



**THE 2022
MALAYSIA-JAPAN WORKSHOP
ON RADIO TECHNOLOGY
(MJWRT2022)**

TECHNICAL PROGRAM

MJWRT2022

“Enabling Future Communication”

<http://mjwrt2022.apmttemc.org/>

11 - 12 JANUARY 2022

VIRTUAL CONFERENCE, KUALA LUMPUR

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IEEE Malaysia AP/MTT/EMC Joint Chapter



Supported by:



Tuesday 11th January 2022

08:30 - 09:00	Registration												
09:00 – 09:10	Opening Speech:												
09:10 – 09:20	<ul style="list-style-type: none"> • Assoc. Prof. Dr. Azremi Abdullah Al-Hadi, Chair IEEE Malaysia AP/MTT/EMC Joint Chapter 												
09:20 – 09:30	<ul style="list-style-type: none"> • Prof. Dr. Hiroyoshi Yamada, Chair IEICE Technical Committee on Antennas & Propagation, Japan • Prof. Ts. Dr. Ali Selamat, Dean of Malaysia-Japan International Institute of Technology, UTM <p>Emcee: Ir. Dr. Nurul Huda Abd. Rahman</p>												
09:30 - 09:35	Photo Session												
09:35 – 10:15	<p>Keynote Speaker 1: Prof. Ts. Dr. Mohamad Kamal A Rahim (Universiti Teknologi Malaysia) Antenna with Electromagnetic Band Gap Structure (EBG) for Wireless Application Moderator: Prof. Dr. Yoshihide Yamada</p>												
10:15 – 10:55	<p>Keynote Speaker 2: Dr. Mahan Rudd (Altair Engineering Sdn. Bhd.) A Guide to 5G Product Design, Wave Propagation Modelling and Radio Network Planning Moderator: Prof. Dr. Yoshihide Yamada</p>												
10:55 - 11:05	Break												
11:05 – 11:35	<p>Invited Speaker 1: Dr. Satoru Kurokawa (National Institute of Advanced Industrial Science and Technology, Japan) Antenna Near Field Measurement System Using An Optical Fiber Link System and Industrial Robot Moderator: Ir. Dr. Kamilia Kamardin</p>												
11:35 – 12:05	<p>Invited Speaker 2: Assoc. Prof. Ts. Dr Idnin Pasya Ibrahim (Universiti Teknologi MARA) Underwater Radio Using Wideband Signals: Prospect, Challenges and Recent Researches Moderator: Ir. Dr. Kamilia Kamardin</p>												
12:05 – 12:25	<p>Sponsor Session COMREL Technologies Sdn. Bhd. 7G AA Co. Ltd. Technical host: Assoc. Prof. Ir. Dr. Nur Emileen Abd Rashid</p>												
12:25 – 14:00	Lunch												
14:00 – 15:30	<p>General Session A1 Session Chair: Prof. Dr. Kentaro Saito</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">14:00</td> <td>Paper ID: 116490 (<i>Rasyidah Hanan Mohd Baharin</i>) Comparison of MOM and FE-BI for Inverse Reconstruction of Electric Field in Phantom</td> </tr> <tr> <td>14:15</td> <td>Paper ID: 117211 (<i>Abdul Aziz Ali</i>) Biocompatible Sago Aerogel Material as A Substrate for Antenna Application</td> </tr> <tr> <td>14:30</td> <td>Paper ID: 116911 (<i>Farizah Ansarudin</i>) Cylindrical Dielectric Lens Antenna for 5G Mobile Base Station</td> </tr> <tr> <td>14:45</td> <td>Paper ID: 116930 (<i>Kei Asahi</i>) Space-Time Adaptive Concept for the Calculation Speed Improvement in MR/FDTD</td> </tr> <tr> <td>15:00</td> <td>Paper ID: 117167 (<i>Norsiha Zainudin</i>) Near Field Radio Link Design in Fat Phantom for Wireless Capsule Endoscopy Application</td> </tr> <tr> <td>15:15</td> <td>Paper ID: 117169 (<i>Madiwalesh Pattar</i>) Novel Module Architecture for Wideband Multichannel Multi Band Down Conversion with Built in Local Oscillators</td> </tr> </table>	14:00	Paper ID: 116490 (<i>Rasyidah Hanan Mohd