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TECHNICAL PROGRAM DETAILS

TUESDAY 18TH DECEMBER 2018

Tuesday, December 18, 14:00 - 17:40

A1: 5G / Millimeter wave Antenna and MIMO Technologies (1 / 2)

Venue: Ballroom 1

Chairs: Zaiki Awang (Universiti Teknologi MARA, Malaysia), Tarik Abd Latef (University of Malaya, Malaysia)

14:00 - 14:20	Base Station Antennas for the 5G Mobile System (Invited)...1 Yoshihide Yamada (Malaysia-Japan International Institute of Technology, Universiti Teknologi Malaysia, Malaysia); Kamelia Quzwain (Universiti Teknologi Malaysia, Malaysia); Intan Izafina Idrus and Tarik Abd Latef (University of Malaya, Malaysia); Farizah Ansarudin (Universiti Kebangsaan Malaysia, Malaysia); Muhammad Kamran Ishfaq (Universiti Teknologi Malaysia & GC University Faisalabad, Malaysia); Tharek Abdul Rahman (Universiti Teknologi Malaysia, Malaysia)
14:20 - 14:40	Design of Shaped Offset Dual-Reflector Antenna for 5G Mobile Base Station...5 Kamelia Quzwain, Yoshihide Yamada, and Kamilia Kamardin (Universiti Teknologi Malaysia, Malaysia); Nurul Huda Abd Rahman (Universiti Teknologi MARA, Malaysia); Tharek Abdul Rahman (Wireless Communication Centre, Universiti Teknologi Malaysia, Malaysia)
14:40 - 15:00	Millimeter-Wave Beamforming MIMO Antenna Design for 5G Wireless Applications (Invited)...9 Muzammil Jusoh (Universiti Malaysia Perlis & School of Computer and Communication Engineering, Malaysia); Fwen Hoon Wee (Universiti Malaysia Perlis, Malaysia); Thennarasan Sabapathy (University Malaysia Perlis, Malaysia); Mohamed Nasrun Osman (Universiti Malaysia Perlis (UniMAP), Malaysia); Mohd Najib Mohd Yasin (BioElectromagnetics Research Group, Malaysia); Hasliza A Rahim (Universiti Malaysia Perlis & Bioelectromagnetics Research Group, Malaysia); Sharul Kamal Abdul Rahim (Universiti Teknologi Malaysia, Malaysia)
15:00 - 15:20	Tri-polarized Patch Antenna with X-Shaped Element for Wireless LAN MIMO System...13 Nornikman Hassan, Badrul Hisham Ahmad and Zahriladha Zakaria (Universiti Teknikal Malaysia Melaka, Malaysia); Mohamad Zoinol Abidin Bin Abd Aziz (Universiti Teknikal Malaysia Melaka & Hang Tuah Jaya, Malaysia); Chew Siang and Mohd Khairy Ismail (Universiti Teknikal Malaysia Melaka, Malaysia)
15:20 - 15:40	A New Model Microstrip Antenna like Microphone Structure for 5G Application...17 Hamizan Yon, Mohd Tarmizi Ali, Mohd Aris, and Bazilah Baharom (Universiti Teknologi Mara, Malaysia)

A1: 5G / Millimeter wave Antenna and MIMO Technologies (2 / 2)**Venue: Ballroom 1****Chairs:** Zaiki Awang (Universiti Teknologi MARA, Malaysia), Tarik Abd Latef (University of Malaya, Malaysia)

16:00 - 16:20	Double-folded Half Wavelength Printed Quadrifilar Helix Antenna with Feeding Network...21 Mohd Fais Mansor (Universiti Kebangsaan Malaysia, Malaysia); Tim Brown (University of Surrey, United Kingdom (Great Britain))
16:20 - 16:40	Wideband Multibeam-Electronically Steerable Parasitic Array Radiator (ESPAR) for 5G Applications (Invited)...25 Tarik Abd Latef (University of Malaya, Malaysia)
16:40 – 17:00	Channel Capacity Enhancement Using MIMO Antenna (Invited)...29 Rohani Bakar and Hiroyuki Arai (Yokohama National University, Japan)
17:00 - 17:20	Multibeam Characteristics of an Array Antenna for 5G Mobile Base Station...33 Intan Izafina Idrus and Tarik Abd Latef (University of Malaya, Malaysia); Yoshihide Yamada (Malaysia-Japan International Institute of Technology, Universiti Teknologi Malaysia, Malaysia); Mohamad Sofian Abu Talip, Narendra Aridas (Universiti Malaya, Malaysia); Tharek Abdul Rahman (Universiti Teknologi Malaysia, Malaysia)
17:20 - 17:40	CPW-Fed Circular Polarized Square Slot Antenna for GPS Applications...37 Neda Rojhani (University of Florence, Italy); Samineh Sarbazi Golazari and Nasrin Amiri (south Tehran Branch, Islamic Azad University, Iran); Farrokh Hodjat-Kashani (Iran University of Science and Technology, Iran)
17:40 - 18:00	4-Elements MIMO System Integrated with Planar Monopole and Slot Antenna for Wireless Applications...41 Harleen Kaur and Hari Shankar Singh (Thapar Institute of Engineering and Technology, India); Rahul Upadhyay (PDPM IITDM, Jabalpur, India)

