

**2020 International Conference on  
Radar, Antenna, Microwave,  
Electronics, and  
Telecommunications  
(ICRAMET 2020)**

**Tangerang, Indonesia  
18 – 20 November 2020**



**IEEE Catalog Number: CFP20C07-POD  
ISBN: 978-1-7281-8923-9**

**Copyright © 2020 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:	CFP20C07-POD
ISBN (Print-On-Demand):	978-1-7281-8923-9
ISBN (Online):	978-1-7281-8922-2

**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

# Contents

A Novel Complex SAR Spatial De-Speckling Filter Evaluation Based On Time-Frequency Domain Formulation Of Texture Information	1
<i>Iman Heidarpour Shahrezaei, Hyun-Cheol Kim</i>	
Implementation Array-Slotted Miliwires in Artificial Dielectric Material on Waveguide Filters $Te_{10}$ Mode	7
<i>M. Reza Hidayat, Salita Ulitia Prini, Rivaldi Zaky NA, Handoko Rusiana Iskandar, Een Taryana, Sofyan Basuki</i>	
Quantification of Physical Blockage Based on Digital Surface Model (DSM) Dataset	13
<i>Rumadi, Kamirul, Farid Armin, Stevry Yushady CH Bissa, Suisbiyanto Prasetya</i>	
Quality of Service (QoS) Analysis for Real-Time Telemetry By IP Satellite Communication	18
<i>Yanuar Firmansyah, Novelita Rahayu, Yanuar Prabowo, Iwan Nofi Yono Putro, Farohaji Kurniawan</i>	
D-ISDET: Double Intensity of Image Shadow Detection and Elimination in Autonomous Vehicle	22
<i>Risnandar, Riyo Wardoyo</i>	
Single and Double Side Comb-Shaped Patch Antenna Design Evolved from Rectangular Shape for Reduced Sized Antenna Applications	28
<i>Huseyin Baydar, Melih Aslan, Veli Tayfun Kilic</i>	
Generative Adversarial Network with Residual Dense Generator for Remote Sensing Image Super Resolution	34
<i>Rika Sustika, Andriyan Bayu Suksmono, Donny Danudirdjo, Ketut Wikantika</i>	
Feature Extraction on Brain Wave Activities in Rapid Serial Visual Presentation Stimulus	40
<i>M. Faizal Amri, Asri Rizki Yuliani, Dwi Esti Kusumandari, M. Ilham Rizqyawan, Artha I. Simbolon, Shafiyah Mahmudah, Rina Ristiana</i>	
Physical Distancing Monitoring with Background Subtraction Methods	45
<i>Hendra Adinanta, Edi Kurniawan, Suryadi, Jalu A. Prakosa</i>	
Dynamic Texture Analysis Using Auto-correlation Function of Histogram Similarity Measure From Galois-Field Texture Representation of Water Flow Video	51
<i>Bernadus H. Sirenden, Petrus Mursanto, Sensus Wijonarko</i>	
Notch/Peak filter Design and its FPGA Implementation through Wave Digital Structure	57
<i>Abhay Sharma, Tarun Kumar Rawat</i>	

Frequency Reconfigurable Multiband Microstrip Antenna Composed of Artificial Magnetic Conductor	62
<i>Muhammad Farhan Maulana, Nanang Ismail, Eki Ahmad Zaki Hamidi, Taufiqurrachman, Hardi Nusantara, Achmad Munir</i>	
Complementary Split Ring Resonator on the Ground Plane for Wearable Antenna	66
<i>Efri Sandi, Baso Maruddani, Nabillah Khairunisa</i>	
Design of 2.4 GHz Slotted SIW Array Antenna for WLAN Application	70
<i>Ahmad Izzuddin, Aulia Dewantari, Eko Setijadi, Elyas Palantei, Eko Tjipto Rahardjo, Achmad Munir</i>	
Characterization of Slotted Square Rings AMC Reflector Using Printed Dipole Antenna	74
<i>Dwiki Haryanto, Levy Olivia Nur, Achmad Munir</i>	
mmWave Path loss Prediction Model Using Grey System Theory for Urban Areas	78
<i>Supachai Phaiboon, Pisit Phokharatkul</i>	
Impact of Dielectric Insertion on Performance of Quad-Ridged Horn Antenna	81
<i>Folin Oktafiani, Effrina Yanti Hamid, Achmad Munir</i>	
High Throughput Satellite using Ka-Band for Government Multifunctional Services in Indonesia: Study of Link Budget and Capacity Analysis	85
<i>Ignatius Daru Kristiadi, Muhammad Imam Nashiruddin, Miftadi Sudjai</i>	
Performance Evaluation of Radio Resource Allocation Algorithm for 5G Device-to-Device Communication Underlying on 4G LTE Networks	91
<i>Mohamad Yasin Ramadhan, Muhammad Imam Nashiruddin</i>	
Path Loss Model of the Maritime Wireless Communication in the Seas of Indonesia	97
<i>Arumjeni Mitayani, Galih Nugraha Nurkahfi, Mochamad Mardi Marta Dinata, Vita Awalia Mardiana, Nasrullah Armi, Chaeriah Bin Ali Wael, Arief Suryadi Satyawan</i>	
Further Investigation of The Feasibility of Using EBG Structure-Based Microstrip Antenna for Gain Enhancement	102
<i>Yahiea Alnaiemy, Lajos Nagy</i>	
Development of Compact Wilkinson Power Divider Using Meander Line for UAV Telemetry Application	107
<i>Muhammad Rizqi, Rama Rahardi, William Damario Lukito, Fajri Anugerah Pramadhana Kornel, Arief Budi Santiko, Achmad Munir</i>	
Characterization of Electromagnetics Wave Absorber Composed of Ring Resonator Structure	111
<i>Ichsan Nusobri, Levy Olivia Nur, Achmad Munir</i>	
Absorption Characteristics of Tunable AMC-based Wave Absorber using Varactor Diode	115
<i>Muthia Hanifah, Levy Olivia Nur, Achmad Munir</i>	
Filtering Power Divider Composed of SIW-based Bandpass Filter for WLAN Application	120
<i>Arief Budi Santiko, Achmad Munir</i>	

