[WeP] Poster Session I	
Date / Time	Oct. 24 (Wed.), 2018 / 15:00-16:30
Place	Grand Ballroom 4

A Halved Volume Dual-Polarized Dipole Antenna

He Huang, Xiaoping Li, Yanming Liu, and Ying Liu Xidian University, China

WeP-02

Far Field from Hemispherical Near Field Measurements for Vehicular Mounted Antenna

Thomas Basikolo¹, Hiroyuki Arai¹, Satoshi Hori², and Shinya Iwanaga²

WeP-03

An Experimental Study of High-Capacity Link Using Orbital Angular Momentum Mode Multiplexing in E-Band Tung Nguyen, Masashi Hirabe, Hiroaki Miyamoto, Ryuji Zenkyu, Masaya Uchida, and Eisaku Sasaki

WeP-04

NEC Corporation, Japan

Circularly Polarized Slotted Cavity Antenna Using TE₂₁₀ Mode for Millimeter-Wave Application

Jang Hwan Bae¹, Jun Gi Jeong¹, Seung Gook Cha¹, Young Joong Yoon¹, and Youngwook Kim²

1 Yonsei University, Korea, 2 California State University, USA

WeP-05

Antenna Gain Enhancement Using Double Dielectric Layered Thin Planar Lens

Rao Shahid Aziz, Tae-Wan Kim, Muhammad Tayyab Azim, Laxmikant Minz, and Seong-Ook Park KAIST, Korea

WeP-06

Multi-Feed and Multi-Polarization Patch Antenna Based on Multiport S-Parameter Matrix Theory

Wen Duan¹, Xiu Yin Zhang¹, and Yue Gao²

¹South China University of Technology, China, ²Queen Mary University of London, UK

¹Yokohama National University, Japan, ²Kojima Industries Corporation, Japan



A Novel Bio Inspired Pattern Reconfigurable Quasi-Yagi Helical Antenna Using Origami DNA

Syed Imran Hussain Shah¹, Saptarshi Gosh¹, Manos M. Tentzeris², and Sungjoon Lim¹
¹Chung-Ang University, Korea, ²Georgia Institute of Technology, USA

WeP-08

Design of Arbitrary Linear Polarization in Traveling Array of Microstrip Comb-Line Antenna Using Rounded Radiating Elements

Ryosuke Kojima, Kunio Sakakibara, and Nobuyoshi Kikuma Nagoya Institute of Technology, Japan

WeP-09

Optimal Distance Measurements of Near-Field Antennas for Cellular Frequency Translators

Ronalaine T. Cutillon¹, Joel Joseph S. Marciano^{1,2}, and Steven Matthew C. Cheng¹

¹University of the Philippines Diliman, Philippines, ²Advanced Science and Technology Institute, Philippines

WeP-10

An Optical Leaky Wave Antenna Excited by Parabolic Reflector

Hiroshi Hashiguchi, Toshihiko Baba, and Hiroyuki Arai *Yokohama National University, Japan*

WeP-11

Study of Coupling Sleeve of Monopole Plasma Antenna for Wi-Fi Application

M. Hilmi, M. T. Ali, I. Pasya, and H. Jaafar Universiti Teknologi MARA, Malaysia

WeP-12

Evaluation of Intersymbol Interference in Non-Far Region Transmission Using 60 GHz-Band Large Array Antennas T. Ruckkwaen, K. Araki, T. Tomura, J. Hirokawa, and M. Ando *Tokyo Institute of Technology, Japan*

WeP-13

Design of Spatial Power Combining Circuit Using Taper Waveguide for High-Power Generation in Terahertz Band Kazuaki Niwa, Kunio Sakakibara, and Nobuyoshi Kikuma Nagoya Institute of Technology, Japan

Improvement of Estimation Accuracy by Using Multiple Guiding Sensors in DOA Estimation of Radio Waves with VESPA Algorithm

Yuya Sato, Nobuyoshi Kikuma, and Kunio Sakakibara Nagoya Institute of Technology, Japan

WeP-15

Performance Improvement of DOA Estimation Using Radio Holography by SAGE Algorithm

