

Wednesday, August 29

Wednesday, August 29, 10:00 - 10:40

WA1: Keynote Speech 1

Chair: Nobuyoshi Kikuma (Nagoya Institute of Technology, Japan)

Electromagnetic Technology for Automotive Applications

[Kazuo Sato](#) (Toyota Central R&D labs., Inc., Japan)

(Invited)

Wednesday, August 29, 11:00 - 11:40

WA2: Keynote Speech 2

Chair: Yoshihiko Kuwahara (Shizuoka University, Japan)

Reflectarray Design Techniques for Millimeter Wave Applications

[Young Joong Yoon](#) (Yonsei University, Korea)

(Invited)

Wednesday, August 29, 13:00 - 14:20

WP1: Recent Progress in Metamaterial and Its Inspired Antennas

Chairs: Ruey-Bing Hwang (National Chiao Tung University, Taiwan), Takuji Arima (Tokyo University of Agriculture and Technology, Japan)

WP1.1 Meta-surface inspired small antenna MACKAY

[Shigeru Makino](#) (Kanazawa Institute of Technology, Japan)

(Invited)

WP1.2 Coaxially Fed Antennas Using Composite Right/Left-Handed Coaxial Line Resonators

[Takatsugu Fukushima](#), [Naobumi Michishita](#) and [Hisashi Morishita](#) (National Defense Academy, Japan); [Naoya Fujimoto](#) (Hitachi Kokusai Electric Inc., Japan)

WP1.3 Design of a Near-zero Refractive-index Metamaterial Unit for Electromagnetic Cloaking

[Peng Chen](#) and [Kai Yang](#) (University of Electronic Science and Technology of China, P.R. China); [Qiang Chen](#) (Tohoku University, Japan)

Wednesday, August 29, 14:40 - 16:00

POS1: Poster Session 1

Chair: Kentaro Nishimori (Niigata University, Japan)

POS1.1 A Compact Design of Reconfigurable Dual Band-Notched UWB antenna

[Sam Weng Yik](#) (UTEM, Malaysia); [Zahriladha Zakaria](#) and [Noor Azwan Shairi](#) (Universiti Teknikal Malaysia Melaka, Malaysia)

POS1.2 Antenna Design for Accurate Tracking of Military Unmanned Aerial Vehicles

[Ming-Hsiang Cho](#) (National Chung-Shan Institute of Science and Technology, Taiwan); [Shu-Yu Lin](#) (National Taipei University of Technology, Taiwan)

POS1.3 A Novel Flexible Implantable Antenna at ISM Band

[Chen Liu](#), [Ying-Qi Jiang](#), [Shuo Ji](#), [Shao-Long Chang](#), [Hong-Fei Li](#) and [Yu-Xing Ding](#) (School of Electronics and Information Qingdao University, P.R. China); [Kwok Chung](#) (Qingdao University of Technology, P.R. China); [Wei-Hua Zong](#) (Qingdao University, P.R. China)

POS1.4 Traveling-wave Array Design of Microstrip Comb-line Antenna for Arbitrary Linear Polarization Using Rounded Radiating Elements

[Ryosuke Kojima](#), [Kunio Sakakibara](#) and [Nobuyoshi Kikuma](#) (Nagoya Institute of Technology, Japan)

POS1.5 Bandwidth Comparison of Traveling-wave and Standing-wave Array Designs of Series-fed Microstrip Patch Array Antennas

[Kengo Ichihashi](#), [Kunio Sakakibara](#) and [Nobuyoshi Kikuma](#) (Nagoya Institute of Technology, Japan)

POS1.6 Kanji Patch Antennas

[Lingling Wang](#), [Ruiqi Liu](#), [Wen Li](#), [Shushuai Xie](#), [Kwok Chung](#) and [Chunwei Zhang](#) (Qingdao University of Technology, P.R. China)

POS1.7 Efficient Antenna Design for Platform-Mounted HF Antennas Using Characteristic Mode Theory

[Kohei Kawabata](#) and [Hiroyuki Arai](#) (Yokohama National University, Japan)

POS1.8 A Novel Flexible UWB Antenna

[Shuo Ji](#), [Tian-Ni Yu](#), [Yi-Jia Gao](#), [Ji-Kang Han](#) and [Chen Liu](#) (School of Electronics and Information Qingdao University, P.R. China); [Kwok Chung](#) (Qingdao University of Technology, P.R. China); [Wei-Hua Zong](#) (Qingdao University, P.R. China)

POS1.9 Application of Choke element to Dual-Band Reflector Backed Dipole Antenna Loading Meander-Loop Parasitic Element

[Mamoru Yamaguchi](#) and [Keizo Cho](#) (Chiba Institute of Technology, Japan); [Taisuke Ihara](#) and [Tatsuhiko Yoshihara](#) (NTT DoCoMo, Inc., Japan)