Tuesday, December 18, 14:00 - 17:40

B1: RF/Microwave/Terahertz Circuit and System

Venue: Ballroom 2

Chairs: Aziati Husna Awang (Universiti Teknologi MARA, Malaysia), Paolo Valerio Testa (Technische Universität Dresden, Germany)

14:00 - 14:20	Distributed Power Combiner and On-Chip Antennas for Sub-THz Multi-Band UWB Receivers...139 Paolo Valerio Testa, Ronny Hahnel and Bernhard Klein (Technische Universität Dresden, Germany); Dirk Plettemeier and Corrado Carta (Dresden University of Technology, Germany); Frank Ellinger (Technische Universität Dresden, Germany)
14:20 - 14:40	Analysis and Design of Laterally and Vertically Radiating Bondwires Antennas for the 140-220GHz Band...143 Paolo Valerio Testa and Vincent Rieß (Technische Universität Dresden, Germany); Corrado Carta (Dresden University of Technology, Germany); Frank Ellinger (Technische Universität Dresden, Germany)
14:40 - 15:00	The Effect of Photonic Crystal Parameters on the Terahertz Photonic Crystal Cavities Microstrip Antenna Performances...147 Nor Roslan and Aziati Husna Awang (Universiti Teknologi MARA, Malaysia); Hizamel M. Hizan (Telekom Malaysia (TM) Research & Development, Malaysia)
15:00 - 15:20	A Tunable Input-Impedance Matching Approach for Long-term Degradation Effects of Power Amplifier...151 Hossein Eslahi, Sayed Albahrani, Dhawal Mahajan and Sourabh Khandelwal (Macquarie University, Australia)
15:20 - 15:40	Achieving Minimal PDN Impedance, SSN and Jitter on PCB with Embedded Capacitance Material...155 Chang Fei Yee (Keysight Technologies, Malaysia)
16:00 - 16:20	Incoherent Heterodyning of Phase Modulated Signal for Low-cost Millimeter-wave RoF Link...159 Guo Hao Thng, Masduzzaman Bakaul, Mohammad Boroon (Monash University Malaysia, Malaysia)
16:20 - 16:40	Hardware Design of DC-3GHz Compressed Sensing Receiver Based on Modulated Wideband Converter...162 Peng Wang and Fei You, Songbai He, Peng Hao (University of Electronic Science and Technology of China, P.R. China)
16:40 - 17:00	A Compact Low Noise Amplifier with Defected Microstrip Structure for Ultra-Wideband Communications...166 Nasrullah Saifullah and Zahriladha Zakaria (Universiti Teknikal Malaysia Melaka, Malaysia); Sam Weng Yik (UTEM, Malaysia); Nornikman Hassan and Noor Azwan Shairi (Universiti Teknikal Malaysia Melaka, Malaysia)
17:00 - 17:20	A 60 GHz Voltage Controlled Oscillator with LowPhase Noise for IEEE 802.11Ad Applications... N/A Umber Abbas, Tun Zainal Azni Zulkifli (Universiti Teknologi PETRONAS, Malaysia)
17:20 - 17:40	High Gain Dual-band Rectangular Transparent THz Antenna for Satellite Systems..174 Tale Saeidi, Idris bin Ismail and Peng Wen Wong (Universiti Teknologi PETRONAS, Malaysia); Adam Alhawari (Najran University, Saudi Arabia)
17:40 - 18:00	Connector Induced Effect on Small Antenna Design...178 Pei-Yu Lyu and Ching-Ping Chuang, Chia-Chan Chang, Sheng-Fuh Chang (National Chung Cheng University, Taiwan); Nhan Thi Phuong Nguyen (International University, Vietnam)

Tuesday, December 18 14:00 - 17:40

C1: Emerging Technologies and Applications (1 / 2)

Venue: Room 1

Chairs: Kamilia Kamardin (Universiti Teknologi Malaysia, Malaysia), Siti Maisurah Mohd Hassan (TM Research & Development Sdn. Bhd., Malaysia)