Yuto Nakajima, Nobuyoshi Kikuma, and Kunio Sakakibara Nagoya Institute of Technology, Japan

WeP-16

Distance Estimation between Base Station and User Terminal Using Multi-Carrier Signal

Masaya Yamada, Nobuyoshi Kikuma, and Kunio Sakakibara Nagoya Institute of Technology, Japan

WeP-17

On Doppler Ambiguity Estimation for Millimeter FM-CW Radar by Using MUSIC Algorithm

Takahiro Horiuchi¹, Hiroyoshi Yamada¹, Yoshio Yamaguchi¹, and Michiyo Hiramoto²
¹Niigata University, Japan, ²OKI Electric Industry Co., Ltd., Japan

WeP-18

Prediction of Indoor-to-Outdoor Radio Wave Propagation Characteristics in the Office Environment at 2.4 GHz and 5.2 GHz Bands

Keita Saito and Manabu Omiya Hokkaido University, Japan

WeP-19

Scattering Process Identification and Cluster Analysis for Millimeter-Wave Indoor Channel Model

Satoru Kishimoto¹, Minseok Kim¹, Danping He², and Ke Guan²

¹Niigata University, Japan, ²Beijing Jiaotong University, China

WeP-20

Development of Point-to-Multipoint Type Human Detection System Using 920 MHz Band

Yoshihiro Matsuda, Koichi Shin, and Masahiro Nishi *Hiroshima City University, Japan*



Exclusion Zone Comparison between in Free Space and Nuclear Power Plant Environment

Sangwoon Youn¹, Jong-Eon Park¹, Jaeyul Choo², and Hosung Choo¹

*Hongik University, Korea, *Korea Institute of Nuclear Safety, Korea

WeP-22

Analysis of Effect of Stirrer Type on Field Uniformity in RRA Reverberation Chamber

Jawad Yousaf¹, Hosang Lee¹, Junhee Han¹, Jeongeun Kim¹, Muhammad Faisal¹, Jun Gyu Yang², and Wansoo Nah¹ Sungkyunkwan University, Korea, ²National Radio Research Agency, Korea

WeP-23

Evaluating Indoor Propagation in Modern Office Building Using V- and E-Band Radio Systems

Zhou Du, Kimmo Aronkytö, and Jyri Putkonen *Nokia Corporation, Finland*

WeP-24

Study of Dielectric Loss and Conductor Loss among Microstrip, Covered Microstrip and Inverted Microstrip Gap Waveguide Utilizing Variational Method in Millimeter Waves

Jinlin Liu, Jian Yang, and Ashraf Uz Zaman Chalmers University of Technology, Sweden

WeP-25

5G Millimeter-Wave Beamforming Issues and Prospects

Sangjoon Lee and Byung-Jun Jang Kookmin University, Korea

WeP-26

Vehicle-to-Infrastructure Radio Channel Delay Spread Measurement in Expressway Environment at 5.9 GHz Hyuk-Je Kim, Chung-Sup Kim, Jong-Su Lim, Ju-Yeon Hong, and Young-Jun Chong *ETRI, Korea*

WeP-27

Measurement Results of High-Speed V2X Channel Characteristics in Expressway Environment Chung-Sup Kim, Hyuk-Je Kim, Jong-Su Lim, Ju-Yeon Hong, and YoungJun Chong *ETRI, Korea*

Outage Probability Performance of Telemetry Modulation Methods under Typical Reentry Plasma Sheath Channel

Hailiang Wei, Lei Shi, Yanming Liu, and Xiaoping Li Xidian University, China

WeP-29

Statistical Characteristics of the Received Signal Envelope Affected by Hypersonic Vehicle Communication Channel

Bo Yao, Lei Shi, and Xiaoping Li Xidian University, China

WeP-30

Effect of Signal Correlation in FMCW-MIMO Radar with Augmented Array

Ryo Saito and Koichi Ichige Yokohama National University, Japan

WeP-31

An Optimum 2D Sparse Array Configuration with Reduced Mutual Coupling

Shogo Nakamura, Sho Iwazaki, and Koichi Ichige Yokohama National University, Japan