POS1.10 A study of meander line polarizer based on equivalent circuits

[Hiromasa Nakajima](#), [Tai Tanaka](#) and [Michio Takikawa](#) (Mitsubishi Electric Corporation, Japan); [Naofumi Yoneda](#) (Mitsubishi Electric Corporation, Japan)

POS1.11 Flat Lens Antenna by Genetic Algorithm

[Kuwahara Yoshihiko](#) and [Arie Setiawan](#) (Shizuoka University, Japan)

POS1.12 Design and measurement of a microstrip antenna array on a broad wall of a rectangular waveguide for 45-degree linear polarization

[Issei Yamasaki](#), [Sakuyoshi Saito](#) and [Yuichi Kimura](#) (Saitama University, Japan)

POS1.13 VHF Band Radar Cross Section of the Independence Class Littoral Combat Ship

[Shih-Chung Tuan](#) (Oriental Institute of Technology, Taiwan); [Shen Shou Chung](#) (Air Force Institute of Technology, Gansan, Taiwan (ROC), Taiwan)

POS1.14 Design for Bandwidth Enhancement of Traveling-wave Microstrip Array Fed from Both Ends
[Hiroya Tanabe](#), [Kunio Sakakibara](#) and [Nobuyoshi Kikuma](#) (Nagoya Institute of Technology, Japan)

POS1.15 E/O Probe Design for Exposure Assessment in Human Body for 85 kHz EV Charging System
[Yuichi Nagumo](#), [Keisuke Konno](#) and [Qiang Chen](#) (Tohoku University, Japan); [Jerdvisanop Chakarothai](#), [Kanako Wake](#) and [Soichi Watanabe](#) (National Institute of Information and Communications Technology, Japan)

POS1.16 Development of localization method corresponding to both polarized waves in a capsule endoscope
[Daijiro Hiyoshi](#) and [Masaharu Takahashi](#) (Chiba University, Japan)

POS1.17 A Dual-Band Decoupling Method for 2 Elements Monopole Antenna by Using a Short Stub and a Branch Element
[Takuya Miyasaka](#) and [Masaharu Takahashi](#) (Chiba University, Japan); [Hiroshi Sato](#) (Panasonic System Networks, Japan)

POS1.18 Design of 2x2 microstrip patch array antenna for 5G C-band access point applications
[Wen-Shan Chen](#) and [Yung-Chi Lin](#) (Southern Taiwan University of Science and Technology, Taiwan)

POS1.19 SLL Reduction of Circular Array by Weighting using Gamma Function
[Ayano Mikunide](#) and [Mitoshi Fujimoto](#) (University of Fukui, Japan)

POS1.20 Wide Angle Null Pattern Using TDL Array Antenna
[Kazuki Nishide](#) and [Mitoshi Fujimoto](#) (University of Fukui, Japan)

POS1.21 A Proposal of Spatial and Temporal Propagation Model for Massive MIMO Based on Measured Propagation Channel
[Ryotaro Taniguchi](#) and [Kentaro Nishimori](#) (Niigata University, Japan); [Koshiro Kitao](#), [Minoru Inomata](#) and [Tetsuro Imai](#) (NTT DOCOMO, INC., Japan)

POS1.22 Development of Electromagnetic Simulation Tool for HF Radar Considering Effects of Ionosphere
[Takuya Kakumoto](#), [Yoshitaka Goto](#) and [Yoshiya Kasahara](#) (Kanazawa University, Japan)

POS1.23 The R&D of Low-Profile Electronically Scanned Array Antenna for Aircraft -The prototype evaluation of 16 elements array antenna to examine the transmission side configuration-
[Takuya Okura](#), [Takashi Takahashi](#), [Tomoshige Kan](#), [Hiroyuki Tsuji](#) and [Morio Toyoshima](#) (National Institute of Information and Communications Technology, Japan)

POS1.24 Multi-beam Massive MIMO Using Robust ICA
[Shota Ogawa](#), [Kentaro Nishimori](#) and [Ryotaro Taniguchi](#) (Niigata University, Japan); [Kazuki Maruta](#) (Chiba University, Japan); [Takefumi Hiraguri](#) (Nippon Institute of Technology, Japan)

POS1.25 Performance Improvement of DOA Estimation Using Conjugate Gradient Method with Subtraction Scheme
[Toshiya Nasu](#), [Nobuyoshi Kikuma](#) and [Kunio Sakakibara](#) (Nagoya Institute of Technology, Japan)

POS1.26 Two-Step Localization of Near-Field Sources Using Compressed Sensing with Two Coordinate Systems
[Masahiro Inami](#), [Nobuyoshi Kikuma](#) and [Kunio Sakakibara](#) (Nagoya Institute of Technology, Japan)

POS1.27 Impact of AOA Estimation on the Channel Capacity in Circular Phased Array 4 x 4 MIMO Antenna
[Taiki Fukushima](#) and [Kazuhiro Honda](#) (University of Toyama, Japan); [Koichi Ogawa](#) (University of Toyama & Faculty of Engineering, Japan)