14:00 - 14:20	Remote Delivery of Uplink Carrier for Incoherent Millimeter Wave Radio-over-Fiber System...274 Mohammad Boroon, Masduzzaman Bakaul, Guo Hao Thng (Monash University, Malaysia)
14:20 - 14:40	Implementation of Remote Antenna Unit and Outdoor/Indoor Unit for Multi-Service Radio-over-Fiber (Invited)...278 Siti Maisurah Mohd Hassan, Amran Naemat; Norman Fadhil Idham Muhammad, Azah Syafiah Mohd Marzuki, and Norhapizin Kushairi (TMR&D Sdn. Bhd., Malaysia)
14:40 - 15:00	Ultra-wideband and Off-optimised Five-Port Reflectometer Using Power Splitters..282 Kim Yee Lee, Yeong Nan Phua, and Eng Hock Lim (, UTAR, Malaysia); Kok Yeow You (Universiti Teknologi Malaysia, Malaysia); Cheng Ee Meng (Universiti Malaysia Perlis, Malaysia); Zulkifly Abbas (University Putra Malaysia, Malaysia)
15:00 - 15:20	Depiction of Peak to Average Power Ratio Reduction Scheme and Potentials for 5G...286 Somayeh Mohammady and John Dooley (National University of Ireland Maynooth, Ireland); Ronan Farrell (Maynooth University, Ireland); Nasri Sulaiman (Universiti Putra Malaysia, Malaysia)
15:20 - 15:40	Improve Data Rate to Mitigate Pilot Contamination in Small-Cell Massive MIMO Systems...291 Adeeb Salh and Lukman Audah (Universiti Tun Hussein Onn Malaysia, Malaysia); Nor Shahida Mohd Shah (Universiti Tun Hussein Onn Malaysia (UTHM), Malaysia); Shipun Anuar Hamzah (Universiti Tun Hussein Onn Malaysia & Faculty of Electrical and Electronic Engineering (FKEE), Malaysia)
16:00 - 16:20	Simulation Analysis of EDFA in Optical Fiber with WDM System in the Perspective of Bangladesh...295 Md. Moshir Rahman, MD Shahrukh Khan, Rejwanul Hossain, S Raihan and Manobendu Sarker (University of Asia Pacific, Bangladesh)
16:20 - 16:40	Design of a Mobile Adapter to Address Frequency Regulations for Rural Cellular Operators...299 Steven Matthew Cheng and Miguel Carlo Purisima (University of the Philippines, Diliman, Philippines); Matthew G Podolsky and Eric Brewer (University of California, Berkeley, USA); Cedric Angelo Festin (University of the Philippines
16:40 - 17:00	Impact of Solid Ground Faults in Copper Cable Toward Achievable Bit Rate in VDSL2 and G.fast Technology...303 Che Ku Afifah Che Ku Alam (Universiti Tun Hussein Onn Malaysia, Malaysia); Fauziahanim Che Seman (Universiti Tun Hussein Onn Malaysia, Malaysia); Azhari Asrokin (Telekom Research & Development Sdn Bhd, Malaysia); Nurhana Norhan (Telekom Malaysia Research and Development Sdn. Bhd., Malaysia); Elfarizanis Baharudin (Universiti Tun Hussein Onn Malaysia & Universiti Putra Malaysia, Malaysia)Philippines)

17:00 - 17:20	Performance Assessment of a Star Patch Antenna Based on RSSI Level in Actual Indoor Environments...307 Fauziahanim Che Seman (Universiti Tun Hussein Onn Malaysia, Malaysia); Farhana Ahmad Poad (Universiti Tun Hussein Onn Malaysia & UTHM, Malaysia); Faisal Ramadhan and Rudy Yuwono (University of Brawijaya, Indonesia); Zuhairiah Zainal Abidin and Shaharil Mohd Shah (Universiti Tun Hussein Onn Malaysia, Malaysia)
17:20 - 17:40	Robust Vertical Handover Decision Based on TwoThresholds and Multiple Parameters...311 Reem Aldebes (University of Malaya, Malaysia); MHD Nour Hindia (Universiti Teknologi Malaysia, Malaysia); Kaharudin Dimyati (University of Malaya, Malaysia); Effariza Hanafi (Universiti Malaya, Malaysia)
17:40 – 18:00	Dielectric Properties of Rice Paddy and Sitophilus Oryzae for Microwave Heating Treatment...317 Siti Zulaika and Rosemizi Abd Rahim (Universiti Malaysia Perlis, Malaysia)

WEDNESDAY 19TH DECEMBER 2018

Wednesday, December 19 08:00 - 13:00

A2: Antenna and Advance Materials (1 / 2)

Venue: Ballroom 1

Chairs: Sharul Kamal A. Rahim (Universiti Teknologi Malaysia, Malaysia), Haizal Jamaluddin (Universiti Teknologi Malaysia, Malaysia)

08:00 - 08:20	Design of Low-Profile Patch Antenna Incorporated with Double Negative Metamaterial Structure...45 Faizal Jamlos (Universiti Malaysia Perlis, Malaysia); Samir Salem Al-Bawri (University Malaysia Perlis (UniMAP), Malaysia)
08:20 - 08:40	Metamaterial Filtenna at 2.4GHz for Bluetooth Application...49 Mohd Nur Amin Hashim (Rohde and Schwarz Technologies Malaysia Sdn Bhd & Universiti Teknologi Malaysia, Malaysia); Mohd Fairus Mohd Yusoff and Nurul Mu'azzah Abdul Latiff (Universiti Teknologi Malaysia, Malaysia)
08:40 - 09:00	Antenna Beam Tilting and Gain Enhancement Using Novel Metamaterial Structure at 28 GHz...53 Bashar Esmail (UTHM, Malaysia); Huda A. Majid (Universiti Tun Hussein Onn Malaysia, Malaysia); Samsul Haimi Dahlan (Universiti Tun Hussien Onn Malaysia, Malaysia); Zuhairiah Zainal Abidin (Universiti Tun Hussein Onn Malaysia, Malaysia); Mohamad Kamal A. Rahim (Universiti Teknologi Malaysia, Malaysia); Muhammad Azfar Abdullah (Agensi Angkasa Negara, Malaysia); Muzammil Jusoh (Universiti Malaysia Perlis & School of Computer and Communication Engineering, Malaysia)
09:00 - 09:20	Design of Electro-Textile UHF RFID Tag Through T-Match Network...57 Aidil Azwan Sharatol Ahmad Shah, Nurul Huda Abd Rahman and Mohd Tarmizi Ali (Universiti Teknologi Mara, Malaysia); Mohd Rozi Ahmad (Universiti Teknologi MARA & Textile Research Center, Malaysia); Muhammad Shakir Amin Nordin, Norsyahirah Izzati Zaidi (Universiti Teknologi MARA, Malaysia); Yoshihide Yamada (Malaysia-Japan International Institute of Technology, Universiti Teknologi Malaysia, Malaysia); Noor Hafizah Abdul Aziz (Universiti Teknologi MARA (UiTM) Malaysia)
09:20 - 09:40	Compact X-Band SIW Antenna with Reduced Size Using CSRR Incorporation...61 Achmad Munir (Institut Teknologi Bandung, Indonesia); Ade Saputra (Universitas Islam Negeri Sunan Gunung Djati, Indonesia); Hepi Ludyati (Politeknik Negeri Bandung (POLBAN), Indonesia)
09:40 - 10:00	Graphene Based Antenna Array for 5G Applications...65 Siti Nor Hafizah Sa'don and Mohd Haizal Jamaluddin (Wireless Communication Centre, Universiti Teknologi Malaysia, Malaysia); Muhammad Ramlee Kamarudin (Centre for Electronic Warfare Information and Cyber, Cranfield University, Shrivenham, United Kingdom); Fauzan Ahmad (MJIIT, Universiti Teknologi Malaysia, Malaysia)