WeP-32

Medium PRF Performance Analysis for Shipborne Pulsed Doppler Radars

Myungsoo Chung, Jinwoo Shin, and Kichul Yoon *ADD, Korea*

WeP-33

Experimental Study on Polarimetric SAR Tomography Using Pi-SAR-L2 Data

Kenichiro Suzuki¹, Hiroyoshi Yamada¹, Masato Ohki², Yoshio Yamaguchi¹, and Ryoichi Sato¹
¹Niigata University, Japan, ²Japan Aerospace Exploration Agency, Japan

WeP-34

A Space-Time Model of Sea Echo with Shipborne HFSWR Platform under Varying Velocity Motion

Xin Zhang^{1,2}, Qiang Yang^{1,2}, Jinwei Sun¹, and Weibo Deng^{1,2}

¹Harbin Institute of Technology, China, ²Ministry of Industry and Information Technology, China



Spectrum Prediction Method Based on EMD and ELM in HFSWR

Hongzhi Li^{1,2}, Changjun Yu^{1,2}, and Bin Zhao^{1,2}

¹Harbin Institute of Technology, China, ²Ministry of Industry and Information Technology, China

WeP-36

Incorporation of Super-Resolution Doppler Analysis and Compressed Sensing Filter for UWB Human Body Imaging Radar Takumi Hayashi¹ and Shouhei Kidera^{1,2}

WeP-37

Acceleration Algorithm for Range Points Migration Based Human Body Imaging with UWB Multi-Static Radar Yoshiki Akiyama¹ and Shouhei Kidera^{1,2}

WeP-38

Transmission Error Correction Using Overlapping Elements in Virtual Array of MIMO Radar

Hidetaka Kato, Nobuyoshi Kikuma, and Kunio Sakakibara

Nagoya Institute of Technology, Japan

WeP-39

Polarimetric H/alpha Analysis on Height Direction by Using Polarimetric TomoSAR

Masanori Gocho¹, Hiroyoshi Yamada¹, Yoshio Yamaguchi¹, Ryoichi Sato¹, Motofumi Arii², and Shoichiro Kojima³

WeP-40

Analysis of the Effect of Doppler Processing Bandwidth Variation on C-Band ScanSAR System Based on Offset Reflector Antenna

Jung-Hwan Lim¹, Jae W. Lee¹, Taek-Kyung Lee¹, Sang-Bum Ryu², Hyeon-Cheol Lee², and Sang-Gyu Lee²

Korea Aerospace University, Korea, **KARI, Korea

WeP-41

A Novel Channel-Calibration Method by Using Isolated and Strong Scatters for Multi-Channel HRWS SAR Ziyue ${\sf Guo}^{1,2}$, Di ${\sf Wu}^{1,2}$, Zhigang ${\sf Guo}^3$

¹Nanjing University of Aeronautics and Astronautics, China, ²Ministry of Industry and Information Technology, China, ³Chinese People's Liberation Army, China

¹The University of Electro-Communications, Japan, ²PRESTO, Japan

¹The University of Electro-Communications, Japan, ²PRESTO, Japan

¹Niigata University, Japan, ²Mitsubishi Electric Corporation, Japan,

³National Institute of Information and Communications Technology, Japan

Angular Spread Estimation of MIMO Radar Using Transmission Diversity

Sota Iwase, Nobuyoshi Kikuma, and Kunio Sakakibara Nagoya Institute of Technology, Japan

WeP-43

Study on Imaging Method and Doppler Effect for Millimeter Wave Automotive SAR

Takumi Kobayashi¹, Hiroyoshi Yamada¹, Yuuichi Sugiyama², Shogo Muramatsu¹, and Yoshio Yamaguchi¹ *Niigata University, Japan,* ² *Denso Ten Limited, Japan*

WeP-44

Modal Analysis of Longitudinal Corrugated Rods Using Asymptotic Boundary Conditions

Chang-Fu Chin and Malcolm Ng Mou Kehn National Chiao Tung University, Taiwan

WeP-45

FDTD Analysis of Electromagnetic Wave Scattering from Human Body

Jae-Woo Baek, Jeahoon Cho, Yeon-Hwa Kim, Seungyong Park, and Kyung-Young Jung Hanyang University, Korea