POS1.28 DOA Estimation of Desired Wave with Interference Rejection Using Circular Adaptive Array
[Kento Kataoka](#), [Nobuyoshi Kikuma](#), [Kunio Sakakibara](#) and [Rikako Yamano](#) (Nagoya Institute of Technology, Japan)

POS1.29 Two-dimensional Source Localization Using Radio Holography and Virtual Array Extension
[Yoshiyuki Sugiura](#), [Nobuyoshi Kikuma](#) and [Kunio Sakakibara](#) (Nagoya Institute of Technology, Japan)

POS1.30 Performance Improvement of Drone MIMO Relay Station Using Selection of Drone Placement
[Naoki Matsumura](#), [Kentaro Nishimori](#), [Ryotaro Taniguchi](#) and [Tsutomu Mitsui](#) (Niigata University, Japan); [Takefumi Hiraguri](#) (Nippon Institute of Technology, Japan)

POS1.31 Angular Spread Estimation of MIMO Radar Using Transmission Beam Diversity
[Sota Iwase](#), [Nobuyoshi Kikuma](#) and [Kunio Sakakibara](#) (Nagoya Institute of Technology, Japan)

POS1.32 Distance Estimation between Base Station and User Terminal Using Multi-Carrier Signal and 4th Order Cumulants
[Masaya Yamada](#), [Nobuyoshi Kikuma](#) and [Kunio Sakakibara](#) (Nagoya Institute of Technology, Japan)

POS1.33 A Single Balanced Mixer using Compact Branch Line Balun for Ultra-wideband Applications
[Mohammed Algumaei](#), [Noor Azwan Shairi](#), [Zahriladha Zakaria](#) and [Badrul Hisham Ahmad](#) (Universiti Teknikal Malaysia Melaka, Malaysia)

POS1.34 Microwave mammography using bilateral symmetry of breast tissue
[Kuwahara Yoshihiko](#) and [Tomoya Osaki](#) (Shizuoka University, Japan)

POS1.35 A 3-dB Quadrature Coupler Using Broadside Striplines for FM Power Amplifiers
[Rangsan Tongta](#) (Suranaree University of Technology, Thailand)

POS1.36 Measured Performance of Broadband Frequency Selective Surface to Reduce Return Loss
[Tomihiro Ikegami](#), [Shota Ino](#), [Kunio Sakakibara](#) and [Nobuyoshi Kikuma](#) (Nagoya Institute of Technology, Japan)

POS1.37 Observation of Composite Periodicity Structure Using POLSAR in Terahertz Waves
[Katsuki Arahara](#), [Hiroaki Nakabayashi](#), [Koji Suizu](#) and [Keizo Cho](#) (Chiba Institute of Technology, Japan)

POS1.38 Design of Spatial Power Combining Circuit Using Taper Waveguide for High-Power Source in Terahertz Band
[Kazuaki Niwa](#), [Kunio Sakakibara](#) and [Nobuyoshi Kikuma](#) (Nagoya Institute of Technology, Japan)

POS1.39 Design of Partially Parallel-feeding Double-layer Broadband Two-dimensional Waveguide Array Using Wall-surrounded Slot on Stepped Narrow-wall
[Haruki Umemura](#), [Kunio Sakakibara](#) and [Nobuyoshi Kikuma](#) (Nagoya Institute of Technology, Japan)

POS1.40 Microwave tomography using transmission line for forward problem
[Kuwahara Yoshihiko](#) (Shizuoka University, Japan); [Mai Ishiba](#) (IHI Corporation, Japan); [Masaya Makiguchi](#) (Shizuoka University, Japan)

POS1.41 Microwave Absorber by FSS using Paper instead of Dielectric Substrate
[Yuka Shinozaki](#) and [Hiroyuki Arai](#) (Yokohama National University, Japan)

POS1.42 The Relation of Scattering Field and Characteristic Mode of PEC Cylinder
[Yu Nishikawa](#) (Graduate School of Engineering, Yokohama National University, Japan); [Hiroyuki Arai](#) (Yokohama National University, Japan)

POS1.43 Mode Excitation of Plate by CMA
[Kazuki Kamiyama](#) and [Hiroyuki Arai](#) (Yokohama National University, Japan)

POS1.44 Study on clutter suppression on ground penetration radar
[Kuwahara Yoshihiko](#) and [Taiga Suzuki](#) (Shizuoka University, Japan)

POS1.45 Wheeler Efficiency Eliminating Cavity Resonances Using Cauchy Method
[Takumi Kato](#) and [Nozomu Ishii](#) (Niigata University, Japan)

POS1.46 Flexural Strength Estimation of Engineered Cementitious Composites by Using Microwave NDT
[Yuanyuan Li](#), [Kwok Chung](#) and [Chunwei Zhang](#) (Qingdao University of Technology, P.R. China)

POS1.47 Reconstruction of Far Field Radiation Pattern from Hemispherical Near Field Measurements