QoS Performance of Software Define Network Using Open Network Operating System Controller	<b>124</b>
<i>Rafli Ramadhan, Nasrullah Armi, Rita Magdalena, Galih Nugraha Nurkahfi, Mochamad Mardi Marta Dinata</i>	
Preserving Network Privacy on Fine-grain Path-tracking Using P4-based SDN	<b>129</b>
<i>Akbari Indra Basuki, Didi Rosiyadi, Iwan Setiawan</i>	
Qu-Antri: Multi-tenant Architecture for Bandung Public Services to Reduce the Crowd	<b>135</b>
<i>Wiwin Suwarningsih, Ana Heryana, Hilman F. Pardede, Purwoko Adhi, Vicky Zilvan, Andri Fachrur Rozie, R. Budiarianto Suryo Kusumo, Ekasari Nugraheni, R. Sandra Yuwana, Dianadewi Riswantini, Endang Suryawati, Ade Ramdan, Dikdik Krisnandi, Andria Arisal</i>	
Evaluating the Performance of Fibbing Architecture in the Hybrid Software Defined Network	<b>141</b>
<i>Dino Budi Prakoso, Royyana Muslim Ijtihadie, Tohari Ahmad, Maurice Ntahobari</i>	
Linear Continuous Sliding Mode-based Attitude Controller with Modified Rodrigues Parameters Feedback	<b>146</b>
<i>Harry Septanto, Djoko Suprijanto</i>	
A Miniaturized Wideband Antenna for Vehicular Communication, WiMAX, and WLAN Applications	<b>151</b>
<i>Shobit Agarwal, Ashwani Sharma</i>	
A 79GHz Series Fed Microstrip Patch Antenna Array with Bandwidth Enhancement and Sidelobe Suppression	<b>155</b>
<i>Yuanzhi Liu, Guo Bai, Mustapha C.E. Yagoub</i>	
Design of Corrugated Horn Antenna for Electronic Support Measure Application	<b>159</b>
<i>Kandi Rahardiyanti, Fitri Yuli Zulkifli, Eko Tjipto Rahardjo</i>	
Design of Corrugated Horn Antenna with Wire Medium Addition as Parabolic Feeder for Ku-Band Very Small Aperture Terminal (VSAT) Application	<b>163</b>
<i>Sahid Ridho, Catur Apriono, Fitri Yuli Zulkifli, Eko Tjipto Rahardjo</i>	
Design and Characterization of 1800MHz TM Mode Circular Waveguide Array Antenna for Energy Harvesting Application	<b>167</b>
<i>Muhammad Panji Kusuma Praja, Sulistyaningsih, Taufiqurrachman, Winy Desvasari, Nasrullah Armi, Achmad Munir</i>	
Miniature Folded Modified Log-Periodic Shaped Tag Antenna for Metal Mountable UHF RFID	<b>171</b>
<i>N. Ripin, Eng-Hock Lim, K. H. Yusof, M. S. S. M. Basir</i>	
Reduced Size Meander Line-based 433MHz Printed Dipole Antenna for UAV Telemetry Application	<b>176</b>
<i>Rama Rahardi, Muhammad Rizqi, William Damario Lukito, Rahmat Wibowo, Folin Oktafiani, Achmad Munir</i>	

