

Welcome Message

The AWAP2023 (Asian Workshop on Antennas and Propagation 2023) will take place at the Dawn Center in Osaka, Japan. This workshop is including oral presentations by invited speakers. In addition, there will be social events that encourage networking and friendship-building among participants. We would like to extend a warm welcome to all attendees and hope to enjoy your stay in Osaka. Let's use this opportunity to make new friends and expand our professional networks!



Sincerely, **General co-chairs** Prof. Sakakibara Prof. Chung Prof. Torrungrueng

Committee Member

General Co-Chairs : Kunio Sakakibara (Nagoya Inst. Tech., Japan), Jae-Young Chung (Seoul Tech., Korea), Danai Torrungrueng (KMUTNB, Thai)

Vice Co-Chairs : QiaoWei Yuan (TOHTECH, Japan)

TPC Co-Chairs : Satoru Kurokawa (AIST, Japan), Takeshi Fukusako (Kumamoto Univ., Japan), Gangil Byun (UNIST, Korea), Titipong Lertwiryaprapa (KMUTNB, Thai)

Award Co-Chairs : Naobumi Michishita (National Defense Academy, Japan), Takuji Arima (Tokyo Univ. Agri. Tech., Japan)

Secretaries : Kentaro Saito (Tokyo Denki Univ. Japan), Yuanfeng She (AIST, Japan), Takashi Hikage (Hokudai, Japan), Michitaka Ameya (AIST, Japan)

Local arrangement : Hidehisa Shiomi (Osaka Univ. Japan)

Program At-a-glance

Thursday 29 June	
10:00-10:15	Opening Ceremony
10:15-10:45	Keynote Speech 1
10:45-11:15	Keynote Speech 2
11:15-11:30	Break
11:30-12:30	Invited Session 1
12:30-13:50	Lunch
13:50-14:50	Regular Session
14:50-15:10	Break
15:10-16:10	Invited Session 2
16:10-16:30	Break
16:30-17:30	Invited Session 3
19:30-21:30	Banquet

Friday 30 June	
10:00-10:30	Keynote Speech 3
10:30-10:50	Break
10:50-12:05	Invited Session 4
12:05-13:20	Lunch
13:20-14:20	Invited Session 5
14:20-14:40	Break
14:40-15:40	Invited Session 6
15:40-16:10	Closing Ceremony

Saturday 1 July
Technical Tours

Social Events

Lunch (29, 30, June)

A boxed lunch will be served at the venue

Banquet (29, June)

Merry Green Osaka Wonder Cruise

19 : 00 Gathering at the entrance of Dawn Center
19 : 30 - 21 : 30 Boarding at Hachikenya Boat Dock

Technical Tour (1, July)

Osaka University, Quantum Computer Lab Tour

We will directly inform the interested participants about the meeting location



**AWAP
2023**



AWAP2023

Asian Workshop on Antennas and Propagation

June 29 - July 1, 2023 | Dawn Center, Osaka, Japan

Organized by:

IEICE, Technical Committee on Antennas and Propagation

Technically Sponsored by :

IEEE AP-S Kansai Joint Chapter

Technical Program

Thursday, June 29

Thursday, June 29 10:00 - 10:15

TA1: Opening Ceremony

Chair: Kentaro Saito (Tokyo Denki Univ., Japan)

Thursday, June 29 10:15 - 10:45

TA2: Keynote Speech 1

Chair: Jaehoon Choi (Hanyang Univ., Korea)

History and Recent Trend of Signal Processing Antenna for DOA Estimation
Nobuyoshi Kikuma (Nagoya Inst. Tech., Japan)

Thursday, June 29 10:45 - 11:15

TA3: Keynote Speech 2

Chair: Hiroyuki Arai (Yokohama National Univ. Japan)

Development of 6×26 Slotted Array Waveguide Antenna for Ku-band Wave Monitoring Radar System
Kyeongsik Min, Youseok Yeoh (Korea Maritime and Ocean Univ., Korea)

Thursday, June 29 11:30 - 12:30

TA4: Invited Session 1: Novel Materials and Techniques for 6G Part1

Chair: Takuji Arima (Tokyo Univ. of Agriculture and Technology, Japan)

- 11:30 3D Printed Planar Meta-lens for a Compact Bi-static Measurement Platform
Nohgyeom Ha, Gyoungdeuk Kim, Sangkil Kim (Pusan Nat. Univ., Korea)
- 11:45 Reflection-phase Compensation Techniques for Finite Metasurfaces
Ryuji Kuse, Takeshi Fukusako (Kumamoto Univ., Japan)
- 12:00 R&D on Millimeter Wave (30 - 300 GHz) Antennas & Propagation for Next Generation Mobile Communications
Ryo Yamaguchi (SoftBank, Japan)
- 12:15 Deep-Learning Path Loss Prediction Model Using Side-View Images
Nobuaki Kuno, Minoru Inomata, Motoharu Sasaki (NTT, Japan)

Thursday, June 29 13:50 - 14:50

TP1: Regular Session : Latest Techniques of Antennas and Propagation Part1

Chair: Naobumi Michishita (National Defense Academy, Japan)

- 13:50 Fundamental Study of a Reconfigurable Reflect-array with Varying Dielectric Thickness
Kenshi Goto , Ryuji Kuse, Takeshi Fukusako (Kumamoto Univ., Japan)
- 14:05 Composite Cavity-backed Antenna Minimizing the Cavity Effect for Circular Polarization
Phanuphong Boontamchaou , Ryuji Kuse, Takeshi Fukusako (Kumamoto Univ., Japan)
- 14:20 Dispersive FDTD modeling of skin tissues in THz band
Jaesun Park , Jaehoon Cho, Kyung-Young Jung (Hanyang Univ., Korea)
- 14:35 GSTC-FDTD modeling of 2-D materials
Sangeun Jang , Jae-Woo Baek, Kyung-Young Jung (Hanyang Univ., Korea)

