



2021 ASIA PACIFIC MICROWAVE CONFERENCE

| 28th of Nov. - 1st of Dec., 2021 | Brisbane, Australia | www.apmc2021.org

Update: 25/11/2021

2021 Asia-Pacific Microwave Conference (APMC) Program

Time Zone: Brisbane, QLD

Brisbane time	Sunday, November 28	Monday, November 29	Tuesday, November 30	Wednesday, December 1
10:00 - 11:00	Tutorial T1: <i>Microwave Circuits and Antennas Using Cutting-Edge Additively Manufactured Electronics (AME) Technology: From Design to Test</i>	Keynote 1: <i>Reflections on a microwave career in a digital world</i>	Keynote 2: <i>RF CMOS over the last 25 years</i>	Keynote 3: <i>Cross-Band PIM Generation in Collocated Cellular Base Stations</i>
11:00 - 11:15				
11:15 - 12:35	Tutorial T2: <i>Microwaves for Materials, Wastes and Agriculture</i> Tutorial T3: <i>Optimization of antennas with constraints using model-based optimization</i>	S1-01: <i>Low-Noise Amplifiers</i> S1-02: <i>Antennas for 5G Applications</i> S1-03: <i>Reflectarrays and Transmittarrays</i> S1-SS1A: <i>Recent Advances in Microwave, Millimetre-Wave and Terahertz Technologies in Australia (Part 1)</i>	S2-01: <i>CMOS Power Amplifiers</i> S2-02: <i>Resonator and Cavity Antennas</i> S2-03: <i>Mm-Wave Communications</i> S2-SS4: <i>Recent Advances in Electromagnetic Medical Imaging and Microwave Biomedical Devices</i>	S3-01: <i>RCS reduction and Cloaking</i> S3-02: <i>Metasurfaces and Metastructures</i> S3-03: <i>Filters I</i> S3-04: <i>Horns and Reflector Antennas</i> S3-SS6: <i>Wearable Antennas, Sensors and Material Characterisation</i>

	<i>algorithms</i>			<i>Techniques</i>
12:35 - 12:45				
12:45 - 14:05		<p>S1-04: <i>Antennas for Radar and Imaging Applications</i></p> <p>S1-05: <i>Biomedical applications and flexible antennas</i></p> <p>S1-06: <i>Manufacture and Integration</i></p> <p>S1-07: <i>Device Modelling</i></p> <p>S1-SS1B: <i>Recent Advances in Microwave, Millimetre-Wave and Terahertz Technologies in Australia (Part 2)</i></p>	<p>S2-04: <i>VCOs, Mixers and Switches</i></p> <p>S2-05: <i>Reconfigurable Antennas</i></p> <p>S2-06: <i>Metamaterials and EBG structures</i></p> <p>S2-07: <i>Transmission Lines and Transitions</i></p>	<p>S_WiM: <i>Women in Microwaves</i></p> <p>S3-05: <i>Power Amplifiers and Transmitter Systems</i></p> <p>S3-06: <i>Filters II</i></p> <p>S3-07: <i>Metasurfaces and FSS Antennas</i></p> <p>S3-08: <i>Mm-wave and Terahertz Radar and Imaging</i></p>
14:05 - 14:20				
14:20 - 14:40	<p>Tutorial T4: <i>Resonant measurement methods of dielectric and ferromagnetic materials in microwave and mm-wave spectra</i></p>	<p>Industrial_1: <i>EMSolutions</i></p>	<p>Industrial_2: <i>EMVision</i></p>	<p>Industrial_3: <i>LEAP Australia</i></p>
14:40 - 15:00	<p>Tutorial T5: <i>5G RF Front End Design</i></p>			
15:00 - 16:30	<p><i>Techniques for Cellular Applications</i></p> <p>Tutorial T6: <i>Antennas & Propagation Standards</i></p>	<p>S1-08: <i>GaN/GaAs Power Amplifiers</i></p> <p>S1-09: <i>Localization and DoA</i></p> <p>S1-10: <i>Power Dividers and Diplexers</i></p> <p>S1-SS2: <i>Advanced Multifunctional Microwave/Millimeter-Wave Components</i></p>	<p>S2-08: <i>Modelling of Devices and Circuits</i></p> <p>S2-09: <i>Rectifiers/DACs /Mixers</i></p> <p>S2-10: <i>Circularly Polarized and Dual-Polarized Antennas</i></p>	<p>S-Memorial: <i>Memorial Session for Prof. Marek Bialkowski</i></p> <p>S3-09: <i>Wireless Power Transfer</i></p> <p>S3-10: <i>Measurement Techniques</i></p> <p>S3-11:</p>

16:30 - 16:40		S1-SS3: <i>3D Printed/Additively Manufactured Microwave, Millimetre-wave and Terahertz Circuits and Antennas</i>	S2-11: <i>Microwaves in Agriculture and Environment</i> S2-SS5: <i>Advanced Terahertz Technologies for Next-Generation Communications and Sensing</i>	<i>Microwave Systems</i> S3-SS7: <i>Advanced Microwave Filtering Components and Circuits</i>
16:40 - 17:00				
17:00 - 18:30	<i>Opening Ceremony</i>	S-I1: <i>EuMA Invited Session</i> S-I2: <i>Microwaves in Asia-Pacific</i>	S-I3: <i>Recent Advances in Active Devices and Systems</i> S-I4: <i>Recent Advances in Passive Devices, Antennas and Systems</i>	S-I5: <i>Research Translation</i> S-I6: <i>Microwaves in Australia</i>
18:30 - 19:00				<i>Awards and Closing Ceremony</i>
19:00 - 19:30				

Sunday, November 28

Sunday, November 28 10:00 - 12:35

Tutorial T1: Microwave Circuits and Antennas Using Cutting-Edge Additively Manufactured Electronics (AME) Technology: From Design to Test

Jaim Nulman, Yang Yang

Room: Boardroom 1

Chair: Yang Yang

Tutorial T2: Microwaves for Materials, Wastes and Agriculture

Mohan Jacob, Graham Brodie

Room: Boardroom 2

Chair: Yang Yang

Tutorial T3: Optimization of antennas with constraints using model-based optimization algorithms

Maria Kovaleva, Karu Esselle

Room: Boardroom 3

Chair: Yang Yang

Sunday, November 28 14:05 - 16:30

Tutorial T4: Resonant measurement methods of dielectric and ferromagnetic materials in microwave and mm-wave spectra

Jerzy Krupka, Bartlomiej Salski

Room: Boardroom 1

Chair: Yang Yang

Tutorial T5: 5G RF Front End Design Techniques for Cellular Applications

Florinel Balteanu, Venkata Vanukuru

Room: Boardroom 2

Tutorial T6: Antennas & Propagation Standards

Vikass Monebhurrin, Lars Jacob Foged, Vince Rodriguez

Room: Boardroom 3

Chair: Yang Yang

Sunday, November 28 17:00 - 18:30

Opening Ceremony

Room: Auditorium

Chair: Konstanty S Bialkowski

Opening Addresses and Networking

Monday, November 29

Monday, November 29 10:00 - 11:00

Keynote 1: Reflections on a microwave career in a digital world

Dr. Rowan Gilmore

Room: Auditorium

Chair: Amin Abbosh

Monday, November 29 11:15 - 12:35

S1-01: Low-Noise Amplifiers

Room: Conference Hall 1

Chair: Yasar Gurbuz

11:15 *Characterization of Wideband Low-Noise Distributed Amplifiers in 0.15 Um Gallium Arsenide Process*