A2: Antenna and Advance Materials (2 / 2)

Venue: Ballroom 1

Chairs: Sharul Kamal A. Rahim (Universiti Teknologi Malaysia, Malaysia), Haizal Jamaluddin (Universiti Teknologi Malaysia, Malaysia)

10:00 - 10:20	Flexible Antenna with HIS Based on PDMS Substrate for WBAN Applications (Invited)...69 Adel Ashyap (Universiti Tun Hussein Onn Malaysia, Malaysia); Samsul Haimi Dahlan (Universiti Tun Hussien Onn Malaysia, Malaysia); Zuhairiah Zainal Abidin, Huda A. Majid, Fauziahanim Che Seman, Xavier Ngu and Noran Azizan Cholan (Universiti Tun Hussein Onn Malaysia, Malaysia)
10:20 - 10:40	SIW Diplexer Integrated with Microstrip Antenna...73 Noor Hasimah Baba, Aziati Husna Awang, and Mohd Tarmizi Ali (Universiti Teknologi Mara, Malaysia); Hizamel M. Hizan (Telekom Malaysia (TM) Research & Development, Malaysia); Hamizan Yon (Universiti Teknologi MARA, Malaysia)
10:40 - 11:00	Accurate Simulation of Fabric and Analysis of Antenna Performance on Different Substrate Materials...77 Norsyahirah Izzati Zaidi, Mohd Tarmizi Ali, Nurul Huda Abd Rahman, Mohamad Faizul Yahya, Muhammad Shakir Amin Nordinand Aidil Azwan Sharatol Ahmad Shah (Universiti Teknologi MARA, Malaysia)
11:00 - 11:20	Design and Performance of Microstrip Patch Antenna for Implantable Biomedical Applications...81 Kamilia Kamardin (Universiti Teknologi Malaysia, Malaysia); Khamis Ali (International Islamic University, Malaysia); Izni Husna Idris and Muhaimin Mokhtar (Universiti Teknologi Malaysia, Malaysia); Nurul Huda Abd Rahman (Universiti Teknologi MARA, Malaysia); Yoshihide Yamada (Malaysia-Japan International Institute of Technology, Universiti Teknologi Malaysia, Malaysia)
11:20 - 11:40	Multiband Minkowski Fractal Patch Antenna with Rhombic SRR for Wireless LAN and WiMAX Applications...85 Nornikman Hassan, Badrul Hisham Ahmad, Zahriladha Zakaria and Nes Ramlee (Universiti Teknikal Malaysia Melaka, Malaysia); Mohamad Zoinol Abidin Bin Abd Aziz (Universiti Teknikal Malaysia Melaka & Hang Tuah Jaya, Malaysia); Mohd Khairy Ismail (Universiti Teknikal Malaysia Melaka, Malaysia)
11:40 – 12:00	Experimental Approach of Resonant Frequency Lowering Using ADM for Microstrip Circular Patch Antenna...89 Hepi Ludyati, Ibni Inggrianti, Ika Kartika (Politeknik Negeri Bandung, Indonesia); Achmad Munir (Institut Teknologi Bandung, Indonesia)
12:00 – 12:20	2.45 GHz Patch Antenna Based on Thermoplastic Polymer Substrates...93 Elfarizanis Baharudin, Fauziahanim Che Seman, Nurul Hanani Manab (Universiti TUn Hussien Onn MaLaysia, Malaysia); Alyani Ismail (Universiti Putra Malaysia, Malaysia)
12:40- 13:00	Design of Dual Band Flexible CPW Fed Antenna Based on Basalt Fiber Composite..97 Liang Yun Ying, Sharul Kamal Abdul Rahim, Amirjan Nawabjan and Lay Hwa Tan (Universiti Teknologi Malaysia, Malaysia)

Wednesday, December 19 08:00 - 13:00

B2: Measurement, Sensors & Electromagnetic Modeling (1 / 2)

Venue: Ballroom 2

Chairs: Asrulnizam Abd Manaf (Universiti Sains Malaysia, Malaysia), Syaiful Redzwan Mohd Shah (Uppsala University, Sweden)

