

# Advance Program of APMET2018

Venue: Fukuoka Institute of Technology, Fukuoka, Japan

Room: Multipurpose Hall (4F in Building “ $\alpha$ ”)

(Last Updated on October 4, 2018)

## Opening Remark

October 12, 2018 (Friday), 08:50–09:00

## Session 1

October 12, 2018 (Friday), 09:00–10:30

- 09:00–09:30 Analysis and Design of Cylindrical Resonator Antenna Using Anisotropic Material .....  
.. *Tae-Wan Kim and Seong-Ook Park (Korea Advanced Institute of Science and Technology, Korea)*
- 09:30–10:00 MIMO Antenna and Beamforming Algorithm Based on Characteristic Mode of Bilateral Symmetric Structure .....  
.... *Dong-Woo Kim and Sangwook Nam (Seoul National University, Korea)*
- 10:00–10:30 An Approach to the Inverse Scattering Problem for a Dielectric Circular Cylinder Using Global Optimization Using Interval Analysis .....  
..... *Kenichi Ishida (Kyushu Sangyo University, Japan)*

## Session 2

October 12, 2018 (Friday), 10:50–12:50

- 10:50–11:20 Scattering and Absorption of Light by Two-Dimensionally Corrugated Noble-Metal Film .....  
..... *Akira Matsushima and Yuki Sakuragi (Kumamoto University, Japan)*
- 11:20–11:50 A New Class of Devices for Simultaneous Operation over Microwave and Millimeter-Wave Frequency Bands .....  
..... *Shao Yong Zheng (Sun Yat-sen University, China)*
- 11:50–12:20 Monopulse DOA Estimation Microstrip Array Antennas Integrated with Magic-Ts .....  
..... *Eisuke Nishiyama and Ichihiko Toyoda (Saga University, Japan)*
- 12:20–12:50 A Comparative Study on the IDR(s)-Based Iterative Progressive Numerical Methods for Electromagnetic Multiple Scattering Simulations .....  
..... *Norimasa Nakashima (Fukuoka Institute of Technology, Japan) and Seiji Fujino (Kyushu University, Japan)*

## Session 3

October 12, 2018 (Friday), 13:50–15:20

- 13:50–14:20 Millimeter-Wave Microstrip-Line-Fed Magnetoelectric Dipole Antenna .....  
..... *Kwai-Man Luk (City University of Hong Kong, China)*

- 14:20–14:50 Numerical and Experimental Study on Transmission Spectrum of X-Shaped Waveguide with Periodic Structure .....  
 ..... **Hiroshi Maeda** (*Fukuoka Institute of Technology, Japan*)
- 14:50–15:20 Effect of Applying Meta-Surface Reflector on  $2 \times 2$  LOS MIMO .....  
 ..... **Ryuji Kuse**, *Takeshi Fukusako*, and *Akira Matsushima* (*Kumamoto University, Japan*)

#### Session 4

October 12, 2018 (Friday), 15:40–17:10

- 15:40–16:10 Analysis of Dyakonov-Like Waves at the Surface of a Semi-Infinite Metal-Dielectric Multilayered Structure .....  
 ..... *Pi-Kuei Shih* (*National Taiwan University, Taiwan*), *Hui-Hsin Hsiao* (*Taipei Medical University, Taiwan*), and **Hung-chun Chang** (*National Taiwan University, Taiwan*)
- 16:10–16:40 The Small 5G Beam-Scanning Smartphone Antenna Coexisting with WBAN UHF-Band MIMO Antennas .....  
 ..... *Changhyeong Lee*, *Heejun Park*, *Gwang-Gyun Namgung*, *Jinyoung Kwon*, and **Sungtek Kahng** (*Incheon National University, Korea*)
- 16:40–17:10 Microwave Imaging by Using Time Reversal Fields .....  
 ..... **Toshifumi Moriyama**, *Toshiyuki Tanaka*, and *Takashi Takenaka* (*Nagasaki University, Japan*)

#### Evening Session (Buffet Dinner)

October 12, 2018 (Friday), 17:30–20:00

Place: OASIS Room (1F in Building “B”)

#### Session 5

October 13, 2018 (Saturday), 09:00–10:30

- 09:00–09:30 Design of Metasurface in Compact Broadband System for Linear-to-Circular Polarization .....  
 ..... **Takeshi Fukusako**, *Ryuji Kuse*, and *Koichi Furuya* (*Kumamoto University, Japan*)
- 09:30–10:00 New Experiments with Successive Estimation Technique .....  
 ..... **Zhiqi Meng**, *Tomonori Tsuburaya* (*Fukuoka University, Japan*), and *Takashi Takenaka* (*Nagasaki University, Japan*)
- 10:00–10:30 The Fusion Design of Filtering Dielectric Resonator Antennas .....  
 ..... **Yongmei Pan** and *Pengfei Hu* (*South China University of Technology, China*)

### Session 6

October 13, 2018 (Saturday), 10:50–12:20

- 10:50–11:20 Diffraction of Electromagnetic Waves by Small Resonant Apertures .....  
..... **Young-Ki Cho** (*Kyungpook National University, Korea*)
- 11:20–11:50 Circular Polarized Antenna Printed on Dielectric Substrate .....  
..... **Mitsuo Taguchi** (*Nagasaki University, Japan*)
- 11:50–12:20 Push-Push Oscillator Arrays Using Unilateral Coupling Circuits and Mutual  
Coupling Circuits .....  
..... **Takayuki Tanaka** and **Ichihiko Toyoda** (*Saga University, Japan*)

### Session 7

October 13, 2018 (Saturday), 13:20–14:50

- 13:20–13:50 Recent Development of Electrically Small Spherical Helix Antennas .....  
..... **Keisuke Fujita** (*National Institute of Technology, Yuge College, Japan*)
- 13:50–14:20 Unconditionally Stable M1-D ADI-FDTD Methods for Interconnected and Cou-  
pled Transmission Lines .....  
..... **Eng Leong Tan** and **Ding Yu Heh** (*Nanyang Technological University,  
Singapore*)
- 14:20–14:50 Electromagnetic Wave Scattering by a Conducting Cylinder Covered with In-  
homogeneous Lossy Material .....  
..... **Masahiko Nishimoto** (*Kumamoto University, Japan*)

### Session 8

October 13, 2018 (Saturday), 15:10–16:40

- 15:10–15:40 Digital Signal Processing in Coupled Photonic Crystal Waveguides .....  
..... **Vakhtang Jandieri** and **Daniel Erni** (*University of Duisburg-Essen, and  
Center for Nanointegration Duisburg-Essen, Germany*)
- 15:40–16:10 A Compact and Broadband Printed Monopole Antenna for Circular Polariza-  
tion ..... **Takafumi Fujimoto**, **Takashi Kawamoto**, and **Keigo Shimizu**  
(*Nagasaki University, Japan*)
- 16:10–16:40 Active Integrated Array Antenna with Oscillation and Modulation Function for  
Spatial Modulation Wireless Communications .....  
... **Ichihiko Toyoda**, **Eisuke Nishiyama**, **Takayuki Tanaka** (*Saga University,  
Japan*)

### Closing Remark

October 13, 2018 (Saturday), 16:40–16:45