WeP-46

Development of a FDTD Simulator for the Analysis of Electromagnetic Wave Propagation in the Ionosphere Jeahoon Cho, Jae-Woo Baek, Seungyong Park, Yeon-Hwa Kim, and Kyung-Young Jung Hanyang University, Korea

WeP-47

An Efficient FDTD Method Modeling Technique for Multi Angle Bi-Static Rader Using Equivalent Currents Takuji Arima¹, Toshiyuki Nishibori², Akihisa Uematsu², and Toru Uno¹

1 Tokyo University of Agriculture and Technology, Japan, ² Japan Aerospace Exploration Agency, Japan

WeP-48

Flexible Dual-Band Ultrathin FSS with Ultra-Close Band Spacing

Sihong Chen, Taisong Pan, and Yuan Lin
University of Electronic Science and Technology of China, China



Security Paper and Detection System Design Using Frequency Selective Surface

Sang-Hwa Lee¹, Min-Sik Kim², Jong-Kyu Kim², and Ic-Pyo Hong¹

¹Kongju National University, Korea, ²National Security Research Institute, Korea

WeP-50

A 2.5-D Miniaturized Frequency Selective Surface with Angular Stability Property

Yue Cui, Wen Jiang, Jun Yu, and Shuxi Gong Xidian University, China

WeP-51

Novel Quintuple-Mode Wideband Filter Based on Substrate Integrated Waveguide Using an Elliptic Metallic Post

H. Ammari, M. L. Riabi, F. Grine, M. T. Benhabiles, R. Khalef, and Ch. Erredir *University of Brothers Mentouri Constantine 1, Algeria*

WeP-52

A Single Layer Microwave Absorber Using FSS of Notched Circular Patch

Yuka Shinozaki and Hiroyuki Arai Yokohama National University, Japan

WeP-53

A Dual-Band Antenna Array with Mutual Coupling Reduction Using 3D Metamaterial Structures

Shengyuan Luo¹ and Yingsong Li^{1,2}

WeP-54

Crosstalk Reduction Design and Analysis of the Planar Meander Transmission Lines

Xiaomin Liu¹, Yingsong Li^{1,2}, Yuting Zhao², and Luyu Zhao³

WeP-55

Dielectric Properties Measurement Technique for Precise Brain Phantom Fabrication

Jae-Yeon Shim, Biswarup Rana, and Jae-Young Chung

Seoul National University of Science and Technology, Korea

¹Harbin Engineering University, China, ²Chinese Academy of Sciences, China

¹Harbin Engineering University, China, ²Chinese Academy of Sciences, China, ³Xidian University, China

[ThP] Poster Session ${\mathbb I}$	
Date / Time	Oct. 25 (Thu.), 2018 / 16:40-18:10
Place	Grand Ballroom 4

A Differentially-Fed Dual-Polarized Antenna Based on Substrate Integrated Waveguide

Xuanbo Wang, Yuehui Cui, and RongLin Li South China University of Technology, China

ThP-02

Microstrip Patch Array Antenna Using a Parallel and Series Combination Feed Network

Heesu Wang, Kam Eucharist Kedze, and Ikmo Park *Ajou University, Korea*

ThP-03

Novel Broadband Dual-Polarized Antenna for 5G Applications

Hua Tang, Xianzheng Zong, and Zaiping Nie
University of Electronic Science and Technology of China, China

ThP-04

Compact Four-Element MIMO Antenna Using DGS for WLAN Applications

Soumen Pandit¹, Akhilesh Mohan¹, Priyadip Ray¹, and Biswarup Rana²

¹Indian Institute of Technology Kharagpur, India, ²Seoul National University of Science and Technology, Korea

ThP-05

Dual-Polarized Left Handed Leaky Wave Antenna Using Grounded Coplanar Transmission Line

Takayoshi Sasaki¹, Keisuke Sato¹, Ichiro Oshima¹, Naobumi Michishita², and Keizo Cho³

¹Denki Kogyo Co. Ltd., Japan, ²National Defense Academy, Japan, ³Chiba Institute of Technology, Japan

ThP-06

Design of a V2X Vehicle Antenna

Seungbok Byun, Sangpil Kang, Choulhee Hong, Heeyoung Kim, and Yoongi Kim *Ace-Technologies Corp., Korea*