08:00 - 08:20	A Wearable, Low-cost Hand Tremor Sensor for Detecting Hypoglycemic Events in Diabetic Patients...182 Hasan Abbas (Texas A&M University at Qatar); Karim Zahed (Texas A&M University, USA); Lejla Alic (Texas A&M University at Qatar, Qatar); Yibo Zhu, Farzan Sasangohar, Ranjana Mehta and Mark Lawley (Texas A&M University, USA); Qammer H Abbasi (University of Glasgow, United Kingdom (Great Britain)); Khalid A. Qaraqe (Texas A&M University at Qatar, USA)
08:20 - 08:40	Microwave Velocimeter Based on Cross-Correlation for Dual-Phase Flows...185 Wesam Taha and Andri Haryono (Khalifa University of Science and Technology, United Arab Emirates); Mohammed Saif ur Rahman (Khalifa University-The Petroleum Institute, United Arab Emirates); Mohamed A Abou-Khousa (Khalifa University of Science and Technology & Petroleum Institute, United Arab Emirates)
08:40 - 09:00	Double Band-Pass Birdcage RF Coil for Dual Elements NMR Imaging at 4.7T MRI System...189 Chang Min Ahn (Kyungpook National University, Korea); Sheikh Faisal Ahmad (Kyungpook National University & Institute of Advance Convergence Technology, Korea); Young Cheol Kim and Hyun Deok Kim (Kyungpook National University, Korea)
09:00 - 09:20	Electromagnetic 3D Model of Oral Cavity with Dental Excitation...193 Lutfi Albasha, Amer Zakaria, Abdelrahman Mostafa and Mostafa Moussa (American University of Sharjah, United Arab Emirates)
09:20 - 09:40	Impact of Blood Vessels on Data Packet Transmission Through the Fat Channel...196 Noor Badariah Asan (Uppsala University, Sweden & FKEKK, Universiti Teknikal Malaysia Melaka, Malaysia); Emadeldeen Hassan (Umeå University, Sweden & Menoufia University, Egypt); Syaiful Redzwan Mohd Shah and Jacob Velandar (Uppsala University, Sweden); Thiemo Voigt (Swedish Institute of Computer Science & Uppsala University, Sweden); Robin Augustine (Uppsala University, Sweden)
09:40 - 10:00	A Demonstration of the Near-Field Imaging Modes Using UHF Imaging Probe...199 Zubair Akhter (Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates); Mohamed A Abou-Khousa (Khalifa University of Science and Technology & Petroleum Institute, United Arab Emirates)

B2: Measurement, Sensors & Electromagnetic Modeling (2 / 2)

Venue: Ballroom 2

Chairs: Asrulnizam Abd Manaf (Universiti Sains Malaysia, Malaysia), Syaiful Redzwan Mohd Shah (Uppsala University, Sweden)

10:20 - 10:40	Implementation Polydimethylsiloxane Based Stretchable Conductive Ink for Printable-Stretchable Electronic Devices Towards Heterogeneous Integration System...203 Asrulnizam Abd Manaf (Universiti Sains Malaysia, Malaysia)
10:40 - 11:00	The Simulation of Single Photon and Applied to the Design of Quantum Antenna..207 Xiaoguang Chen and Qiu Penghui (Fudan University, P.R. China)
11:00 - 11:20	Detection of Pressure and Heat in a Compressive Orthotic for Diabetes Prevention..211 Anqi Mao (Queen's University, Canada); Adnan Zahid (University of Glasgow, United Kingdom (Great Britain)); Masood Ur Rehman (University of Essex, United Kingdom (Great Britain)); Muhammad Ali Imran and Qammer H Abbasi (University of Glasgow, United Kingdom (Great Britain))
11:20 - 11:40	Assessment of Signal Transmission Using Microwave Sensors for Health Monitoring Applications...215 Syaiful Redzwan Mohd Shah and Jacob Velandar (Uppsala University, Sweden); Noor Badariah Asan (Uppsala University, Sweden & FKEKK, Universiti Teknikal Malaysia Melaka, Malaysia); Mauricio D Perez (Uppsala University, Sweden & National Technological University, Argentina); Robin Augustine (Uppsala University, Sweden)
11:40 – 12:00	Inspection of Non-Metallic Pipes Using Microwave NDT...219 Andri Haryono (Khalifa University of Science and Technology, United Arab Emirates); Mohammed Saif ur Rahman (Khalifa University-The Petroleum Institute, United Arab Emirates); Mohamed A Abou-Khousa (Khalifa University of Science and Technology & Petroleum Institute, United Arab Emirates)
12:00 – 12:20	Numerical Calculation Error of Variational Method with Dielectric Measurement Using a Coaxial-probe...223 Kouji Shibata and Masaki Kobayashi (Hachinohe Institute of Technology, Japan)
12:20 – 12:40	Prediction of Dielectric Properties of Cement-Graphite Mixture Using Neural Network Models...227 See Khee Yee (Universiti Tun Hussein Onn Malaysia & Lecturer, Malaysia)
12:40- 13:00	Spurious Power Detection Using Mobile Sensors for Spectrum-Sharing...231 Nobuo Suzuki and Tatsuya Yoshioka (Advanced Telecommunications Research Institute International, Japan); Toshiyuki Maeyama (Takushoku University, Japan)

Wednesday, December 19, 08:00 - 10:00

C2: Industry Special Session

Venue: Room 1

Chair: Azah Syafiah Mohd Marzuki (TM R&D Sdn Bhd, Malaysia)