[Adnin Natasha](#), [Sudipta Chakraborty](#), [Simon Mahon](#), [Benny Wu](#), [Andrew Jones](#) and [Michael Heimlich](#)

11:35 *Design of a 1.8-mW K-Band Low Noise Amplifier With 19.3-dB Gain and 3.3-dB Noise Figure in 90-Nm CMOS*

[Kai Chun Chang](#), [Yunshan Wang](#) and [Huei Wang](#)

11:55 *A 21.5-50 GHz Low Noise Amplifier in 0.15- μ m GaAs pHEMT Process for Radio Astronomical Receiver System*

[Yu-Min Chen](#), [Yunshan Wang](#), [Chau-Ching Chiong](#) and [Huei Wang](#)

12:15 *LNA Designs for 5G Receiver Applications*

S1-02: Antennas for 5G Applications

Room: Boardroom 1

Chairs: N Nasimuddin, Nghia Nguyen-Trong

11:15 *Single-Feed Dual-Band Antenna With Large Frequency Ratio for 5G Wireless Terminals*

[Muhammad Ikram](#) and [Nghia Nguyen-Trong](#)

11:35 *Compact SRR-Based Dual-Polarized Antenna for 5G-NR Applications*

[Zilin Peng](#), [Zhan Wang](#) and [Yuandan Dong](#)

11:55 *Wideband Linear Frequency Scanning Antenna for 5G Millimeter Wave Applications*

[Wei Shuping](#), [N Nasimuddin](#) and [Arokiaswami Alphones](#)

12:15 *Design and Analysis of A Simple Miniaturized Fractal Antenna for 5G Ka-Band Applications*

[Wahaj Abbas Awan](#), [Mohammad Alibakhshikenari](#) and [Ernesto Limiti](#)

S1-03: Reflectarrays and Transmittarrays

Room: Boardroom 2

Chair: Peiyuan Qin

11:15 *Design of Single-Layered Broadband Circularly Polarized Reflectarray*

[Long Jin](#), [Yao Sun](#) and [Zhibin He](#)

11:35 *Millimetre-Wave Multi-Beam Shaped Transmitarray With A Wide Beam Coverage*

[Lizhao Song](#), [Peiyuan Qin](#) and [Y. Jay Guo](#)

11:55 *Experimental Evaluation of Load-Modulating Channel Estimation for Tunable Reflectarray*

[Shun Sasaki](#)

12:15 *A High Gain Dual-Polarization Reflectarray Antenna Design Using Modified Mushroom Elements*

[Luohao Liu](#), [Fan Yang](#), [Shenheng Xu](#) and [Maokun Li](#)

S1-SS1A: Recent Advances in Microwave, Millimetre-Wave and Terahertz Technologies in Australia (Part 1)

Room: Conference Hall 2

Chairs: Sudipta Chakraborty, Xi Zhu

11:15 Load-Pull Measurement Technique for 94 GHz GaAs Amplifiers Based on Discrete Sampling With Compact Gamma Matching Networks

[Leigh E Milner](#) and [Michael Heimlich](#)

11:35 Design Progress and Technology Maturity: Trends in Compound Semiconductor MMICs

[Simon Mahon](#)

11:55 A 77 GHz Power Amplifier for Low Cost Radar Transmitters in a 55-Nm CMOS Technology

[Viet Hoang Le](#)

12:15 A W-Band Driver Amplifier in 0.1 μm pHEMT Gallium Arsenide Process

[Sudipta Chakraborty](#), [Tran Van Dung](#), [Jakov Mihaljevic](#), [Simon Mahon](#) and [Michael Heimlich](#)

Monday, November 29 12:45 - 14:05

S1-04: Antennas for Radar and Imaging Applications

Room: Conference Hall 1

Chair: Morteza Shahpari

12:45 UWB Antipodal Vivaldi Antenna With Metamaterial Slabs and Dielectric Enclosure for Microwave to Millimeter Wave Imaging Applications

[Athul O Asok](#) and [Sukomal Dey](#)

13:05 A Centrosymmetric Triple-Tail Bow-Tie Antenna for Ground Penetration Radar

[Yue Liu](#) and [Xue Jun Li](#)

13:25 An Ultra-Wideband Resistively Loaded Modified Dipole for Ground Penetrating Radar

[Yan Deng](#), [Sheng Gao](#), [Shun Li Li](#), [Hongxin Zhao](#) and [Xiaoxing Yin](#)

13:45 Location and Angular Velocity Detection Using a Circular Frequency Diverse Array Radar

[Zhehao Yu](#), [Chong Han](#), [Yingtao Zou](#) and [Xuyang Lu](#)

S1-05: Biomedical applications and flexible antennas

Room: Boardroom 1

Chair: Mélusine Pigeon

12:45 Microwave Doppler Radar for Monitoring of Vital Sign and Rotational Movement

[Shubhadip Paul](#) and [Mohammad Jaleel Akhtar](#)

13:05 Dual-Band Dual-Mode Wearable Textile Antennas for On-Body and Off-Body Communications

[Quoc Hung Dang](#), [Shengjian Jammy Chen](#), [Baoqi Zhu](#) and [Christophe Fumeaux](#)

13:25 A Poly-Di-Methyl-Siloxane Based Conformal Ultra-Wideband Antenna With Additional GSM Band

[Wahaj Abbas Awan](#), [Mohammad Alibakhshikenari](#) and [Ernesto Limiti](#)

13:45 The Effects of Using Ferromagnetic Core and Shield on Deep TMS System

[Rawan Abu Yosef](#) and [Ahmed Toaha Mobashsher](#)

S1-06: Manufacture and Integration

Room: Boardroom 2

Chairs: Thomas Baum, Robert Minasian

12:45 28GHz-Band 2x2 Patch Antenna Module Vertically Integrated With a Compact 2-D BFN in Broadside Coupled Stripline Structure

[Jean Temga](#), [Taiki Machii](#), [Takashi Shiba](#) and [Noriharu Suematsu](#)

13:05 Crosstalk Reduction in Silicon-On-Insulator Waveguides for Dense Integration

[Shijie Song](#), [Chujun Wu](#), [Xiaoke Yi](#) and [Robert Minasian](#)

13:25 Mems Fabrication Process Using Lithography and Stacking Techniques

[Wattana Pongtham](#)

13:45 Investigation of a Composite Embedded RF Passive Devices

[Greg Beziuk](#), [Thomas Baum](#), [Kelvin Nicholson](#) and [Kamran Ghorbani](#)