<a href="#">A Broadband High Gain Microstrip Yagi Antenna Array for Mm-wave Communication Systems</a>	<b>180</b>
<i>Guo Bai, Yuanzhi Liu, Cheng Liao</i>	
<a href="#">Effect of Loading on the RCS of Coplanar Antenna Structures</a>	<b>184</b>
<i>Zaed S. A. Abdulwali, Majeed A. S. Alkanhal</i>	
<a href="#">A Reliable Public Safety Framework for Industrial Internet of Things (IIoT)</a>	<b>189</b>
<i>Faheem Reegu, Wazir Zada Khan, Salwani Mohd Daud, Quratulain Arshad, Nasrullah Armi</i>	
<a href="#">On the Design of Modified Variable Structure Repetitive Control with Fast Transient Response</a>	<b>194</b>
<i>Edi Kurniawan, Jalu A. Prakosa, Hendra Adinanta, Suryadi, Purwowibowo</i>	
<a href="#">Experimental Based Identification Model of Low Fluid Flow Rate Control Systems</a>	<b>200</b>
<i>Jalu A. Prakosa, Edi Kurniawan, Hendra Adinanta, Suryadi, Purwowibowo</i>	
<a href="#">Transfer Learning and Fine-Tuning for Deep Learning-Based Tea Diseases Detection on Small Datasets</a>	<b>206</b>
<i>Ade Ramdan, Ana Heryana, Andria Arisal, R. Budiarianto S. Kusumo, Hilman F. Pardede</i>	
<a href="#">Machine Learning Based Plant Diseases Detection: A Review</a>	<b>212</b>
<i>Hilman F. Pardede, Endang Suryawati, Dikdik Krisnandi, R. Sandra Yuwana, Vicky Zilvan</i>	
<a href="#">Balancing Robot Navigation with Virtual Map and Virtual Sensor</a>	<b>218</b>
<i>Henry Probo Santoso, Joko Slamet Saputro, Hari Maghfiroh, Mochamad Mardi Marta Dinata</i>	
<a href="#">Aspect-Based Sentiment Analysis on Candidate Character Traits in Indonesian Presidential Election</a>	<b>224</b>
<i>Lindung Parningotan Manik, Hani Febri Mustika, Zaenal Akbar, Yulia Aris Kartika, Dadan Ridwan Saleh, Foni Agus Setiawan, Ika Atman Satya</i>	
<a href="#">Image Classification Performance Evaluation for 3D Model Reconstruction</a>	<b>229</b>
<i>Anny Yuniarti, Nanik Suciati, Agus Zainal Arifin</i>	
<a href="#">Quantized Convolutional Neural Network toward Real-time Arrhythmia Detection in Edge Device</a>	<b>234</b>
<i>Muhammad Ilham Rizqyawan, Aris Munandar, M. Faizal Amri, Rio Korio Utoro, Agus Pratondo</i>	
<a href="#">Classifying aggravation status of COVID-19 event from short-text using CNN</a>	<b>240</b>
<i>Ekasari Nugraheni, Purnomo Husnul Khotimah, Andria Arisal, Andri Fachrur Rozie, Dianadewi Riswantini, Ayu Purwarianti</i>	
<a href="#">A C-band Circular Polarized Antenna with Elliptical Shape for SAR Sensor</a>	<b>246</b>
<i>Farohaji Kurniawan, Sunar, Agus Wiyono, Dewi Anggraeni, Jefri Abner Hamonangan, Yanuar Prabowo, Iwan Y. Putro, Yanuar firmansyah</i>	