08:00 - 08:20	NB-IoT: The Potentials in the Connected World...N/A Azah Syafiah Mohd Marzuki (TM R&D Sdn Bhd, Malaysia); Chun Yeow Yeoh (Telekom Reseach & Development Sdn. Bhd., Malaysia); Khairul Rahim Khairudin Khairul Rahim (TM Berhad, Malaysia)
08:20 - 08:40	Recent Antenna Development of Automotive Millimeter-wave Radar Systems..N/A Kunio Sakakibara (Nagoya Institute of Technology, Japan)
08:40 - 09:00	Performing Standing Wave Measurement with Planar Transmission Line - An Alternative Approach to Teach Electromagnetic Wave Propagation Theory...N/A Fabian Wai-Lee Kung (Malaysia Multimedia University, Malaysia); Wai-Heng Choo (DreamCatcher Consulting Sdn Bhd, Malaysia)
09:00 - 09:20	Performance Verification of LTE Band 5 Repeater with Self-Interference Cancellation Module...N/A Azah Syafiah Mohd Marzuki (TM R&D Sdn Bhd, Malaysia); Ahmad Samingan (Telekom Research & Development, Malaysia); Suhandi Bujang (Telekom R&D SB, Malaysia); Azlan Bin Sulaiman (TMR&D & Telekom Research & Development, Malaysia); Mohd Fadzil Amiruddin (TMR&D & TM Research & Development, Malaysia); Ishak Suleiman (TM Research and Development Sdn. Bhd., Malaysia)
09:20 - 09:40	Simulia 3DEXPERIENCE Simulation Portfolio...N/A Lik Suong Ding (Universiti Tun Hussein Onn Malaysia, Malaysia)
09:40 – 10:00	Overview of 5G Base Station Field Testing and Techniques...N/A Jun Jie Low (Anritsu, Singapore)

Wednesday, December 19 10:20 - 12:40

D2: Computational Methods for Radar Technologies and Satellite Applications

Venue: Room 1

Chairs: Nurul Hazlina Noordin (Universiti Malaysia Pahang, Malaysia), Idnin Pasya (University Teknologi MARA, Malaysia)

10:20 - 10:40	An Enhanced Simulated Kalman Filter Algorithm and Its Application in Adaptive Beamforming (Invited)...321 Nurul Hazlina Noordin, Kelvin Lazarus, Zuwairie Ibrahim and Nurulfadzilah Hassan (Universiti Malaysia Pahang, Malaysia)
10:40 - 11:00	Theoretical Accuracy Analysis of a 4-Beam Speed-Over-Ground Radar on Uneven Surface...325 Khairul Khaizi Mohd Shariff (Faculty of Electrical Engineering, Universiti Teknologi MARA, Malaysia); Idnin Pasya (University Teknologi MARA, Malaysia); Zaiki Awang (Universiti Teknologi MARA, Malaysia); Syed Abdul Mutalib Al Junid (Faculty of Electrical Engineering, UiTM Shah Alam, Malaysia)
11:00 - 11:20	Performance of MIMO FMCW Radar in Detecting Small Vessels...329 Suraya Zainuddin (Universiti Teknologi MARA & Universiti Teknikal Malaysia Melaka, Malaysia); Idnin Pasya (University Teknologi MARA, Malaysia); Nur Emileen Abd Rashid (Universiti Teknologi MARA, Malaysia); Raja Syamsul Azmir Raja Abdullah (University Putra Malaysia, Malaysia); Abdul Rahman Abdullah (Araken Sdn. Bhd., Malaysia)
11:20 - 11:40	Determination of the Phase Center of Sensing Radars Based on Elliptic Phase-Contour Fitting Method...333 Pei-Yu Lyu, Chung-Hao Zhang and Sheng-Fuh Chang (National Chung Cheng University, Taiwan); Shih-Cheng Lin (National Chiayi University, Taiwan); Chia-Chan Chang (National Chung-Cheng University, Taiwan)
11:40 – 12:00	Flexible Linear-to-Circular Polarizing Surface for S-Band CubeSat Based on Dodecagonal Ring...337 Hidayath Mirza (Advanced Communication Engineering Centre (ACE) CoE, UniMap & Jazan University); Ping Jack Soh and Toufiq Md Hossain (Advanced Communication Engineering Centre (ACE) CoE, UniMap); Rais Ahmed Sheikh (Advanced Communication Engineering Centre (ACE) CoE, UniMap & Jazan University); Mohd Jamlos and Azremi Abdullah Al-Hadi (Advanced Communication Engineering Centre (ACE) CoE, UniMap)
12:00 – 12:20	UWB Transparent THz Antenna for Medical Imaging and Satellite Communication Applications...341 Tale Saeidi, Idris bin Ismail and Peng Wen Wong (Universiti Teknologi PETRONAS, Malaysia); Adam Alhawari (Najran University, Saudi Arabia)
12:20 – 12:40	Vertical Array of Orthogonal Circular Polarised Quadrifilar Helix Antenna for Satellite MIMO System...345 Mohd Fais Mansor (Universiti Kebangsaan Malaysia, Malaysia); Tim Brown and Barry Evans (University of Surrey, United Kingdom (Great Britain))

Wednesday, December 19, 14:00 - 17:40

A3: Low Profile and Antennas Arrays

Venue: Ballroom 1

Chairs: Evizal Abdul Kadir (Universitas Islam Riau, Indonesia), Eng Hock Lim (Faculty of Engineering and Science, UTAR, Malaysia)