S1-07: Device Modelling

Room: Boardroom 3

Chair: Sourabh Khandelwal

12:45 L-Bot: A Physically Motivated Deep Learning Based Inductor Modeling Tool

[Uttung Surange](#) and [Sourabh Khandelwal](#)

13:05 *An Adaptive Synthesis and Design Approach of Extracted-Pole Filters*

Minglei Rao, Ping Zhao and Luyu Zhao

13:25 *Modified Loss Mechanism of Mason Model for Bulk Acoustic Wave Resonators*

[Qingwen Li](#), Xiuping Li, Yuqiang Xie, Zheyang Cao and Jiarui Dong

13:45 *Accurate Power Loss Measurements of Aperture Tuning RF Switches on Board*

Valentyn Solomko, [Oguzhan Oezdamar](#), Johannes Rimmelspacher, Pablo Nascimento, Michael Muerke, Chul Seung Pyo, Robert Weigel and Amelie Hagelauer

S1-SS1B: Recent Advances in Microwave, Millimetre-Wave and Terahertz Technologies in Australia (Part 2)

Room: Conference Hall 2

Chairs: Sudipta Chakraborty, Xi Zhu

12:45 *GaN and GaAs HEMT Channel Conductance Model for Nonlinear Microwave and RF Applications*

[Anthony Parker](#)

13:05 *Design of Passive-Inspired Millimetre-Wave Integrated Devices in Low-Cost Bulk CMOS Technology*

Lisheng Chen, Lang Chen, Zeyu Ge, Roberto Gómez-García and Xi Zhu

13:25 *Terahertz Integrated Polarization Beam Splitter Based on Effective-Medium Waveguide*

[Weijie Gao](#), Christophe Fumeaux and [Withawat Withayachumnankul](#)

13:45 *Mutual Coupling in Arrays of Metamaterial Loaded Horns*

Trevor S. Bird and Maral Ansari

Monday, November 29 14:20 - 14:40

Industrial_1: EMSolutions

Room: Auditorium

Chair: Sasan Ahdi Rezaeieh

Monday, November 29 15:00 - 16:40

S1-08: GaN/GaAs Power Amplifiers

Room: Boardroom 1

Chairs: Ryo Ishikawa, Ernesto Limiti

15:00 A 4.5-GHz-Band Miniature Outphasing GaN HEMT MMIC Power Amplifier

[Ryo Ishikawa](#), [Yoichiro Takayama](#) and [Kazuhiko Honjo](#)

15:20 W-Band Coplanar Medium Power Amplifier

[Simon Mahon](#), [Daniel Sjöberg](#), [Jonas Hansryd](#) and [Michael Heimlich](#)

15:40 Novel Power Combining for a 5-18 GHz, 10-21 W, Non-Uniform Distributed Power Amplifier

[Simon Mahon](#), [Leigh E Milner](#), [Irfan Shahid](#) and [Michael Heimlich](#)

16:00 X-Band GaAs Stacked-FET Amplifier

[David Niven](#), [Simon Mahon](#) and [Michael Heimlich](#)

16:20 A High Performance In-Package Harmonic Terminated Class-J Doherty Power Amplifier for 3.5 GHz mMIMO Applications

[Maruf N Ahmed](#), [Joseph Staudinger](#), [Srinidhi Embar. R](#) and [Jennifer Kitchen](#)

S1-09: Localization and DoA

Room: Boardroom 2

Chair: Amin Darvazehban

15:00 Nature Scatterer Assisted Indoor NLoS Localization With a Single AP

[Yiwen Wang](#), [Zengshan Tian](#), [Mu Zhou](#) and [Ze Li](#)

15:20 A State Recognition Approach Based on Distribution Difference for Passive People Counting

[Min Chen](#), [Zengshan Tian](#), [Yue Jin](#) and [Mu Zhou](#)

15:40 Indoor Localization Based on Scatterers and Multipath Propagation

[Yang Yang](#), [Zengshan Tian](#), [Ze Li](#) and [Linxia Li](#)

16:00 A Phase-Based Indoor Localization Algorithm Using EKF for Passive RFID Tags

[LiangBo Xie](#), [Xixi Liu](#), [Zengshan Tian](#), [Yaqian Song](#), [Beibei Fan](#) and [Mu Zhou](#)

16:20 Device-Free Indoor Tracking Using CSI With Probability Data Association

[Zengshan Tian](#), [Chenglin Ye](#), [Yue Jin](#) and [Xuan Zuo](#)

S1-10: Power Dividers and Diplexers

Room: Boardroom 3

Chairs: Masayuki Fujita, Yi-Hsin Pang

15:00 *Three-Way Substrate-Integrated Waveguide Filtering Power Divider With In-Phase and Anti-Phase Outputs*

[Hong-Wen Qian](#) and Yi-Hsin Pang

15:20 *600-GHz-Band Frequency-Division Multiplexing Communication With Silicon Unclad Diplexer*

[Norihiro Shibata](#), Yuta Uemura, Yuma Kawamoto, Li Yi, Masayuki Fujita and Tadao Nagatsuma

15:40 *Design of Semi-Lumped-Element Power Divider With Arbitrary Three Matching Frequencies*

[Ayumu Tsuchiya](#), Tadashi Kawai and Akira Enokihara

16:00 *Design of a Four-Frequency Channel Power Division Multiplexer*

[Kuo-Lun Sun](#), Kai-Jie Xu and Pu-Hua Deng

16:20 *Group Delay Analysis Approach for Quasi-Reflectionless Power Divider With Flat Phase Difference*

[Girdhari Chaudhary](#), Daehan Lee and Yongchae Jeong

S1-SS2: Advanced Multifunctional Microwave/Millimeter-Wave Components

Room: Conference Hall 1

Chairs: Pin Wen, Kai-Da Xu

15:00 *High Selectivity Balanced-To-Unbalanced Filtering Power Divider With Stub-Loaded Dual-Mode Resonators*

[Pin Wen](#)

15:20 *Design of Millimeter-Wave Bandpass Filter Using Edge-Coupling Dual-Mode Resonator*

[Yiqun Liu](#) and Kai-Da Xu

15:40 *TE₂₀ Mode Differential Waveguide Directional Coupler and Wideband Balun by 3-D Printing*

[Patrick Chiu](#), King Yuk Chan, Sheng Huang and Rodica Ramer

16:00 *A Compact Filtering Antenna With High Selectivity and Simple Structure*

[Dongxi Yu](#), Wei Nie, Bo Zhang, Zhongqian Niu and Mu Zhou

16:20 *Ku-Band Ortho-Mode Transducer Supporting Three Modes and Integrated With Horn Antenna*

[Yunhao Fu](#), [King Yuk Chan](#) and [Rodica Ramer](#)

S1-SS3: 3D Printed/Additively Manufactured Microwave, Millimetre-wave and Terahertz Circuits and Antennas

Room: Conference Hall 2

Chairs: [King Yuk Chan](#), [Yang Yang](#)