[Thomas Basikolo](#) and [Hiroyuki Arai](#) (Yokohama National University, Japan); [Satoshi Hori](#) and [Shinya Iwanaga](#) (Kojima Industries Corporation, Japan)

POS1.48 Non-Resonant Probe Calibration Using Three-Antenna Method

[Atsushi Katsuta](#) and [Hiroyuki Arai](#) (Yokohama National University, Japan); [Masami Arai](#) (Huawei Technologies Japan K. K., Japan)

POS1.49 Optimal Design of FSS on Lattice Substrate for Microwave Absorption Application

[Yuchen Zhao](#), [Yanning Yuan](#), [Yurong Pu](#) and [Jiangfan Liu](#) (Xi'an University of Technology, P.R. China); [Xi Xiaoli](#) (Xi'an University of Technology, P.R. China); [Di Fan](#) (Xi'an University of Technology, P.R. China)

POS1.50 A Hybrid Phase Unwrapping Algorithm Based on Quality-guided and Surface-Fitting

[Zhang Yan](#) (Northwestern Polytechnical University, P.R. China); [Zijian Xing](#) (Northwestern Polytechnical University of China, P.R. China)

POS1.51 Study on Land Classification of PolSAR Data by Using Support Vector Machine

[Nanako Saito](#), [Hiroyoshi Yamada](#) and [Yoshio Yamaguchi](#) (Niigata University, Japan)

Wednesday, August 29, 16:20 - 17:40

WP2: Advanced Small Antennas and Related Topics

Chairs: Kwok Chung (Qingdao University of Technology, P.R. China), Keisuke Noguchi (Kanazawa Institute of Technology, Japan)

WP2.1 Compact Multi Antennas with High Isolation Using Dipole and Monopole Modes

[Toru Fukasawa](#), [Kengo Nishimoto](#), [Toyohisa Tanaka](#) and [Yasuhiro Nishioka](#) (Mitsubishi Electric Corporation, Japan); [Naofumi Yoneda](#) (Mitsubishi Electric Corporation, Japan)

WP2.2 An Electrically Small Broadside-coupled Split-ring Resonator Antenna Integrated in a BLE Module Package

[Makoto Sano](#) (Toshiba Corporation, Japan); [Keiju Yamada](#) (Toshiba Co., Japan); [Makoto Higaki](#) (Toshiba Corporation, Japan)

WP2.3 Broadbanding of a Microstrip Antenna Using a Stub Excitation under the Patch

[Fumiya Osaki](#) and [Keisuke Noguchi](#) (Kanazawa Institute of Technology, Japan); [Taichi Hamabe](#) (Panasonic Corporation Connected Solutions Company, Japan)

WP2.4 A Printed Inverted-F Antenna for Dual-Band Dual-Sense Circular Polarization

[Keigo Shimizu](#) and [Takafumi Fujimoto](#) (Nagasaki University, Japan)

Thursday, August 30

Thursday, August 30, 08:40 - 10:00

TA1: Millimeter-wave Antenna Technologies

Chairs: Kunio Sakakibara (Nagoya Institute of Technology, Japan), Kin-Fai Tong (University College London, United Kingdom (Great Britain))

TA1.1 Millimeter-Wave Microstrip-Fed Magneto-Electric Dipole Antennas

[Kwai-Man Luk](#) (City University of Hong Kong, Hong Kong)
(Invited)

TA1.2 Design of a 60GHz-band Metal Cap Antenna with Two Slots Fed by the Post-wall Waveguide

[Jiro Hirokawa](#) and [Takashi Tomura](#) (Tokyo Institute of Technology, Japan)

TA1.3 Phased Array Antenna with Whole-Metal-Cover for MM-Wave 5G Mobile Phone Applications

[Hojoo Lee](#), [Jihoon Bang](#), [Seongkyu Lee](#) and [Jaehoon Choi](#) (Hanyang University, Korea)

Thursday, August 30, 10:20 - 11:40

POS2: Poster Session 2

Chair: Wataru Chujo (Meijo University, Japan)

POS2.1 Influence of Car Body for Car Window Antenna

[Tetsuya Ogawa](#) (Tokyo University of Agriculture and Technology, Japan); [Toru Uno](#) (Tokyo University of Agricultural Technology, Japan); [Takuji Arima](#) and [Yujiro Kushiyama](#) (Tokyo University of Agriculture and Technology, Japan); [Osamu Kagaya](#) (ASAHI GLASS CO., LTD., Japan)

POS2.2 Design of Transparent Patch Antenna for Smallsats

[Kuwahara Yoshihiko](#) and [Nogi Kazuma](#) (Shizuoka University, Japan)

POS2.3 Dual-strip Monopole Antenna for USB Dongle Applications

[Wen-Shan Chen](#), [Ming-Han Liang](#), [Ting-Yan Zhuo](#), [Jia-Hao Lin](#) and [Jui-Hong Hsu](#) (Southern Taiwan University of Science and Technology, Taiwan)