14:00 - 14:20	Compact Z-Slotted Patch Antenna for UHF Metal-Mountable Tag (Invited)...100 Yaw Hua Niew, Eng Hock Lim, Kim Yee Lee and Fwee Leong Bong and Boon Kuan Chung (UTAR, Malaysia)
14:20 - 14:40	Radiated Electromagnetic Bad Gap Antenna for ISM Band in Medical Application..103 Ida Maria Mohd Yusoff (Politeknik Sultan Salahuddin Abdul Aziz Shah, Malaysia); Norhana Mat Salleh (Universiti Teknologi MARA, Malaysia); Ahmad Azlan Ab Aziz (Politeknik Sultan Salahuddin Abdul Aziz Shah, Malaysia); Robiatun Adayiah Awang, Mohd Tarmizi Ali Ali (Universiti Teknologi Mara, Malaysia)
14:40 - 15:00	Advances in Passive UHF RFID Tag Antenna Designs for Challenging Environment Surfaces...N/A Jun Ouyang, Abubakar Sharif, and Yi Yan (University of Electronic Science and Technology of China, P.R. China)
15:00 - 15:20	An Electrically Small Multiband Antenna for USB Dongle Antenna Application...111 Muhsin Ali (Comsats University, Abbottabad, Pakistan); Azremi Abdullah Al-Hadi (University Malaysia Perlis, Malaysia); Jalil Kazim (Comsats University, Abbottabad, Pakistan); Rizwan Khan (Universiti Malaysia Perlis, Malaysia); Owais Owais (CIIT, Pakistan); Ping Jack Soh (Universiti Malaysia Perlis (UNIMAP) & Katholieke Universiteit Leuven, Malaysia)
15:20 - 15:40	Electronically Scanned Phased Array Antenna Design and Implementation...115 Hazem Banna (Higher Institute of Engineering and Technology, New Damietta, Egypt); Khaled Hassab-Allah and Ahmed Abd-Allatif (Akhbar Alyoum Academy, Egypt)

16:00 - 16:20	Reconfigurable MIMO Antenna for Wireless Communication Based on Arduino Microcontroller (Invited)...119 Evizal Abdul Kadir (UIR, Indonesia); Sharul Kamal A. Rahim (UTM, Malaysia); Sri Listia Rosa (Universitas Islam Riau, Indonesia); Hitoshi Irie (Chiba University, Japan); Yudhi Arta (UIR, Indonesia)
16:20 - 16:40	A Balanced Feed Triple Frequency Patch Loaded Printed Dipole Antenna for WiMAX/WLAN Applications...123 Sayan Sarkar, Amartya Banerjee and Bhaskar Gupta (Jadavpur University, India)
16:40 - 17:00	Comparison Between 2 3D-Printed 2X2 Horn Antenna Arrays at 12.5GHz with Different Feeding Structures...127 Maha El Feshawy (German University in Cairo - Home, Egypt); Hany F Hammad (German University Cairo, Egypt)
17:00 - 17:20	Multiple Bands of Antenna Design Based on Slits Configuration...131 Fwen Hoon Wee and Siti Zuraidah Ibrahim, Muzammil Jusoh (Universiti Malaysia Perlis, Malaysia); Been Seok Yew (Universiti Sultan Zainal Abidin & Faculty of Innovative Design and Technology (FRIT), Malaysia); Lee Yeng Seng (University Malaysia Perlis, Malaysia)
17:20 - 17:40	Small-Size Modified Meander Line Antenna for Dual-Band (433.92MHz and 2.45GHz) Operation...135 Sung Woo Choi, Sheikh Faisal Ahmad, Ick Chang Choi, Hyun Deok Kim (Kyungpook National University, Korea)

Wednesday, December 19, 14:00 - 17:40

B3: Antenna, Dielectric Resonators and Coupling Structures

Venue: Ballroom 2

Chairs: Md. Tarikul Islam (Universiti Kebangsaan Malaysia, Malaysia), Badrul Hisham Ahmad (Universiti Teknikal Malaysia Melaka, Malaysia),