15:00 RF Printed Circuit Partially Combined With the Inkjet-Printing Technology

[Yuta Sugiyama](#), [Hidenori Ishibashi](#), [Toru Takahashi](#) and [Yoshio Inasawa](#)

15:20 Rapid Prototyping of Ultrawideband Compact Resonant Cavity Antennas Using 3D Printing

[Touseef Hayat](#), [Muhammad Usman Afzal](#), [Foez Ahmed](#) and [Karu Esselle](#)

15:40 360° Beam-Steerable Pattern- and Frequency-Reconfigurable Antenna With 3D Printed Dielectric Lens

[Weijie Gao](#), [Shengjian Jammy Chen](#), [Withawat Withayachumnankul](#) and [Christophe Fumeaux](#)

16:00 Additively Manufactured Multi-Layer Bandpass Filter Based on Vertically Integrated Composite Right and Left Handed Resonator

[Mengze Li](#), [Yang Yang](#), [Francesca Iacopi](#) and [Jaim Nulman](#)

16:20 A 3D Printed H-Plane Horn Antenna With Size Reduction by Permittivity Control

[Sheng Huang](#), [King Yuk Chan](#) and [Rodica Ramer](#)

Monday, November 29 17:00 - 18:30

S-I1: EuMA Invited Session

Room: Conference Hall 1

Chair: [Kamran Ghorbani](#)

17:00 *Dynamic Behavior of Highly Rugged GaN Receivers*

Matthias Rudolph

17:30 *Stability Analysis and Efficient Simulation of Novel Circuits for Radar Systems, RFID, and Wireless Power Transfer*

Almudena Suarez

18:00 *Towards a Smart EM Environment - Perspectives, Recipes, and Future Trends*

Andrea Massa

S-I2: Microwaves in Asia-Pacific

Room: Conference Hall 2

Chair: Christophe Fumeaux

17:00 *Recent Advances in Neuro-TF for Fast Parameterized Modeling and Optimization*

Feng Feng

17:30 *Continuously Beam-Scanning Phased Arrays Using Low-Cost Phase Shifting Elements*

Huy Nam Chu, The Hop Hoang, Ji Kai-Jung and Tzyh-Ghuang Ma

18:00 *Multiport Antenna Systems for Microwave and mmWave Applications*

Shiban K Koul and Karthikeya GS

Tuesday, November 30

Tuesday, November 30 10:00 - 11:00

Keynote 2: RF CMOS over the last 25 years

Prof. Neil Weste

Room: Auditorium

Chair: Amin Abbosh

Tuesday, November 30 11:15 - 12:35

S2-01: CMOS Power Amplifiers

Room: Conference Hall 1

Chair: Mohammad Hashmi

11:15 A 44.3% Peak PAE 25-GHz Stacked-FET Linear Power Amplifier IC With a Varactor-Based Novel Adaptive Load Circuit in 45 nm CMOS SOI

[Tsuyoshi Sugiura](#), [Mengchu Fang](#) and [Toshihiko Yoshimasu](#)

11:35 A 30-To-70-GHz CMOS Amplifier for 300-GHz Heterodyne Receivers

[Shinichiro Fujimoto](#), [Ricky Smith](#), [Shuhei Amakawa](#), [Takeshi Yoshida](#) and [Minoru Fujishima](#)

11:55 A 3.5GHz CMOS Transceiver for Sub-6GHz and Mm-Wave Co-Existed 5G Communication Systems

[Jiawen Chen](#), [Shucong Mei](#), [Haoshen Zhu](#), [Liang Wu](#), [Quan Xue](#) and [Wenquan Che](#)

12:15 Gain Boosted D-Band CMOS Amplifier Using a Radial Stab for Source AC Grounding

[Taiki Machii](#), [Mizuki Motoyoshi](#), [Suguru Kameda](#) and [Noriharu Suematsu](#)

S2-02: Resonator and Cavity Antennas

Room: Boardroom 1

Chair: Hugo G Espinosa

11:15 A Wideband Differentially-Fed Higher-Order Mode Laminated Resonator Antenna With High Gain

[Yaowei Hou](#), [Zijian Shao](#), [Yao-ping Zhang](#) and [Junfa Mao](#)

11:35 A Wideband High-Gain Resonator Cavity Antenna With 2-Level Stepped Ground

[Peixing Li](#), [Tayyab Ali Khan](#) and [Alex Wong](#)

11:55 A Cavity-Backed Slot Antenna on Timber

[Mohamed Adel Ezzat Elqunawy Radwan](#), [Yana Salchak](#), [Noor Albadri](#), [Hugo G Espinosa](#) and [David V Thiel](#)

12:15 Analysis of Coaxial Probe Coupled Wideband Two-Layer Hemispherical Dielectric Resonator Antenna With an Air-Gap

[Mahesh Singh](#), [Tazeen Shaikh](#) and [Bratin Ghosh](#)

S2-03: Mm-Wave Communications

Room: Boardroom 2

Chair: Xiaolong You

11:15 Oriented Genetic Algorithm for Digital Predistortion Model Structure Optimization

[Wen Qiao](#), [Chengye Jiang](#), [Guichen Yang](#), [Lei Su](#) and [Falin Liu](#)

11:35 A Robust Algorithm for PAM4 Eye-Diagram Analysis

[Jeffrey Jargon](#) and [Jerome Cheron](#)

11:55 A Compact DC-To-Over-67-GHz LTCC BGA Package for 100-GBaud Communications Systems

[Hitoshi Wakita](#), [Munehiko Nagatani](#) and [Hiroyuki Takahashi](#)

12:15 Millimeter Wave RF Front-End in 5G MIMO Channel Emulator

[Mengyun Hu](#)

S2-SS4: Recent Advances in Electromagnetic Medical Imaging and Microwave Biomedical Devices

Room: Conference Hall 2

Chairs: [Sasan Ahdi Rezaeieh](#), [Abu Sadat Md. Sayem](#)

11:15 Wideband Body-Matched Loop-Dipole Composite Antenna for Electromagnetic Fatty Liver Detection Systems

[Amin Darvazehban](#) and [Sasan Ahdi Rezaeieh](#)

11:35 Advanced Materials and Manufacturing Technologies for the Development of Flexible and Transparent Antennas

[Abu Sadat Md. Sayem](#) and [Karu Esselle](#)

11:55 Big Data-Machine Learning Processing of Recorded Radiofrequency Physiological and Pathological Measurements to Predict the Progression of Alzheimer's Disease

[Rahmat Ullah](#), [Imran Saied](#) and [Tughrul Arslan](#)

12:15 A Multi-Feature Fusion Temporal Neural Network for Multi-Hand Gesture Recognition Using Millimeter-Wave Radar Sensor

[Dengke Yao](#), [Yong Wang](#), [Wei Nie](#), [LiangBo Xie](#), [Mu Zhou](#) and [Xiaobo Yang](#)

Tuesday, November 30 12:45 - 14:05

S2-04: VCOs, Mixers and Switches

Room: Conference Hall 1

Chair: [Nobuyuki Itoh](#)