Baharin</i>) Comparison of MOM and FE-BI for Inverse Reconstruction of Electric Field in Phantom	14:15	Paper ID: 117211 (<i>Abdul Aziz Ali</i>) Biocompatible Sago Aerogel Material as A Substrate for Antenna Application	14:30	Paper ID: 116911 (<i>Farizah Ansarudin</i>) Cylindrical Dielectric Lens Antenna for 5G Mobile Base Station	14:45	Paper ID: 116930 (<i>Kei Asahi</i>) Space-Time Adaptive Concept for the Calculation Speed Improvement in MR/FDTD	15:00	Paper ID: 117167 (<i>Norsiha Zainudin</i>) Near Field Radio Link Design in Fat Phantom for Wireless Capsule Endoscopy Application	15:15	Paper ID: 117169 (<i>Madiwalesh Pattar</i>) Novel Module Architecture for Wideband Multichannel Multi Band Down Conversion with Built in Local Oscillators
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General Session B1		
Session Chair: Prof. Dr. Takashi Hikage		
14:00	Paper ID: 116950 (<i>Sayaka Matsukawa</i>) Non-destructive Inspection for FRPM Pipeline Utilizing Temporal and Spatial Synthesis of Microwaves Propagating along Pipe-wall	
14:15	Paper ID: 117212 (<i>Mohammad Luthful Hakim</i>) Frequency Integration of Dual-band Hexagonal Metamaterial Resonator antenna for Wi-Fi and 5G Wireless Communication	
14:30	Paper ID: 117191 (<i>Nur Qamarina Azmi</i>) Near Field on Inductor Loops for Inductive Couple Fed Antenna	
14:45	Paper ID: 117194 (<i>Muhammad Hafeez Rosmin</i>) Slot Implementation on Second Iteration of Fractal Log Periodic Dipole Antenna for UHF Band Application	
15:00	Paper ID: 117184 (<i>Satoshi Nishida</i>) Influence of Facilities in a Railway Tunnel on Radio Wave Propagation	
15:15	Paper ID: 117200 (<i>M. Muhsin</i>) Focal Region Ray Tracing on Abbe's Sine Condition Lens Antenna	
15:30 – 17:00	General Session A2	
	Session Chair: Assoc. Prof. Ir. Dr. Nur Emileen Abd Rashid	
	15:30	Paper ID: 117202 (<i>Nurul Syafeeqa Ishak</i>) Fabrication and Characterisation of Frequency Selective Surface (FSS) for Terahertz Sensing Application
	15:45	Paper ID: 117189 (<i>Yuanfeng She</i>) Uncertainty Analysis of Far-Field Gain Measurement of DRGH Using Single-Antenna Extrapolation Method from 1 GHz to 18 GHz
	16:00	Paper ID: 117203 (<i>Norun Fariyah Abdul Malek</i>) Design of Enhanced Gain Patch Antenna at 2.4 GHz and 3.5 GHz for Wireless Application
	16:15	Paper ID: 117193 (<i>Hideaki Sugiyama</i>) Gain Enhancement of Square Bottom Lens for Lens Array Antennas
	16:30	Paper ID: 117207 (<i>Ayuni Afiqah Arjunaidi</i>) Focal Region Ray Tracing for Slanted Incident Rays on Spherical Reflector Antenna
	16:45	Paper ID: 117210 (<i>Siti Harliza Mohd Razali</i>) Design of Normal Mode Helical Antenna (NMHA) for Seawater Application
	General Session B2	
	Session Chair: Assoc. Prof. Dr. Azura Hamzah	
	15:30	Paper ID: 117213 (<i>Muhammad Adib Haron</i>) LTE-Based Passive Forward Scattering Radar for Drone Detection and Classification
	15:45	Paper ID: MJWRT01 (<i>Puteri Nadiyah Syamimi Said Ja'afar</i>) Metallic Cylinder Reflected Power Measurement For 93.1GHz Frequency Modulated Continuous Wave Radar Calibration
	16:00	Paper ID: 117195 (<i>Yukiko Wada</i>) Miniaturization of the Antenna Composed of Metal Box with a Slot and Inner Folded Dipole Element
	16:15	Paper ID: MJWRT02 (<i>Nurfarahin Miswadi</i>) Design of a Flexible T-Matched Feed UHF RFID Tag Antenna