POS2.4 Broadbanding of a Microstrip Antenna Using a Stub Excitation under the Patch

[Fumiya Osaki](#) and [Keisuke Noguchi](#) (Kanazawa Institute of Technology, Japan); [Taichi Hamabe](#) (Panasonic Corporation Connected Solutions Company, Japan)

POS2.5 A Printed Inverted-F Antenna for Dual-Band Dual-Sense Circular Polarization

[Keigo Shimizu](#) and [Takafumi Fujimoto](#) (Nagasaki University, Japan)

POS2.6 Double-layer Waveguide Planar Array Antenna Composed of E-plane Feeding Circuit and Narrow-wall Cavity 2x2-element Sub-arrays

[Haruna Yokoi](#), [Kunio Sakakibara](#) and [Nobuyoshi Kikuma](#) (Nagoya Institute of Technology, Japan)

POS2.7 Fluid Switch For Radiation Pattern Reconfigurable Antenna

[Linyu Cai](#) and [Kin-Fai Tong](#) (University College London, United Kingdom (Great Britain))

POS2.8 Analysis of Element Design for Folded Reflectarray

[Jun Gi Jeong](#) and [Young Joong Yoon](#) (Yonsei University, Korea)

POS2.9 A Novel Microstrip Implantable Antenna at ISM Band

[Ying-Qi Jiang](#), [Chen Liu](#), [Xiao-Jiao Mo](#) and [Peng-Fei Xue](#) (School of Electronics and Information Qingdao University, P.R. China); [Kwok Chung](#) (Qingdao University of Technology, P.R. China); [Wei-Hua Zong](#) (Qingdao University, P.R. China)

POS2.10 Wide-Stopband Filtering Transformers for Antennas with Flexible Input Impedance

[Shih-Cheng Lin](#), [Jian-Shun Chiou](#), [Yang-Zheng Lin](#), [Jia-Ying Li](#) and [Chi-Wen Hsieh](#) (National Chiayi University, Taiwan)

POS2.11 Superposition of DRA modes with a monopole

[Derek Gray](#) (Xi'an Jiaotong-Liverpool University, P.R. China)

POS2.12 Wideband performance of discretized Sochacki lenses

[Derek Gray](#) (Xi'an Jiaotong-Liverpool University, P.R. China); [Nasiha Nikolic](#) (CSIRO Computational Informatics, Australia)

POS2.13 A dual-polarized FSR backed dipole antenna

[Masato Hasegawa](#) and [Keizo Cho](#) (Chiba Institute of Technology, Japan)

POS2.14 Influence of excitation direction on magnetic field of magnetic material loaded linear solenoid array

[Yoshihiro Nakamura](#) and [Keizo Cho](#) (Chiba Institute of Technology, Japan)

POS2.15 Development of Denture Implanted RFID Tag Antennas

[Junyi Xu](#), [Hiroyasu Sato](#), [Mizuki Motoyoshi](#), [Noriharu Suematsu](#) and [Hiroyasu Kanetaka](#) (Tohoku University, Japan); [Kazuhiro Yasui](#) (Cosmotechs. Ltd, Japan); [Qiang Chen](#) (Tohoku University, Japan)

POS2.16 A compact unidirectional radiated microstrip RFID tag antenna

[Zijian Xing](#) (Northwestern Polytechnical University of China, P.R. China); [Ling Wang](#) and [Zhang Yan](#) (Northwestern Polytechnical University, P.R. China)

POS2.17 Accuracy Improvement of Distance Estimation based on Received Signal Strength by Active Propagation Control

[Kazunori Ogou](#), [Hisato Iwai](#) and [Hideichi Sasaoka](#) (Doshisha University, Japan)

POS2.18 Estimation of received signal at arbitrary remote location considering propagation characteristics

[Yuto Nishitsuji](#), [Hisato Iwai](#) and [Hideichi Sasaoka](#) (Doshisha University, Japan)

POS2.19 A Computational Study of Indoor-to-Outdoor Propagation in Office Environment at 2.4 GHz and 5.2 GHz Bands

[Keita Saito](#) and [Manabu Omiya](#) (Hokkaido University, Japan)

POS2.20 Multiple Objects Position Estimation Method using Hyperbola, Ellipse and Circle

[Takuya Iwata](#) and [Mitoshi Fujimoto](#) (University of Fukui, Japan); [Takanobu Tabata](#) (Kojima Industries Corporation, Japan)

POS2.21 DOA Estimation Using Cyclostationarity of OFDM Signal

[Tasuku Endo](#), [Mitoshi Fujimoto](#), [Takuya Iwata](#) and [Takuro Mamiya](#) (University of Fukui, Japan)

POS2.22 Fundamental Study on Ambiguity Suppression of Automotive Squint-mode MW-SAR by Using SIMO Radar

[Akira Oshima](#) (Niigata University & Graduate School of Science & Technology, Japan); [Hiroyoshi Yamada](#), [Yoshio Yamaguchi](#) and [Shogo Muramatsu](#) (Niigata University, Japan)