12:45 An X- to Ka-Band Single-Pole-Double-Throw Switch With Good Power Handling Capability

[Yi-Fan Tsao](#), [Yuan Wang](#), [Chien-Ming Tsao](#), [Joachim Würfl](#) and [Heng-Tung Hsu](#)

13:05 *Design of a Q-Band Single-Balanced Passive Mixer in 0.15 Um GaN Technology*

[Nethini T Weerathunge](#), [Sudipta Chakraborty](#), [Simon Mahon](#), [Gerry McCulloch](#), [Andrew Jones](#) and [Michael Heimlich](#)

13:25 *A Study on High-Efficiency 24-GHz CMOS Voltage Control Oscillator*

[Yoshiki Hashimoto](#), [Nobuyuki Itoh](#), [Takayuki Morishita](#) and [Kiyotaka Komoku](#)

13:45 *A 201.8-dBc/Hz-FoMT Octave-Tuning-Range LC-VCO IC With a Self-Shifted Voltage-Controlled Novel Varactor in 45-Nm CMOS SOI*

[Mengchu Fang](#) and [Toshihiko Yoshimasu](#)

S2-05: Reconfigurable Antennas

Room: Boardroom 1

Chair: Kwok-keung (Michael) Cheng

12:45 *Compact, 14-Pattern-States, Reconfigurable Antenna Design and Characterization*

[Chung Yin Lau](#) and [Kwok-keung \(Michael\) Cheng](#)

13:05 *A Pattern Reconfigurable Antenna Array With a Broad Angular Coverage for 5G Millimeter-Wave Mobile Devices*

[Yu-Chen Lo](#), [Nai-Chen Liu](#), [Sung-Jung Wu](#) and [Jenn-Hwan Tarnq](#)

13:25 *Pattern-Reconfigurable 2-Element MIMO Antenna Design by Using Novel Switchable Decoupling and Matching Network*

[Chung Yin Lau](#) and [Kwok-keung \(Michael\) Cheng](#)

13:45 *Quad-Band Inverted-F Antenna System Tuned by Hybrid C-Tuner*

[Oguzhan Oezdamar](#), [Valentyn Solomko](#), [Robert Weigel](#) and [Amelie Hagelauer](#)

S2-06: Metamaterials and EBG structures

Room: Boardroom 2

Chair: Kimberley W. Eccleston

12:45 *Modelling of the Dielectric Resonator and Metal Strip Based Negative-Refractive-Index Lens*

[Kimberley W. Eccleston](#), [Yiwen Zhou](#), [Ian G Platt](#), [Adrian E.-C. Tan](#) and [Ian M Woodhead](#)

13:05 *A Compact Slow-Wave Filter With Double-Sided Selectivity and Wide Out-Of-Band Rejection*

[Arash Arsanjani](#), [Hossein Sarbandi Farahani](#), [Behrooz Rezaee](#), [Reinhard Teschl](#) and

Wolfgang Bosch

13:25 Equivalent Circuit Model of Nonreciprocal Composite Right/Left-Handed Coupled Line

[Takumu Ideguchi](#) and [Tetsuya Ueda](#)

13:45 Nonreciprocal CRLH Transmission Line Using Active Circuit-Loaded Ring Resonators

[Hidefumi Yasuda](#), [Tetsuya Ueda](#) and [Toshiro Kodera](#)

S2-07: Transmission Lines and Transitions

Room: Conference Hall 2

Chairs: Tsugumichi Shibata, Kazuo Tanaka

12:45 Particle Swarm Optimization of a Cascaded Multisection Line Impedance Matching Circuit

[Bojun Zheng](#), [Koki Nakamura](#) and [Tsugumichi Shibata](#)

13:05 Time-Domain Analysis and Design of GCPW Vertical Transition Using Eccentric Via-Hole in Multilayer PCB

[Yizhou Zhao](#), [Hao Shen](#), [Hongxin Zhao](#) and [Xiaoxing Yin](#)

13:25 A Novel Mode-Selective Transmission Line With Low Loss Using Glide-Symmetric Holey Structure

[Tingting Xie](#), [Xiaohe Cheng](#), [Yuan Yao](#), [Junsheng Yu](#) and [Xiaodong Chen](#)

13:45 Frequency Characteristics of Transmission by the Waveguide With Random Shape Boundary

[Kiyofumi Katayama](#), [Kazuo Tanaka](#) and [Masahiro Tanaka](#)

Tuesday, November 30 14:20 - 14:40

Industrial_2: EMVision

Room: Auditorium

Chair: Sasan Ahdi Rezaeieh

Tuesday, November 30 15:00 - 16:40

S2-08: Modelling of Devices and Circuits

Room: Conference Hall 1

Chairs: Liang Chen, Tadashi Kawai

15:00 *Physics-Enforced Modeling for Insertion Loss of Transmission Lines by Deep Neural Networks*

[Liang Chen](#) and Lesley Tan

15:20 *Numerical Calculation of High Power RF-DC Cyclotron Rectifier for Wireless Power Transfer*

[Maho Matsukura](#), Kohei Shimamura and Shigeru Yokota

15:40 *Comparison of X-Parameter De-Embedding Techniques for Intrinsic Large-Signal Characterization of Power FinFETs*

[Kun-Ming Chen](#), Jia-Ding Han, Hsin-Hui Hu, Bo-Yuan Chen, Chia-Wei Chuang and Guo-Wei Huang

16:00 *Circuit Performance Analysis of Analog RF LNA Designed With Negative Capacitance FET*

[Hossein Eslahi](#)

16:20 *Theoretical Analysis of Ideal Full-Bridge Rectifier With High-Frequency Input*

Takashi Hirakawa, Yoshichika Ohta, Naoki Hasegawa and Yuta Nakamoto

S2-09: Rectifiers/DACs/Mixers

Room: Boardroom 1

Chairs: Kenjiro Nishikawa, James Scott

15:00 *Full-Range Three-Stage 16GSa/s Riemann Pump RF-Power DAC in GaN HEMT*

[Tomoyuki Furuichi](#), Rui Ma, Toshiaki Koike-Akino and Yuji Komatsuzaki

15:20 *A Miniaturized Wilkinson Power Divider for MMIC Applications*

[Nethini T Weerathunge](#), Sudipta Chakraborty and Michael Heimlich

15:40 *19 Gbps 60-GHz CMOS OOK Demodulator With 0.3 pJ/Bit Based on Asymmetric Inverters*

[Helmuth Morath](#), Mengqi Cui, Paolo Valerio Testa, Jens Wagner and Frank Ellinger

16:00 *A WR3.4 x12 Frequency Multiplier Chain Based on InP HBT Technology*

[Gihyun Lim](#), Junghwan Yoo, Heekang Son, Doyoon Kim and Jae-Sung Rieh

16:20 *Design of 94GHz High Efficiency Rectifier MMIC*

[Ren Furumoto](#), Hayato Shimizu and Kenjiro Nishikawa

S2-10: Circularly Polarized and Dual-Polarized Antennas

Room: Boardroom 2

Chair: Shengjian Jammy Chen

15:00 *Design of a Ka-Band Low-Profile Wideband Circularly Polarized Magneto-Electric Dipole Antenna With Parasitic Patches and Its Array*