Design of a Dual-Band Planar Monopole Antenna for WLAN Applications

Ji-Woong Park, Min-Joo Jeong, Niamat Hussain, Han-Ul Bong, and Nam Kim *Chungbuk National University, Korea*

ThP-08

Dual Polarization L-Shaped Slot Array Antenna for 5G Metal-Rimmed Mobile Phone

Eusoo Park¹, Young Joong Yoon¹, and Hyungrak Kim²

¹Yonsei University, Korea, ²Daelim University College, Korea

ThP-09

Reflectarray Antenna with Backfire Patch Antenna

Reiji Toda, Kohei Tsukamoto, and Hiroyuki Arai Yokohama National University, Japan

ThP-10

Gain Improvement of A Metasurface for U-Slot Microstrip Patch Antenna Array at 5.8 GHz

Duc Dung Nguyen and Chulhun Seo Soongsil University, Korea

ThP-11

Array Antenna with Suppressed Side Lobe Level for Millimeter-Wave Applications

Soo-Chang Chae¹, Ghoo Kim¹, Hye-Won Jo¹, In-June Hwang¹, Yeon-Jea Cho², and Jong-Won Yu¹ ** KAIST, Korea, ²KT Corporation, Korea

ThP-12

Position Optimization of LF Array Antennas in a Small Device

Tae Heung Lim, Jun Hur, and Hosung Choo Hongik University, Korea

ThP-13

Mutual Coupling Reduction in Circular Polarized MIMO Antenna Using an Electromagnetic Bandgap Structure Yu Dang, Jiaran Qi, Yongheng Mu, Yue Xu, and Jinghui Qiu Harbin Institute of Technology, China

A Tapered Slot Antenna for Beamforming Application

Dong-Chan Kim, Seong-Jin Park, and Seong-Ook Park KAIST, Korea

ThP-15

A Simple Wideband Magneto-Electric Dipole Antenna

Jingtao Zeng and Kwai-Man Luk

City University of Hong Kong, Hong Kong, China

ThP-16

UWB Bow-Tie Antenna with WLAN/WiMAX Band Application

Minbeom Ko and Jaehoon Choi Hanyang University, Korea

ThP-17

Antipodal Vivaldi Antenna Array Optimized by Modified Differential Evolution Algorithm

Yu Dang, Hongmei Li, and Jiaran Qi Harbin Institute of Technology, China

ThP-18

Compact Penta-Band CPW-Fed Slot Antenna

You-Hua Wu and Wen-Hua Tu National Central University, Taiwan

ThP-19

Single Feed Dual Polarized Crossed Slot Antenna for Tri-Band Operation

Kapil Saraswat and A. R. Harish
Indian Institute of Technology Kanpur, India

ThP-20

A Low Profile UWB Directional Radiation Antenna Filled with Dielectric

Shu Lin, Shou-Lan Liu, Jian-Lin Jiao, Yu-Wei Zhang, and Cai-Tian Yang *Harbin Institute of Technology, China*



A Low-Profile Ultra-Wideband Directional Radiation Conformal Antenna Filled with Medium

Shu Lin, Jian-Lin Jiao, Shou-Lan Liu, Yu-Wei Zhang, and Cai-Tian Yang *Harbin Institute of Technology, China*

ThP-22

A UWB Low-Profile Tightly Coupled Dipole Array

Guopeng Tang, Ganlin Feng, Yin He, Bo Tao, and Chenjiang Guo Northwestern Polytechnical University, China

ThP-23

Design of a Broadband Patch Antenna Using an L-Shaped Probe for Direction Finding Applications

Doyoung Jang¹, Sungjun Yoo¹, Woong Hee Kim², and Hosung Choo¹ Hongik University, Korea, ²ETRI, Korea

ThP-24

Design of a Multi-Band Coupled Fed Printed Dipole Antenna as an Array Element for Direction Finding Systems Sungsik Wang, Sungjun Yoo, and Hosung Choo

Hongik University, Korea

ThP-25

Dual-Band Antenna Based on Composite Right/Left-Handed Transmission Line

Yu Dang, Jiaran Qi, Yongheng Mu, Yue Xu, and Jinghui Qiu Harbin Institute of Technology, China