	16:30	Paper ID: 117199 (<i>Bazilah Baharom</i>) Simulated Performances of Low Profile 2×2 Lens Antenna Array in 300GHz Band
	16:45	Paper ID: MJWRT05 (<i>Muhammad Al-Hadi Zable</i>) Investigation on Dielectric Properties of Sludge Waste from Water Treatment Using Microwave Non-Destructive Testing (MNDT)
17:00 – 18:00	General Session A3 Session Chair: Dr. Sumiaty Ambran	
	17:00	Paper ID: 117204 (<i>Kazuki Yoshida</i>) Numerical Estimation of Indoor Propagation Characteristics Considering Shadowing due to Human Bodies in Local-5G Frequency Band
	17:15	Paper ID: MJWRT03 (<i>Mahroof Mohamed Maftroos</i>) Characterizing Passively Q-switched fiber laser in LiDAR Application
	17:30	Paper ID: MJWRT06 (<i>Wahidah Mansor</i>) Recognition of Radar Based Deaf Sign Language Using Convolution Neural Network
	17:45	Paper ID: 116829 (<i>Rasyidah Hanan Mohd Baharin</i>) Report on UAV-Propagation Experiment in Coastal Areas near Sado Airport, Niigata, Japan
	General Session B3 Session Chair: Prof. Dr. Kentaro Saito	
	17:00	Paper ID: MJWRT11 (<i>Noorlindawaty Md Jizat</i>) Compact Size Butler Matrix with Via-Hole Coupling for Millimetre-Wave Application
	17:15	Paper ID: 117205 (<i>Kazuho Suzuki</i>) Multiple Targets Identification for Traffic Monitoring by Using Beamforming with Khatri-Rao Product Extended Array Processing
	17:30	Paper ID: MJWRT07 (<i>Hazilah Mad Kaidi</i>) Rehabilitation Monitoring Using Arduino Nano 33 BLE IoT-Based
	17:45	Paper ID: 117075 (<i>Mahadev Sarkar</i>) Design Strategies to Overcome EMI/EMC Issues of Airborne Receivers

Wednesday 12th January 2022

08:45 – 10:00	General Session A4 Session Chair: Prof. Dr. Takashi Hikage	
	08:45	Paper ID: 117031 (<i>Kohei Yamamoto</i>) Numerical Estimation of Human Body Blockage Characteristics of 5G Sub-6 GHz for Epidemiologic Research on Children's Health
	09:00	Paper ID: MJWRT10 (<i>Anis Fariza binti Md. Pazil</i>) Textile Characterisation for Wearable Antenna Application using Transmission Lines Method
	09:15	Paper ID: MJWRT12 (<i>Noor Hafizah Abdul Aziz</i>) Detection and Classification of Target's Speed and Size Using LTE-Based Passive Forward Scattering Radar
	09:30	Paper ID: 117206 (<i>Masaya Kato</i>) Effect of Increasing the Number of vertical Antenna Elements on 3D Imaging for Automotive Millimeter-wave SAR
	09:45	Paper ID: MJWRT08 (<i>Ajibade Samuel</i>) Utilizing Logistic Map to Enhance the Population Diversity of PSO

10:00 – 10:40	Keynote Speaker 3: Prof. Dr. Hisashi Morishita (National Defense Academy, Japan) Antenna Design Using Folded Structure Moderator: Prof. Dr. Hiroyoshi Yamada
10:40 – 11:20	Keynote Speaker 4: Prof. Dr. Qiang Chen (Tohoku University, Japan) Gradient Index Lens Using Perforated Dielectric Moderator: Prof. Dr. Hiroyoshi Yamada
11:20 – 11:30	Break
11:30 – 12:00	Invited Speaker 3: Prof. Dr. Widad Ismail (Universiti Sains Malaysia) Prof. Dr. Alyani Ismail (Universiti Putra Malaysia) Virtue of Identification Utilizing Radio Technology Moderator: Dr. Hazilah Mad Kaidi
12:00 – 12:30	Invited Speaker 4: Prof. Dr. Mitoshi Fujimoto (Fukui University, Japan) Communication Area Expansion Effect by Relay in Polarized MIMO Transmission Moderator: Dr. Hazilah Mad Kaidi
12.30 - 13.00	Award Ceremony Closing Remarks by Prof. Dr. Yoshihide Yamada Emcee: Ir. Dr. Nurul Huda Abd. Rahman