[Luqing Wang](#) and [Zeljko Zilic](#)

15:20 *Circularly Polarized Monopulse Antenna Based on Sequential Rotation Array Using Cross-Polarization*

[Qiuyi Zhang](#), [Tongtong Zhang](#), [Jinlun Li](#), [Shunli Li](#), [Hongxin Zhao](#) and [Xiaoxing Yin](#)

15:40 *Cosecant Squared Pattern for Wide-Band Dual-Polarized Antenna Array Using Orthogonal Feeding Technique*

[Anh Trinh-Ngoc](#), [Cong Kien Dinh](#), [Binh Nguyen](#), [Manh Linh Nguyen](#) and [Tien Manh Nguyen](#)

16:00 *Design of Dual-Polarization Dual-Band High-Gain Microstrip Patch Antenna Based on High-Order Modes*

[Long Jin](#) and [Zhibin He](#)

16:20 *Investigation of a Button Antenna Performance in Wearing Scenarios*

[Xiaoyang Yin](#), [Shengjian Jammy Chen](#) and [Christophe Fumeaux](#)

S2-11: Microwaves in Agriculture and Environment

Room: Boardroom 3

Chairs: Alexe Bojovschi, Kimberley W. Eccleston

15:00 *Microwave Microfluidic Sensor for Detecting Heavy Metal Pollution in Water*

[Haneen Hassan Abdelwahab](#), [Amir Ebrahimi](#), [Francisco Tovar-Lopez](#), [Greg Beziuk](#) and [Kamran Ghorbani](#)

15:20 *Fabrication of Resonance Type of Electrode Sensor to Detect Bamboo Shoot Growing in Agricultural Soil*

[Kouta Iwamoto](#), [Subaru Iwaki](#), [Masaya Sakamoto](#) and [Futoshi Kuroki](#)

15:40 *Analysis and Design of High Frequency Electromagnetic Plasma Generator for Infectious Waste Disposal*

[Watcharapong Bunpradit](#)

16:00 *A Buried Cavity Backed Slot Antenna for Agriculture and Infrastructure Monitoring*

[Arslan A Nizami](#), [Yana Salchak](#), [Noor Albadri](#), [Mohamed Adel Ezzat Elqunawy](#), [Radwan](#), [Hugo G Espinosa](#) and [David V Thiel](#)

16:20 Estimation of Propagation Performance Between IoT Terminals and Gateway Using UHF-Bands for Landslides Prediction System

Takuma Kinoshita, Daiya Miyamoto, Subaru Iwaki, Kouta Iwamoto, Masaya Sakamoto, Kazuya Miyamoto and Futoshi Kuroki

S2-SS5: Advanced Terahertz Technologies for Next-Generation Communications and Sensing

Room: Conference Hall 2

Chairs: Withawat Withayachumnankul, Yang Yang

15:00 3D-Printed Sub-Terahertz Lens for Manipulation of Deflective Quasi-Non-Diffractive OAM Waves

Xiaoyuan He, Li Deng and Yang Yang

15:20 Leaky-Mode Analysis of Micro-Structured Dielectric Waveguides Toward Integrated Tunneling Multiplexers With Enhanced Bandwidth

Daniel Headland and Withawat Withayachumnankul

15:40 Advanced Terahertz Devices Based on Photonic Crystal and Resonant Tunneling Diode

Masayuki Fujita

16:00 Dynamic Phase Measurement for Vibrometry Based on Leaky-Wave Terahertz Radar

Yuki Ito and Yasuaki Monnai

16:20 Internal Structure Visualization by Terahertz Computed Tomography With Carbon Nanotube Photo-Scanner Toward Multi-Frequency Image Reconstruction

Tomoya Furukawa, Takeru Q. Suyama, Kou Li, Imari Sato and Yukio Kawano

Tuesday, November 30 17:00 - 19:00

S-13: Recent Advances in Active Devices and Systems

Room: Conference Hall 1

Chair: Sourabh Khandelwal

17:00 Recent Advance of Far-Field Wireless Power Transfer Technology and Regulation in Japan

Naoki Shinohara

17:30 Silicon ICs for Sub Millimeter-Wave Signal Generation and Detection

Mona Hella

18:00 A New Integrated-Circuit Approach to Terahertz Devices and Applications

Ullrich Pfeiffer

18:30 THz Technology: The Move From Scientific to Commercial Applications - 6G, Space & More

Jeffrey Hesler

S-I4: Recent Advances in Passive Devices, Antennas and Systems

Room: Conference Hall 2

Chair: Arokiaswami Alphones

17:00 Advanced Filtering Circuits Integrating the Lumped and Distributed Parameters

Wenquan Che

17:30 High-Gain Antennas With Complete Beam Steering - State of the Art and Challenges

Karu Esselle

18:00 Deep Learning Approaches for Inverse and Forward Scattering Problems

Xudong Chen

Wednesday, December 1

Wednesday, December 1 10:00 - 11:00

Keynote 3: Cross-Band PIM Generation in Collocated Cellular Base Stations

Ms Christine Blair

Room: Auditorium

Chair: Amin Abbosh

Wednesday, December 1 11:15 - 12:35

S3-01: RCS reduction and Cloaking

Room: Conference Hall 1

Chair: Shen Shou Max Chung

11:15 Reflecting Phase-Gradient Metasurface for Radar Cross Section Reduction

Khushboo Singh, Muhammad Usman Afzal, Ali Lalbakhsh and Karu Esselle

11:35 Multi-Band SIW Cavity Based Metamaterial Perfect Absorber

Majid Amiri, Mehran Abolhasan, Negin Shariati and Justin Lipman

11:55 Changing the Radar Cross Section of Quadcopter by Shape Modification

Shen Shou Max Chung and Shih-Chung Tuan

12:15 Design of a Broadband Carpet Cloak by Using an One-Dimensional Distributed Transmission-Line Model

[Tsutomu Nagayama](#), Akihiro Toshima, Yuki Sonoda, Seiji Fukushima and Toshio Watanabe

S3-02: Metasurfaces and Metastructures

Room: Boardroom 1

Chair: Amir Ebrahimi

11:15 Focused Transmissive Metasurface for Microwave Power Transmission

Xianjin Yi, Xing Chen and Jie Li

11:35 3D-Printed Reflective Dielectric Coding Metamaterials for Terahertz Waves Manipulation

Jingye Sun, Yang Gao, Kai Luo and Fangjing Hu

11:55 Polarization-Insensitive Metasurface Based Switchable Absorber/ Risorber

[Priyanka Tiwari](#) and Surya Pathak

12:15 Mutual Coupling Reduction in THz Integrated Circuits Using Cubic Micropillar Array