ThP-26

A Resistance Loaded Vivaldi Antenna for Microwave Imaging

Lijia Chen, Hua Zhong, Shufeng Zhang, Li Xia, Hua Zong, and Shengchang Lan *Harbin Institute of Technology, China*

ThP-27

A Non-Curved Broadband High-Gain Vivaldi Antenna

Shang Yu, Shu Lin, Yu-Wei Zhang, and Bao-Qi Zhu Harbin Institute of Technology, China

A Dual-Polarized Printed Dipole for Base Station in 5G Mobile Communications

Hua Tang, Xianzheng Zong, and Zaiping Nie
University of Electronic Science and Technology of China, China

ThP-29

CPW-Fed Tuning Stub Loaded Wide-Slot Antenna for UWB Applications

Yeonjeong O, Sungpeel Kim, and Jaehoon Choi *Hanyang University, Korea*

ThP-30

Generation of Bessel Beams at Millimeter-Wave Band Using 3-D Printed Axicon Lenses

Peng-Yu Feng and Shi-Wei Qu University of Electronic Science and Technology of China, China

ThP-31

Design of a Cavity-Backed Patch Antenna for a Phased Array

Jinwoo Shin¹, Kichul Yoon¹, Myungsoo Chung¹, Seokgon Lee², and Chanhong Kim¹ ADD, Korea, ²Hanwha Systems, Korea

ThP-32

A 28 GHz 4 × 4 U-Slot Patch Array Antenna for mm-Wave Communication

Kyoseung Keum and Jaehoon Choi Hanyang University, Korea

ThP-33

Simulation and Analysis of the Influence on Radiation of Loading Dielectric on Slot Antenna

Jia-Yi Wang, Shu Lin, Zhi-Yuan Sun, Yan-Di Bi, and Alexander Denisov *Harbin Institute of Technology, China*

ThP-34

Performance Investigation of Feed Horn Using FDM 3D Printing Technology

Sang Tae Kim, Jae W. Lee, and Taek-Kyung Lee Korea Aerospace University, Korea



A 7:1 Bandwidth Tightly Coupled Antenna Array with Large Angle Scanning

Yuan Sui¹, Yingsong Li^{1,2}, and Luyu Zhao³

¹Harbin Engineering University, China, ²Chinese Academy of Sciences, China, ³Xidian University, China

ThP-36

Design of Coupled Line to Discriminate Channel Failure in Active Phased Array

Daesung Park^{1,2}, Donghyuk Jang¹, Seunghee Seo³, and Jaehoon Choi²

1Hanwha Systems, Korea, ²Hanyang University, Korea, ³ADD, Korea

ThP-37

Shifted Beam Microstrip Array Antenna for Velocity Detection Radar

Damaraji Wijoyono, Try Putra Wibowo, and Fitri Yuli Zulkifli *Universitas Indonesia, Indonesia*

ThP-38

Sparse Controllable Adaptive Array Beamforming with Improved Array Element Utilization

Wanlu Shi¹ and Yingsong Li^{1,2}

¹Harbin Engineering University, China, ²Chinese Academy of Sciences, China

ThP-39

A Simple Estimation Method for Input Impedance of Comb-Line Array

Jihoon Kim¹, Kangwook Kim¹, and Namjoon Yoo²
¹GIST, Korea, ²Accendo Corporation, Korea

ThP-40

A Broadband High-Gain Printed Parabolic Reflector Antenna with A Spatial Wedge-Shaped Feeding Structure

Yuwei Zhang, Shu Lin, Yandi Bi, Shang Yu, and Alexander Denisov Harbin Institute of Technology, China

ThP-41

A Simple Expression for Curved Rectangular Patch Antenna Pattern

Hirokazu Kobayashi¹ and Takuma Watanabe²

¹Osaka Institute of Technology, Japan, ²Fujitsu LTD, Japan

Concentric Arrayed - Radial Line Slot Antenna with Groove for Rotating Mode Generation