14:00 - 14:20	Experimental Verification Integrated Directly and Indirectly LED with Patch Antenna...235 Suhaila Subahir, Aziati Husna Awang and Hamizan Yon (Universiti Teknologi MARA, Malaysia); Siti Norhidayah Kamarudin (UITM, Malaysia)
14:20 - 14:40	Dual Band Rectangular Dielectric Resonator Antenna for Wireless Communication..239 Robiatun Adayiah Awang (MARA University of Technology, Malaysia); Hamizan Yon (Universiti Teknologi MARA, Malaysia); Muhamad Aimannuddin Hasan Ashaari and Muhamad Shahrul Shafiq Hassan (Universiti Teknologi MARA, Malaysia)
14:40 - 15:00	Microstrip Patch Antenna and Three-stage Cockcroft-Walton Rectenna for Wi-Fi Energy Harvesting...242 Pei Kee Chong, Lillian Olule and Gnanam Gnanagurunathan (The University of Nottingham Malaysia Campus, Malaysia)
15:00 - 15:20	Dual Band Circularly Polarized Dielectric Resonator Antenna Using DSWPD with Phase Shifter for IRNSS...246 Pankaj Chaudhary (DA-IICT, India); Deepak Ghodgaonkar (DAIICT, India); Sanjeev Gupta (DA-IICT, India); Abhishek Shukla (SAC, ISRO, India)
15:20 - 15:40	Perforated Dielectric Resonator Antenna Operating on Higher Order Mode...250 Irfan Ali and Mohd Haizal Jamaluddin (Universiti Teknologi Malaysia, Malaysia); Muhammad Ramlee Kamarudin (Cranfield University, United Kingdom); Abinash Gaya, Raghuraman Selvaraju and Muhammad Hashim Dahri (University Technology Malaysia, Malaysia)
16:00 - 16:20	Design of Wideband Dielectric Resonator Antenna with ApertureCoupled Technique for 5G Applications...254 Abinash Gaya and Mohd Haizal Jamaluddin (Universiti Teknologi Malaysia, Malaysia); Muhammad Ramlee Kamarudin (Cranfield University, United Kingdom (Great Britain)); Irfan Ali (Universiti Teknologi Malaysia, Malaysia)
16:20 - 16:40	A Wide Band Dielectric Resonator Antenna with a C Shaped Slot Aperture for 5G Applications...258 Abinash Gaya and Mohd Haizal Jamaluddin (Universiti Teknologi Malaysia, Malaysia); Muhammad Ramlee Kamarudin (Cranfield University, United Kingdom (Great Britain)); Irfan Ali (Universiti Teknologi Malaysia, Malaysia)
16:40 - 17:00	Verification of Lens Antenna Shaping Based on Refraction Angles...262 Farizah Ansarudin (Universiti Kebangsaan Malaysia, Malaysia); Tharek Abdul Rahman (Wireless Communication Centre, Universiti Teknologi Malaysia, Malaysia); Yoshihide Yamada (Malaysia-Japan International Institute of Technology, Universiti Teknologi Malaysia, Malaysia)
17:00 - 17:20	The Design of Quarter-Wave EBG Antenna...266 Norhana Mat Salleh, Ida Maria Mohd Yusoff and Ahmad Azlan Ab Aziz (Politeknik Sultan Salahuddin Abdul Aziz Shah, Malaysia); Mohd Tarmizi Ali (UiTM, Malaysia)
17:20 - 17:40	A Modified Side Feeding Directional Antenna for Microwave Imaging Applications...270 Md. Tarikul Islam, Md Samsuzzaman (UKM, Malaysia & Patuakhali Science and Technology University, Bangladesh); Kamarulzaman Mat (UKM, Malaysia)

Wednesday, December 19, 14:00 - 15:00

C3: Women in Microwaves Special Session

Venue: Room 1

Chair: Fauziahanim Che Seman (Universiti Tun Hussein Onn Malaysia, Malaysia)

14:00 - 14:20	Love What You Do - Tips to Develop Your Career...N/A Azian Wahab (National Instruments, Malaysia)
14:20 - 14:40	Women ENGINEERS Leadership in the Industry 4.0...N/A Widad Ismail (Engineering Campus, Universiti Sains Malaysia, Malaysia)
14:40 - 15:00	Climbing the Corporate Ladder: Lessons I Learned...N/A Sarguna Karuppiah (Motorola Solutions, Malaysia)

Wednesday, December 19 16:00 - 17:40

D3: Passive Devices and Filter Design

Venue: Room 1

Chairs: Sharul Kamal Abdul Rahim (Universiti Teknologi Malaysia, Malaysia), Peng Wen Wong (Universiti Teknologi PETRONAS, Malaysia)

16:00 - 16:20	A Sustainable and Fast Approach to Filter Design for 5G Implementation...349 Peng Wen Wong (Universiti Teknologi PETRONAS, Malaysia)
16:20 - 16:40	Single Band RF Energy Harvesting at 5.8 GHz Using EBG Unit Cells...352 Lillian Olule, Gnanam Gnanagurunathan and Nandha Kumar Thulasiraman (The University of Nottingham Malaysia Campus, Malaysia); Baskaran Kasi (Universiti Infrastruktur Kuala Lumpur, Malaysia)
16:40 - 17:00	Phase Characteristics of Multi-Layer Crossed-dipole FSS in Salisbury Screen Absorber...356 Fauziahanim Che Seman (Universiti Tun Hussein Onn Malaysia, Malaysia); Saleh Mohamed (UTHM); Farhana Ahmad Poad (Universiti Tun Hussein Onn Malaysia & UTHM, Malaysia); Wai Yan Yong (University of Twente, The Netherlands); Sharul Kamal A. Rahim (Universiti Teknologi Malaysia, Malaysia); Elfarizanis Baharudin (Universiti Tun Hussein Onn Malaysia & Universiti Putra Malaysia, Malaysia); Shaharil Mohd Shah (Universiti Tun Hussein Onn Malaysia, Malaysia)
17:00 - 17:20	Permittivity and Permeability Measurements of CISR Sheets for Microwave Absorber Applications...359 Rahul Vashisth (Dhirubhai Ambani Institute of Information and Communication Technology, India); Deepak Ghodgaonkar (DAIICT, India); Sanjeev Gupta (Dhirubhai Ambani Institute of Information and Communication Technology, India)
17:20 - 17:40	Tunable Rectangular Ring Resonator Filter with Embedded Shunt Barium Strontium Titanate Capacitors...363 Nurul Osman (Universiti Putra Malaysia, Malaysia)