POS2.23 Study on Rotational Element Electronically Scanned Array

[Kei Yokokawa](#), [Kiyotaka Suzuki](#), [Narihiro Nakamoto](#), [Satoshi Yamaguchi](#), [Yusuke Suzuki](#), [Toru Fukasawa](#) and [Masataka Ohtsuka](#) (Mitsubishi Electric Corporation, Japan); [Naofumi Yoneda](#) (Mitsubishi Electric Corporation, Japan); [Hiroaki Miyashita](#) (Mitsubishi Electric Corporation, Japan)

POS2.24 Small-Size 5G C-Band/WLAN5.2/5.8GHz MIMO Antennas for Laptop Computer Applications

[Wen-Shan Chen](#) and [Yao-Lin Chang](#) (Southern Taiwan University of Science and Technology, Taiwan)

POS2.25 MIMO Cognitive Radio considering Interference

[Takuro Mamiya](#) and [Mitoshi Fujimoto](#) (University of Fukui, Japan)

POS2.26 Evaluation of Block MSN Algorithm Based on Transmission Rate in Multiuser-MIMO System

[Kosuke Yonezu](#), [Nobuyoshi Kikuma](#) and [Kunio Sakakibara](#) (Nagoya Institute of Technology, Japan)

POS2.27 A Study on Adaptive Modulation Method for Downlink Multi-beam Massive MIMO

[Fumiya Muramatsu](#), [Kentaro Nishimori](#), [Ryotaro Taniguchi](#) and [Yuki Yaku](#) (Niigata University, Japan); [Takefumi Hiraguri](#) (Nippon Institute of Technology, Japan)

POS2.28 Polarized MIMO Transmission Using Relay In Urban Area

[Kazuaki Morimoto](#) and [Mitoshi Fujimoto](#) (University of Fukui, Japan)

POS2.29 Reduction Effect of Snapshots in DOA Estimation Using Radio Holography by SAGE Algorithm

[Yuto Nakajima](#), [Nobuyoshi Kikuma](#) and [Kunio Sakakibara](#) (Nagoya Institute of Technology, Japan)

POS2.30 A Measurement Method of MIMO Channel Capacity Considering the Base Station Correlation in 3D MIMO-OTA

[Ryoya Furukura](#) and [Kazuhiro Honda](#) (University of Toyama, Japan); [Koichi Ogawa](#) (University of Toyama & Faculty of Engineering, Japan)

POS2.31 Effect of Signal-Subspace Dimension on MIMO Radar with Transmission Signal Errors

[Hidetaka Kato](#), [Nobuyoshi Kikuma](#) and [Kunio Sakakibara](#) (Nagoya Institute of Technology, Japan)

POS2.32 Study on Number of Selected Antennas for BD Based Massive MIMO considering K-factor

[Yuki Yaku](#), [Kentaro Nishimori](#), [Yoshiki Shirasawa](#) and [Ryotaro Taniguchi](#) (Niigata University, Japan); [Yoshiaki Morino](#) and [Takefumi Hiraguri](#) (Nippon Institute of Technology, Japan); [Nobuyoshi Kikuma](#) (Nagoya Institute of Technology, Japan)

POS2.33 Performance Evaluation of Multi-beam Massive MIMO with Measured 4 by 4 Beam Patterns

[Akinori Kudo](#), [Kentaro Nishimori](#), [Ryotaro Taniguchi](#), [Shota Ogawa](#) and [Fumiya Muramatsu](#) (Niigata University, Japan); [Takefumi Hiraguri](#) (Nippon Institute of Technology, Japan); [Jiro Hirokawa](#) (Tokyo Institute of Technology, Japan)

POS2.34 Improvement of DOA Resolution Capability of VESPA by Using Multiple Guiding Sensors

[Yuya Sato](#), [Nobuyoshi Kikuma](#) and [Kunio Sakakibara](#) (Nagoya Institute of Technology, Japan)

POS2.35 A Compact 9 GHz Microwave Imaging System

[Kang-Chun Peng](#) (National Kaohsiung University of Science and Technology, Taiwan); [Chiu-Chin Lin](#) (National Kaohsiung University of Science and Technology); [Cyuan-Fong Li](#) (National Kaohsiung University of Science and Technology, Taiwan); [Cheng-Yuan Hung](#), and [Yu-Sung Hsieh](#) (Metal Industries Research & Development Center, Taiwan)

POS2.36 Miniaturized Switchable Bandpass To Matched Bandstop Filter Using Stepped-Impedance Resonator

[Mohd Khairy Zahari](#), [Noor Azwan Shairi](#), [Badrul Hisham Ahmad](#) and [Zahriladha Zakaria](#) (Universiti Teknikal Malaysia Melaka, Malaysia); [Peng Wen Wong](#) (Universiti Teknologi PETRONAS, Malaysia)

