfira Febriani H., Rina Fitriana, Cendana Lestari Faturrahman</i>	66-70
118	Performance Evaluation of Machine Learning Classifiers for Face Recognition <i>Dodi Sudiana, Mia Rizkinia, Fahri Alamsyah</i>	71-75
120	Design of The Affordable IoT-Based Monitoring System for Versatile Application in Machine Tool <i>Muhamad Aditya Royandi, Jui-Pin Hung</i>	76-80

122	Design Study of The Effect of Cover Addition on Eddy Current Brake Type Half Circle Slotted: A Computational Approach <i>Dhanu Pramandita, U Ubaidillah, Muhammad Nizam, Mufti Reza Aulia Putra</i>	81-84
133	Development of Long Short-Term Memory (LSTM) Bayesian Network Method for Predicting Wind Power Potential in a Wind Power Plant in Indonesia <i>Dodi Sudiana, Mia Rizkinia, Nathanael Tristan</i>	85-89
145	Mismatch Reduction using 2-D Inductance Map for Robust Vector Control of IPM Motor <i>Faiz Husnayain, Toshihiko Noguchi, Kiyohiro Iwama, Feri Yusivar</i>	90-93
146	Responsivity Calibration of Terahertz Pyroelectric Detector Based on Blackbody Radiator <i>Arie Pangesti Aji, Hiroaki Satoh, Catur Apriono, Eko Tjipto Rahardjo, Hiroshi Inokawa</i>	94-97
161	Noise Filtering in the Output of Photodetector to Enhance the Performance of Optical Relaying Network on FSO communications <i>Ucuk Darusalam, Purnomo Sidi Priambodo, Eko Tjipto Rahardjo</i>	98-103
162	Automatic Physiognomy System using Active Appearance Model and Convolutional Neural Network <i>Dodi Sudiana, Mia Rizkinia, Ilham Mulya Rafid</i>	104-109
169	Microstrip Antenna Size Reduction using CSRR and DGS for ISM band <i>Joko Tri Atmojo, Eko Tjipto Rahardjo</i>	110-113
172	Deep Learning Approach for Parasite Detection in Thick Blood Smear Images <i>Hanung Adi Nugroho, Rizki Nurfauzi</i>	114-118
214	Substrate Bias Effect on SOI-based Thermoelectric Power Generator <i>Hiroshi Inokawa, Yuto Goi, Toshiaki Yorigami, Kyohei Shirotori, Hiroaki Satoh, Motohiro Tomita, Takeo Matsuki, Hiroya Ikeda, Takanoobu Watanabe</i>	119-122
225	Multi Sensing on Bearing Faults Detection with Internet of Things (IoT) based <i>Isla Madinah Hakim, Zaqiatud Darojah, Eny Kusumawati, Endah Suryawati Ningrum</i>	123-128
228	Machine Learning Based SPAM Message Classification System using Blockchain Technology <i>Guna Suryo Aji, Teuku Salman Farizi, Muhammad Farhan, Riri Fitri Sari</i>	129-134
232	"Do you mean I was wrong?" A Preliminary Approach on a Graph-based Framework for Suggesting Alternate Interpretations on Japanese Conversations <i>Takaaki Kawai, Naoki Fukuta</i>	135-140
234	Ethereum Price Prediction Comparison Using KNN and Multiple Polynomial Regression <i>Nova Kristian, Fikri Adzikri, Mia Rizkinia</i>	141-146
238	Feasibility Study of LTE Network Implementation on Working Frequency 700 MHz, 2100 MHz, and 2300 MHz in Indonesia <i>Ferialia Fitri, Rendy Munadi, Nachwan Mufti Adriansyah</i>	147-152
239	Object Detection System for Self-Checkout Cashier System Based on Faster Region Based Convolution Neural Network and YOLO9000 <i>Michael Ariyanto, Prima Dewi Purnamasari</i>	153-157
240	Review of Non-Invasive Blood Glucose Level Estimation Based on Photoplethysmography and Artificial Intelligent Technology <i>Ernia Susana, Kalamullah Ramli</i>	158-163
244	Automatic Essay Grading System for Japanese Language Exam using CNN-LSTM <i>Amanda Nur Oktaviani, Marwah Zulfanny Alief, Lea Santiar, Prima Dewi Purnamasari, Anak Agung Putri Ratna</i>	164-169

245	Human-Interface Approach Towards Multi-Agent System Field Optimization <i>Ihsan Ibrahim, Anak Agung Putri Ratna, Naoki Fukuta</i>	170-175
254	Implementation and Evaluation for Monitoring System in Electrical Meter based on LoRaWAN Network <i>Ahmad Fakhrol Fauzi, I Gde Dharma Nugraha</i>	176-181
256	Design of Cross & Square Slot with Beamforming for Microstrip Reflectarray Antenna at 28 GHz <i>Aulia Ramadhani, Ahmad Firdausi, Umairah Umairah, Mudrik Alaydrus</i>	182-186
260	Implementing Recommender System-based Approach for Health Management Mobile Application <i>Halim Md Abdul, Ihsan Ibrahim, Naoki Fukuta</i>	187-190
269	Investigation on Simulation-Based Octagonal Ring MIMO Antenna For 5G Applications <i>Yusnita Rahayu, Ibrahim As</i>	191-194
284	Biosensor Microstrip Antenna Design at 2.45 GHz for Bacteria Detection <i>Yusnita Rahayu, Inesti Lailatul Qodriyah, Meilita Kurniati, Anhar, Huriatul Masdar, Maya Savira</i>	195-199
298	Meander line Antenna with Metamaterial Structure for AIS (Automatic Identification System) Micro Satellite <i>Rosza Madina, Fitri Yuli Zulkifli</i>	200-203
332	Comparison of MLP-BPNN and MLP-PSO for Automatic Essay Grading System for Japanese Language Exam <i>Farhan Putra, Prima Dewi Purnamasari, Anak Agung Putri Ratna, Lea Santiar</i>	204-208