Ashish Kumar Verma and Rahul Singhal

S3-03: Filters I

Room: Boardroom 2

Chair: Rakesh Singh Kshetrimayum

11:15 Broadband Input Quasi-Reflectionless BPF and BSF for 5G Applications

[Sunanda Lakkimsetti](#), Rakesh Singh Kshetrimayum and Matthew Morgan

11:35 Compact, Shielded Microstrip Filter With High Selectivity for 5G N78 Application

Lin Gu and Yuandan Dong

11:55 Miniaturized, Multilayer, Shielded, and Surface-Mountable 5G N79 Bandpass Filter

Danyu Yang and Yuandan Dong

12:15 *Simulation Modeling and Analysis of FBAR RF Filters Considering Different Configurations of Grounding Bond-Wires*

[Huaiqiang Yu](#)

S3-04: Horns and Reflector Antennas

Room: Boardroom 3

Chairs: Trevor S. Bird, Ken Smart

11:15 *Effective Phase Center Adjustment Method for Pyramid Horn Antenna*

[Jiuyang Xiao](#) and [Yangmiao Lin](#)

11:35 *Theoretical Design of A Simultaneous S/X Feed System for an F/D=0.45 Parabolic Reflector*

[Christophe Granet](#), [John Kot](#), [Ken Smart](#), [Howard D'Costa](#) and [Robert Shaw](#)

11:55 *Manufacture and Test of a Simultaneous S/X Feed System for a Satellite Ground Station*

[Ken Smart](#), [Robert Shaw](#), [Michael Bourne](#), [Michael Death](#), [Christophe Granet](#) and [John Kot](#)

12:15 *Design and Measurement of a 17.3 - 21.2 GHz Corrugated Horn as a Feed for a CATR*

[Christophe Granet](#), [Eric Arnaud](#) and [Cyrille Menudier](#)

S3-SS6: Wearable Antennas, Sensors and Material Characterisation Techniques

Room: Conference Hall 2

Chair: Shengjian Jammy Chen

11:15 *Wireless Implantable Medical Device: In-Body EM Losses for a Multilayer Body Model*

[Mélusine Pigeon](#), [John Laurence Buckley](#) and [John Barton](#)

11:35 *Textile Planar Wideband Omnidirectional Antenna for Wearable Applications*

[Shengjian Jammy Chen](#), [Quoc Hung Dang](#) and [Christophe Fumeaux](#)

11:55 *Screen Printed Epidermal Antenna for IoT Health Monitoring*

[Roy B. V. B. Simorangkir](#), [Dinesh R. Gawade](#), [Sanjeev Kumar](#), [Brendan O'Flynn](#), [John Laurence Buckley](#), [Tim Hannon](#), [Paul Donovan](#) and [Robert Newberry](#)

12:15 *Analysis of Microfluidic Pipes in a W-Band Waveguide for Determining*

Complex Permittivity

[Robert Jones](#), Andre Sarker Andy, Robert Donnan, Rostyslav Dubrovka and Akram Alomainy

Wednesday, December 1 12:45 - 14:05

S_WiM: Women in Microwaves

Room: Boardroom 1

Chair: Rodica Ramer

S3-05: Power Amplifiers and Transmitter Systems

Room: Conference Hall 1

Chair: Robabeh Antiohos

12:45 Design of RF Powered ZigBee Sensor Node and Sub 1GHz RF Power Transmitter for Asset Tracking

[Mohamed Rabeek Sarbudeen](#)

13:05 A Compact Wideband Reconfigurable Power Amplifier Using PIN Diodes

Xinchen Zou, Cuiping Yu, Shulan Li and Yuanan Liu

13:25 A Hybrid Energy Harvesting System Using Meandered Square Loop Rectenna for IOT Devices

[Ankita Deo](#)

13:45 Input-Output Harmonic Controlled Broadband Class-B/J Power Amplifier

[Vivek Tamrakar](#), Sagar Kumar Dhar, Tushar Sharma and Jayanta Mukherjee

S3-06: Filters II

Room: Boardroom 2

Chairs: Girdhari Chaudhary, Xiaolong You

12:45 A Planar Crossover With Dual-Band Bandpass Response

[Yu-Chi Chiu](#) and [Yi-Hsin Pang](#)

13:05 An UHF Sharp Roll-Off and Wide Rejection Band Compact Low-Pass Filter With the Highest Figure of Merit for Merchandise

[Cheng-Hung Hsieh](#)

13:25 Design of Microstrip Sextaplexer Based on Coupled Bandpass Filters With Common Feedline Technique

[Cheng-Hung Hsieh](#)

13:45 Low-Loss Compact SIW Filters With Shielded Complementary Split-Ring Resonator

[Yane Zheng](#), [Yilong Zhu](#), [Zhan Wang](#) and [Yuandan Dong](#)

S3-07: Metasurfaces and FSS Antennas

Room: Boardroom 3

Chair: Aliya A. Dewani

12:45 Gain Enhancement in a Fabry-Perot Cavity Antenna Using Phase Correcting Miniaturised FSS

[Garth Catton](#), [Hugo G Espinosa](#), [Aliya A. Dewani](#) and [Steven G O'Keefe](#)

13:05 One-Sided Directional Slot Unit and Its Array Antenna With AMC Reflector for 5G N257 Band Applications

[PeiYi Qiu](#), [feng Quanyuan](#) and [Haruichi Kanaya](#)

13:25 Spatial-Temporal Programmable Metasurface for Single Channel Radiation

[Chengfan Li](#), [Zhehao Yu](#), [Yan Shen](#), [Runqing Cai](#) and [Xuyang Lu](#)

13:45 Design of a Broadband Horizontally Polarized Omnidirectional Metasurface Antenna

[Deqiang Yang](#), [Tao Tingting Tao](#) and [Sihao Liu](#)

S3-08: Mm-wave and Terahertz Radar and Imaging

Room: Conference Hall 2

Chair: Haruichi Kanaya

12:45 Deep Learning Based Concealed Object Recognition in Active Millimeter Wave Imaging

[San Hlaing Myint](#), [Yutaka Katsuyama](#), [Toshio Sato](#), [Xin Qi](#), [Kazuhiko Tamesue](#), [Zheng Wen](#), [Keping Yu](#), [Tokuda Kiyohito](#) and [Takuro Sato](#)

13:05 Investigation on 600-GHz-Band FMCW Photonic Radar System for a Flexible Inspection Distance

[Ryohei Kaname](#), [Li Yi](#) and [Tadao Nagatsuma](#)

13:25 300GHz Band On-Chip Vivaldi Antenna on Dual-Layer Proton Irradiated CMOS Si Substrate

[Hans Herdian](#), [Takeshi Inoue](#), [Takuichi Hirano](#), [Masatsugu Sogabe](#), [Atsushi Shirane](#) and [Kenichi Okada](#)