<b>Tunable Multi-Band Microstrip Antenna Based on Artificial Magnetic Conductor</b> <i>Nurul Fadhillah, Levy Olivia Nur, Achmad Munir</i>	<b>249</b>
<b>Dual Band Implantable Antenna for Biomedical Telemetry Applications</b> <i>Katsinos Konstantinos</i>	<b>253</b>
<b>Design of a Transmitarray Antenna with Triple Rectangular Rings at 29 GHz</b> <i>Ristia Ningsih, Anggoro Anggoro, Umaisaroh Umaisaroh, Mudrik Alaydrus</i>	<b>257</b>
<b>Deep Learning for Dengue Fever Event Detection Using Online News</b> <i>Purnomo Husnul Khotimah, Andri Fachrur Rozie, Ekasari Nugraheni, Andria Arisal, Wiwin Suwarningsih, Ayu Purwarianti</i>	<b>261</b>
<b>On Using Declarative Generation Rules To Deliver Linked Biodiversity Data</b> <i>Zaenal Akbar, Yulia Aris Kartika, Dadan Ridwan Saleh, Hani Febri Mustika, Lindung Parningotan Manik</i>	<b>267</b>
<b>Break Point Distance Path Loss Model for Indoor Wireless Communications with Equivalent Floor</b> <i>Supachai Phaiboon, Pisit Phokharatkul</i>	<b>273</b>
<b>Photovoltaic Performance and Up Scaling of Monolithic Dye-Sensitized Solar Module</b> <i>Natalita M. Nursam, Jojo Hidayat, Shobih, Putri Nur Anggraini</i>	<b>276</b>
<b>Design and Improvement of Cross-Coupled Rectifier Using 0.18 <math>\mu\text{m}</math> CMOS Process Technology</b> <i>Irawan Sukma, Ihsan Supono</i>	<b>281</b>
<b>Slot Antenna for Multi-Band Frequency Diversity</b> <i>Mosab M. Qwakneh, Khaled A. AlHammami, Abdel-Rahman S. Omar, Yanal S. Faouri</i>	<b>287</b>
<b>Screen Printed Electrochemical Sensor for Ascorbic Acid Detection Based on Nafion/Ionic Liquids/Graphene Composite on Carbon Electrodes</b> <i>Robeth Viktoria Manurung, Mahadir Marakka, Arifin Pide, Erry Dwi Kurniawan, I Dewa Putu Hermida</i>	<b>291</b>
<b>Video Analysis on Handwashing Movement for the Completeness Evaluation</b> <i>Esa Prakasa, Bambang Sugiarto</i>	<b>296</b>
<b>Measuring the Effect of Elementary Descriptive Attributes on News Recommender Systems</b> <i>Hani Febri Mustika, Yulia Aris Kartika, Ika Atman Satya, Lindung Parningotan Manik, Arida Ferti Syafiandini, Foni Agus Setiawan, Zaenal Akbar, Dadan Ridwan Saleh</i>	<b>302</b>
<b>A Fully Integrated X-Band Multifunction Core Chip in 0.25 <math>\mu\text{m}</math> GaN HEMT Technology</b> <i>Rehan Akmal, Hammad M. Cheema, Muhammad Kashif, Muhammad Shoaib Arif, Muhammad Zeeshan</i>	<b>308</b>
<b>Modeling of Low-Resolution Face Imaging</b> <i>Nova Hadi Lestriandoko, Diah Harnoni Apriyanti, Esa Prakasa</i>	<b>314</b>

Analysis of IEEE 802.11p MAC Protocol for Safety Message Broadcast in V2V Communication	<b>320</b>
<i>Chaeriah Bin Ali Wael, Nasrullah Armi, Arumjeni Mitayani, Dayat Kurniawan, Arief Suryadi Satyawan, Agus Subekti</i>	
Ultra-High Resolution KOMPSAT-5 SAR Sea-Ice Random Radiometric Anomaly Formulation Based On Hybrid Domain Texture Decomposition	<b>325</b>
<i>Iman Heidarpour Shahrezaei, Hyun-Cheol Kim, Tae-Byeong Chae</i>	
Theoretical Model for Continuance Usage Intention of mHealth Application	<b>331</b>
<i>Aulia Absari Khalil, Wayan Suparta, Edi Abdurachman, Agung Trisetyarso</i>	
On the Comparison of Social Distancing Violation Detectors with Graphical Processing Unit Support	<b>337</b>
<i>Suryadi Suryadi, Edi Kurniawan, Hendra Adinanta, Bernadus H. Sirenden, Jalu A. Prakosa, Purwowibowo Purwowibowo</i>	
Security Attack on Secret Sharing Based Watermarking Using Fractional Fourier Transform and Singular Value Decomposition	<b>343</b>
<i>Didi Rosiyadi, Heri Prasetyo, Shi Jinn Horng, Akbari Indra Basuki</i>	
Signal Processing Algorithm for Pre-processing the Surface Plasmon Resonance Signal Response	<b>348</b>
<i>Isa Anshori, Aminul Solihin, Muhammad Harun Alrasyid, Suksmandhira Harimurti, Gilang Gumilar, Muhammad Yusuf, Silmina Prastriyati Sari, Brian Yuliarto, Wyanda Arnafia</i>	
Pre-Development Analysis of Truther Framework: A Platform to Verify Information Authenticity	<b>352</b>
<i>Alfian Akbar Gozali</i>	
Web App Design for Surface Plasmon Resonance Signal Processing	<b>358</b>
<i>Isa Anshori, Mahendra Baleno Rama, Rey Ezra, Suksmandhira Harimurti, Gilang Gumilar, Muhammad Yusuf, Silmina Prastriyati Sari, Brian Yuliarto, Wyanda Arnafia</i>	
Performance Evaluation of Vertically Stacked Nanosheet InGaAs/InAlAs/InP Double Quantum Well FinFET on Si Substrate	<b>362</b>
<i>Erry Dwi Kurniawan, Yan-Ting Du, Yung-Chun Wu</i>	
Low-Profile, Multiband & Wideband 'C-Shaped' Monopole Antenna for 5G and WLAN Applications	<b>366</b>
<i>Jayshri Sharad Kulkarni, Chow-Yen Desmond Sim</i>	