POS2.37 Concealed Dangerous Object Detection Based on a 77GHz Radar

[Zhaoyu Zhang](#) and [Xin Di](#) (Fujitsu Research & Development Center, P.R. China); [Yi Xu](#) (Fujitsu Research and Development Center Co., Ltd, P.R. China); [Jun Tian](#) (Fujitsu R&D Center Co., Ltd., P.R. China)

POS2.38 Via-hole Arrangement for Bandwidth Extension of Planar Microstrip-to-Waveguide Transition

[Tuan Thanh Nguyen](#), [Kunio Sakakibara](#) and [Nobuyoshi Kikuma](#) (Nagoya Institute of Technology, Japan)

POS2.39 Design of Frequency Selective Surface Loaded to Multilayer Dielectric Plate for Loss Reduction over Wide Incident Angle

[Shota Ino](#), [Tomihiko Ikegami](#), [Kunio Sakakibara](#) and [Nobuyoshi Kikuma](#) (Nagoya Institute of Technology, Japan)

POS2.40 Optical Distribution Network for Millimeter Wave Communication System Connected by Radio over Fiber

[Naruto Yonemoto](#) and [Yasuyuki Kakubari](#) (Electronic Navigation Research Institute, MPAT, Japan)

POS2.41 E-plane Beam-forming Performance of Rotman-lens in Multi-layer Substrate

[Yamauchi Shugo](#), [Yosuke Otsuka](#), [Kunio Sakakibara](#) and [Nobuyoshi Kikuma](#) (Nagoya Institute of Technology, Japan); [Kojiro Iwasa](#) (NIPPON PILLAR PACKING CO., LTD., Japan)

POS2.42 High Gain Optical Leaky Wave Antenna by Photonic Bandgap

[Hashiguchi Hiroshi](#), [Toshihiko Baba](#) and [Hiroyuki Arai](#) (Yokohama National University, Japan)

POS2.43 EMS Characterization of LDO with On-chip Decaps by Using Direct RF Power Injection Method

[Yin-Cheng Chang](#) (National Chip Implementation Center, NARLabs, Taiwan); [Ping-Yi Wang](#) (National Tsing Hua University, Taiwan); [Hsu-Feng Hsiao](#) (Chip Implementation Center, National Applied Research Laboratories, Taiwan); [Ta-Yeh Lin](#) (Chip Implementation Center, National Applied Research Laboratories, Taiwan); [Shuohung Hsu](#) (National Tsinghua University, Taiwan); [Mao-Hsu Yen](#) (National Taiwan Ocean University, Taiwan); [Ming-Shan Lin](#) (Bureau of Standards, Metrology & Inspection, Taiwan); [Da-Chiang Chang](#) (Chip Implementation Center, National Applied Research Laboratories, Taiwan)

POS2.44 Electrostatic-Discharge Behaviour and Analysis of a Power Management IC

[Yu-Jen Chen](#) (National Sun Yat-sen University, Taiwan); [Shen-Li Chen](#) (National United University, Taiwan)

POS2.45 Analysis of indoor exclusion zone in nuclear power plant environments

[Jong-Eon Park](#), [Sangwoon Youn](#) and [Hosung Choo](#) (Hongik University, Korea); [Jaeyul Choo](#) (Korea Institute of Nuclear Safety, Korea)

POS2.46 Development of Antenna for Local Exposure of Small Animal in 26.5 GHz Band

[Sousuke Higashibata](#) and [Takuji Arima](#) (Tokyo University of Agriculture and Technology, Japan); [Toru Uno](#) (Tokyo University of Agricultural Technology, Japan); [Yasutaka Murakami](#) (Tokyo University of Agriculture and Technology, Japan)

POS2.47 Estimation of SAR Enhancement Due to Implant Metal Exposed to External Electromagnetic Waves

[Emi Matsuda](#), [Keita Sakakibara](#), [Takashi Hikage](#), [Manabu Yamamoto](#) and [Toshio Nojima](#) (Hokkaido University, Japan)

POS2.48 An Efficient Compact Flexible EM Energy Harvester

[Khaled Aljaloud](#) and [Kin-Fai Tong](#) (University College London, United Kingdom (Great Britain))

POS2.49 Design of High-impedance Folded Dipole Antennas Consisting of Three Conductors

[Takuya Nishio](#) (Kanazawa-Institute of Technology, Japan); [Keisuke Noguchi](#) and [Kenji Itoh](#) (Kanazawa Institute of Technology, Japan); [Jiro Ida](#) (Kanazawa-Institute of Technology, Japan)

POS2.50 Magnetic-Field Resonant Coupling at Mid-Range

[Ruey-Bing Hwang](#) (National Chiao Tung University, Taiwan)

POS2.51 Wireless Power Transmission to a Body-Attached Vital Sensor Considering the Human Walking Motion

[Yuki Futagi](#) (Toyama University, Japan); [Kazuhiro Honda](#) (University of Toyama, Japan); [Koichi Ogawa](#) (University of Toyama & Faculty of Engineering, Japan)