Thursday, June 29 15:10 - 16:10

TP2: Invited Session 2 : Challenges for Higher Frequency Regions

Chair: Kyung-Young Jung (Hanyang Univ., Korea)

- 15:10 Multilayer S/X-Band Array Antenna for Shipborne Radar Applications
Doyoung Jang, Hosung Choo (Hongik Univ., Korea)
- 15:25 Planar Array of X-shaped Slot Antennas in Millimeter Wave Frequency Band
Mangseang Hor, Masanobu Hirose (7Gaa, Japan), Takashi Hikage (Hokudai, Japan)
- 15:40 Polarization Switchable Fabry-Perot Cavity Antenna
Yeong-Geun Jeon, Gwang ro YUN, Dongho KIM (Sejong Univ., Korea)
- 15:55 Design of 29-GHz-band Wide-angle Beam-Scanning Patch Array Antennas for LEO Small Satellites
Takashi Tomura (Tokyo Tech, Japan)

Thursday, June 29 16:30 - 17:30

TP3: Invited Session 3 : Biomedical, Sensing and Measurement

Chair: Michitaka Ameya (AIST, Japan)

- 16:30 Sub-THz Reflectarray using Stacked Striplines with Varying Propagation Path Lengths at 120 GHz
Donggeun An, Myeonggin Hwang, Youngno Youn, Daehyeon Kim (POSTECH, Korea), Sangheon Lee, Jehoon Cho, Joongseop Kim, Changhun Kim (LG Uplus, Korea), Wonbin Hong (POSTECH, Korea)
- 16:45 Wireless Human Sensing Technology for Smart Healthcare
Takuya Sakamoto (Kyoto Univ., Japan)
- 17:00 Non-Destructive Ethanol-Aqueous Solution with Modified Jerusalem Resonator for Disinfectants Against COVID-19 Characterization
Nonchanutt Chudpooiti, Tanaporn Pechrkool, Prayoot Akkaraekthalin (KMUTNB, Thai)
- 17:15 On Variation of 2-Dimensional Khatri-Rao Virtual Array for MIMO Radar
Hiroyoshi Yamada (Niigata Univ., Japan)

Friday, June 30

Friday, June 30 10:00 - 10:30

FA1: Keynote Speech 3

Chair: Young Joong Yoon (Yonsei Univ., Korea)

Electromagnetic-based Sensors and Applications
Prayoot Akkaraekthalin (KMUTNB, Thai)

Friday, June 30 10:50 - 12:05

FA2: Invited Session 4: Novel Materials and Techniques for 6G Part2

Chair: Danai Torrungrueng (KMUTNB, Thai)

- 10:50 Passive Circuit-Based Nonreciprocal Metamaterials and Their Antenna Applications
Tetsuya Ueda (Kyoto Inst. Tech., Japan)
- 11:05 Enhancing Electromagnetic Transparency of Lossy Media Using Parity-Time Symmetry-Based Metasurface
Thi Hai-Yen Nguyen (UNIST, Korea), Dimitrios Sounas (WSU, Korea), Gangil Buyn (UNIST, Korea)
- 11:20 THz Channel Sounding and Channel Model Development Towards B5G/6G
Minseok Kim (Niigata Univ., Japan)
- 11:35 Propagation Loss Characteristics for Indoor Terahertz Communications
Hirokazu Sawada, Takeshi Matsumura (NICT, Japan)
- 11:50 Dual-Frequency Decoupling Circuit Integrated with Matching Circuits for Two-Element Antennas
Kengo Nishimoto , Yoshio Inasawa (Mitsubishi Electric Corp., Japan)

Friday, June 30 13:20 - 14:20

FP1: Invited Session 5: Antennas for Smart devices

Chair: Jiro Hirokawa (Tokyo Tech, Japan)

- 13:20 Recent Advances in RFID Sensors for Construction Material Monitoring Applications
Rattapong Suwalak (KMUTL, Thai), Danai Torrungrueng (KMUTNB, Thai)
- 13:35 Some Discussions on Antenna Alignment Measurements Using Image Processing and Uncertainty Estimation
Yuanfeng She, Sayaka Matsukawa (AIST, Japan)
- 13:50 Patch-Like Antennas with Monopole-Like Radiations
Jae-Young Chung, Sung-Yong Cho, Seungwoo Bang (SeoulTech, Korea)
- 14:05 A Circular Polarized Printed Monopole Antenna for Radar Application in UWB High band
Takafumi Fujimoto, Chai-Eu Guan, Zin Mar Phyo (Nagasaki Univ., Japan)

Friday, June 30 14:40 - 15:40

FP2: Invited Session 6: Latest Techniques of Antennas and Propagation Part2

Chair: Yuanfeng She (AIST, Japan)

- 14:40 UHF-RFID Gate Station for Textile Management in Hospital
Titipong Lertwiriayaprapa, Kiadtisak Salayong, Kittisak Phaebua, Montree Saowadee (KMUTNB, Thai)
- 14:55 Power Transfer Method in Concrete Slab Using Slab Guided-mode
Sayaka Matsukawa, Michitaka Ameya (AIST, Japan)
- 15:10 Full-Wave Numerical Modeling for Scattering of Non-Classical Electromagnetic Fields
Dong-Yeop Na (POSTECH, Korea)
- 15:25 Transfer Power of MIMO Sytem and Rayleigh Quotient
Qiaowei Yuan (TOHTECH, Japan)

Friday, June 30 15:40 - 16:10

FP3: Closing Ceremony

Chair: Kentaro Saito (Tokyo Denki Univ., Japan)