Wednesday, December 1 14:20 - 14:40

Industrial_3: LEAP Australia

Room: Auditorium

Chair: Sasan Ahdi Rezaeieh

Wednesday, December 1 15:00 - 16:40

S-Memorial: Memorial Session for Prof. Marek Bialkowski

Room: Conference Hall 1

Chair: Salman Durrani

15:00 *Phased Array Antennas and Beyond*

[Nemai Karmakar](#)

15:16 *Reflections Through Time - Remembering Professor Marek Bialkowski*

[Vesa P Waris](#)

15:33 *Our Fond Memories With Marek and His Words of Wisdom for Life*

[Yifan Wang](#) and [Feng-Chi Eddie Tsai](#)

15:50 *Reflect-Array Developments*

[Ashley Robinson](#)

16:06 *Prof. Marek Bialkowski - A Great Academic Mentor*

[Salman Durrani](#)

16:23 *From Mobile Satellite Communications to Unmanned Aerial Vehicles - How Prof. Marek Bialkowski Helped Shape My Career*

[Shaun Jellett](#)

S3-09: Wireless Power Transfer

Room: Boardroom 1

Chairs: Naoki Hasegawa, Negin Shariati

15:00 *Frequency Diversity Transmitting Array for Stable Power Reception Under Rotation in 2D Far-Field Wireless Power Transmission*

[Chien-Chi Hsu](#), [Ching-Ya Tseng](#), [Ling-Zhu Lu](#) and [Hsin-Chia Lu](#)

15:20 *Lightweight Rectenna Array for Demonstration of Microwave Power Transfer to Flying-Objects*

[Naoki Hasegawa](#)

15:40 *Magnetic Coupling Resonant Simultaneous Wireless Power and Information Transfer System With Switched Relay Resonators*

[Penghui Han](#), [Xin Wang](#), [Jiawei Zhang](#) and [Ji Yuefeng](#)

16:00 *Utilization of Meander Line Slots for Enhancing the WPT Efficiency and Transmission Range*

[Zhanel Kudaibergenova](#), [Kassen Dautov](#), [Mohammad Hashmi](#) and [Muhammad Akmal Chaudhary](#)

16:20 *Miniaturized Patch Rectenna Using 3-Turn Complementary Spiral Resonator for Wireless Power Transfer*

[Ali Raza](#), [Rasool Keshavarz](#) and [Negin Shariati](#)

S3-10: Measurement Techniques

Room: Boardroom 2

Chairs: Amir Ebrahimi, Takashi Shimizu

15:00 *Site Validation for Radiated Field Measurements of High-Voltage/Large-Capacity Electrical Equipment*

[Shinobu Ishigami](#), [Tatsuru Itsukaichi](#), [Ken Kawamata](#) and [Yasutoshi Yoshioka](#)

15:20 *Complex Permittivity and Uncertainty Evaluations for an Ultra Thin Photosensitive Insulator Film Using a Millimeter Wave Circular Cavity Resonator*

[Takashi Shimizu](#), [Kazuaki Ebisawa](#) and [Yoshinori Kogami](#)

15:40 *Complex Permittivity Measurement for Thin Dielectric Rods With High Permittivity Using a 50 GHz Band TM₀₁₀ Mode Cavity*

[Takashi Shimizu](#), [Takuya Hayashi](#) and [Yoshinori Kogami](#)

16:00 *Phase Variation Reflective-Mode Displacement Sensor Using a CPW Loaded With Dumbbell-Shaped Resonator*

[Zahra Mehrjoo](#), [Amir Ebrahimi](#) and [Kamran Ghorbani](#)

16:20 *High Range Resonators for Rotation Sensing: Design and Demonstration*

[Vaishnavi Bhope](#) and [A. r. Harish](#)

S3-11: Microwave Systems

Room: Boardroom 3

Chair: Shunichi Futatsumori

15:00 *Basic Study of Electromagnetic Noise Waveform Extraction Using Independent Component Analysis*

[Nao Takahashi](#), [Shinobu Ishigami](#) and [Ken Kawamata](#)

15:20 Helicopter Radio Altimeter Interference Path Loss Measurement Including Adjacent 5G Mobile Telecommunications Band

[Shunichi Futatsumori](#), [Norihiro Miyazaki](#), [Noriaki Hiraga](#), [Keiji Kobayashi](#) and [Kenichi Nakafukushima](#)

15:40 Research on Practical Application of Product Shelves Using UHF-RFID Technology

[Tomohiro Osaki](#) and [Yoshinobu Okano](#)

16:00 UMPS: Ultrasound-Microwave-Fused Phase Synchronization for UAV-Based Phased Arrays

[Shih-Ming Huang](#), [Wei-Cheng Chen](#), [Yun-Ting Tsai](#), [Ethan Fang Wu](#) and [Shih-Yuan Chen](#)

16:20 Blake Chart Optimization of a VHF Phased Array Using Surrogate-Based Method

[Liang-Yu Ou Yang](#) and [Bingzhang Tsai](#)

S3-SS7: Advanced Microwave Filtering Components and Circuits

Room: Conference Hall 2

Chair: Yang Yang

15:00 Design of Dual-Band Power Amplifier Based on Band-Stop Input Matching Structure

[Xian Gui](#), [Cuiping Yu](#), [Shulan Li](#), [Ming Su](#) and [Yuanan Liu](#)

15:20 A Dual-Band Balanced Filter With High Common-Mode Suppression

[Li YuanChun](#), [Xin Fang](#), [Di-Si Wu](#) and [Quan Xue](#)

15:40 3D Sub-Terahertz Dual-Mode Cavity Resonator and Its Application to Dual-Polarized Frequency Selective Surface

[Jing-Yu Lin](#) and [Yang Yang](#)

16:00 Vertically Stacked Circular SIW Filter With Controllable Transmission Zeros and Higher-Order Mode Suppression

[Hanyu Tian](#), [Yane Zheng](#) and [Yuandan Dong](#)

16:20 Design of Mode Suppression Bandpass Filter Using Stub-Loaded Periodic Structure

[Yiqun Liu](#) and [Kai-Da Xu](#)

Wednesday, December 1 17:00 - 18:30

S-15: Research Translation

Room: Conference Hall 1

Chair: James Scott

17:00 *In Praise of Electromagnetics Research: Community Needs, Now More Than Ever*

[David V Thiel](#)

17:30 *Wi-Fi HaLow for the Internet of Things - Introduction to a State of the Art IEEE 802.11ah Compliant System on chip(SoC)*

[Peter D Bradley](#)

18:00 *Integrating RF PLLs Into Complex SoC to Support 5G and WiFi Radios*

[Julian Jenkins](#)

S-16: Microwaves in Australia

Room: Conference Hall 2

Chair: Withawat Withayachumnankul

17:00 *Recent Advances in Microwave Photonic Signal Processing*

[Xiaoke Yi](#)

17:30 *Analogue Multi-Beam Antennas for B5G and 6G*

[Y. Jay Guo](#)

18:00 *Noncontact Radar Sensors*

[Mehmet Rasit Yuce](#)

Wednesday, December 1 18:30 - 19:30

Awards and Closing Ceremony

Room: Auditorium

Chair: Amin Abbosh