POS2.52 Comparison Topologies of Resonant Tank from Class-C Wireless Power Transfer

[Irawan Sukma](#) and [Akio Kitagawa](#) (Kanazawa University, Japan)

Thursday, August 30, 13:00 - 14:20

TP1: Antennas and Propagation Considering Human Body

Chairs: Wen-Shan Chen (Southern Taiwan University of Science and Technology, Taiwan), Kazuhiro Honda (University of Toyama, Japan)

TP1.1 Antennas for Wireless Power Transmission of Capsule Endoscope

[Masaharu Takahashi](#) (Chiba University, Japan)

TP1.2 EMF exposure from 5G equipment at millimeter wave frequencies

[Kun Li](#) (National Institute of Information and Communications Technology, Japan); [Kensuke Sasaki](#) (NICT, Japan); [Soichi Watanabe](#) (National Institute of Information and Communications Technology, Japan)

TP1.3 A study of helmet antennas

[Kazuya Matsubayashi](#), [Naobumi Michishita](#) and [Hisashi Morishita](#) (National Defense Academy, Japan)

TP1.4 Human Monitoring Using MIMO Radar

[Naoki Honma](#), [Dai Sasakawa](#) and [Nobuyuki Shiraki](#) (Iwate University, Japan); [Takeshi Nakayama](#) and [Shoichi Iizuka](#) (Panasonic Corporation, Japan)

Thursday, August 30, 14:40 - 16:00

TP2: Novel Antenna Techniques for Wireless Applications

Chairs: Hiroyuki Arai (Yokohama National University, Japan), Kazunari Kihira (Mitsubishi Electric Corporation, Japan)

TP2.1 Circularly Polarized Antennas with Stable Phase Center

[Qing-Xin Chu](#) (South China University of Technology, P.R. China)
(Invited)

TP2.2 Design of Microstrip Antenna Arrays Fed by Slots on Broad and Narrow Walls of the Rectangular Waveguide

[Yuichi Kimura](#), [Fumihiko Nonaka](#), [Shintaro Shimamori](#) and [Sakuyoshi Saito](#) (Saitama University, Japan)

TP2.3 Functional Microstrip Array Antenna Integrating Double-Sided MIC's

[Eisuke Nishiyama](#) and [Ichihiko Toyoda](#) (Saga University, Japan)

Friday, August 31

Friday, August 31, 08:40 - 10:00

FA1: New Trend in Mobile Propagation

Chairs: Hisato Iwai (Doshisha University, Japan), Hiroaki Nakabayashi (Chiba Institute of Technology, Japan)

FA1.1 5G System Evaluation Tool

[Koshiro Kitao](#), [Anass Benjebbour](#), [Tetsuro Imai](#), [Yoshihisa Kishiyama](#), [Minoru Inomata](#) and [Yukihiko Okumura](#) (NTT DOCOMO, INC., Japan)

FA1.2 4.9 GHz band Outdoor-to-Indoor Radio Propagation Measurement by an Unmanned Aerial Vehicle
[Kentaro Saito](#), [Qiwei Fan](#), [Nopphon Keerativoranan](#) and [Jun-ichi Takada](#) (Tokyo Institute of Technology, Japan)

FA1.3 A Study of User Capacity for Massive MIMO in Urban Street Canyon Environment
[Takuya Nitsu](#) and [Hiroaki Nakabayashi](#) (Chiba Institute of Technology, Japan)

FA1.4 Measurements of Path loss Characteristics using Scale Model for 3D Cell Layout
[Ken Ikeda](#) (Tokyo Institute of Technology, Japan); [Hideki Omote](#) and [Teruya Fujii](#) (Softbank Corp., Japan); [Kei Sakaguchi](#) (Tokyo Institute of Technology & Fraunhofer HHI, Japan)

Friday, August 31, 10:20 - 11:40

FA2: EMC Related Topics

Chairs: Peng Chen (University of Electronic Science and Technology of China, P.R. China), Qiang Chen (Tohoku University, Japan)

FA2.1 Crosstalk and Common Mode Noise Reductions in High-Speed Coupled Transmission Lines
[Ding-Bing Lin](#) (National Taiwan University of Science and Technology, Taiwan)
(Invited)

FA2.2 Effects of Selecting the Fitting Range for SAR Probe Calibration in Waveguide System
[Nozomu Ishii](#) (National Institute of Information and Communications Technology/Niigata University, Japan); [Yuto Shimizu](#), [Tomoaki Nagaoka](#) and [Soichi Watanabe](#) (National Institute of Information and Communications Technology, Japan)

FA2.3 A Hybrid MoM/FDTD Method for Exposure Assessment of Wireless Power Transfer Systems
[Jerdvisanop Chakarothai](#), [Kanako Wake](#) and [Soichi Watanabe](#) (National Institute of Information and Communications Technology, Japan); [Takuji Arima](#) (Tokyo University of Agriculture and Technology, Japan); [Toru Uno](#) (Tokyo University of Agricultural Technology, Japan)