Damoa Maeng¹, Seung Hun Cha¹, Woo Joong Kim¹, Sung Hoe Kim¹, Young Joong Yoon¹, Hyungrak Kim², Jiheon Ryu³, and Jin Soo Choi³

¹Yonsei University, Korea, ²Daelim University College, Korea, ³ADD, Korea

ThP-43

Multi-Beam Transmitarray Antenna Design Using Principle of Superposition

Chang-Hyun Lee, Sang Wook Chi, Jae-Gon Lee, and Jeong-Hae Lee *Hongik University, Korea*

ThP-44

Novel Continuous Beam Scanning Leaky-Wave Antennas Using 1-D Mushroom Structure

Debabrata K. Karmokar, Shu-Lin Chen, and Y. Jay Guo *University of Technology Sydney, Australia*

ThP-45

The Relation of Scattering Field and Characteristic Mode of PEC Circular Cylinder

Yu Nishikawa and Hiroyuki Arai Yokohama National University, Japan

ThP-46

A Method to Reduce the Influence of Coaxial Lines on the Radiation of Printed Dipole Fed by CPW

Zhi-Yuan Sun, Shu Lin, Jia-Yi Wang, Alexander Denisov, and Cai-Tian Yang *Harbin Institute of Technology, China*

ThP-47

Design of a GPS Antenna Element Using Circular Dual-Loop with an Extended Cavity Structure

Jun Hur and Hosung Choo Hongik University, Korea

ThP-48

Single Channel Linear Rotary Joint at X-Band

Muhammad Tayyab Azim, Junhyeong Park, Laxmikant Minz, Rao Shahid Aziz, and Seong-Ook Park *KAIST, Korea*



Analysis of Stacked Dielectric Resonator Antenna

Tae-Wan Kim and Seong-Ook Park KAIST, Korea

ThP-50

Broadside Axial-Ratio Computation Using Surface Current Distribution for Planar Antennas

Trivesh Kumar¹ and A. R. Harish²

¹PDPM-IIITDM Jabalpur, India, ²Indian Institute of Technology Kanpur, India

ThP-51

Withdrawn

ThP-52

A New Calibration Kit for VNA Measurements of General Microstrip Line Devices Using Gap Waveguide Technology Julius Petersson, Ashraf Zaman, and Jian Yang Chalmers University of Technology, Sweden

ThP-53

Radiation Characteristics of Near-Field Beam Focusing for an Active Array Antenna

Hye Sun Ju, Shin-Young Cho, Joonho So, and Seog Bong Kim *ADD, Korea*

ThP-54

Analysis on Self-Balancing Effect of a Small Loop Antenna

Takashi Yanagi, Yasuhiro Nishioka, Toru Fukasawa, Naofumi Yoneda, and Hiroaki Miyashita *Mitsubishi Electric Corporation, Japan*

ThP-55

Single-Cut Near-Field Far-Field Transformation Technique Based on 2D Plane-Wave Expansion

Shuntaro Omi, Toru Uno, and Takuji Arima
Tokyo University of Agriculture and Technology, Japan

Using Correlation Characteristics of Zadoff-Chu Sequence to Measure DOA and TOA by Synthetic Aperture Antennas

Kazuma Tomimoto and Ryo Yamaguchi Softbank Corporation, Japan

ThP-57

A Calibration Method for Array Antenna Using Non-Resonant Probe

Atsushi Katsuta¹, Hiroyuki Arai¹, and Masami Arai²

¹Yokohama National University, Japan, ²Huawei Technologies Japan K.K., Japan

ThP-58

Withdrawn

ThP-59

Continuous Measurement Method of Microwave Properties Using Cavity Perturbation Technique Chul-Ki Kim and Seong-Ook Park *KAIST, Korea*

ThP-60

Design of a 2×2-Element for a Perpendicular-Corporate Feed Four-Layer Parallel-Plate Pair-Slot Array Antenna Hisanori Irie, Takashi Tomura, and Jiro Hirokawa *Tokyo Institute of Technology, Japan*

ThP-61

Double-Layer Waveguide Planar Array Antenna Composed of Narrow-Wall Cavity-Backed 2x2-Element Sub-Arrays Fed by E-Plane Feeding Circuit

Haruna Yokoi, Kunio Sakakibara, and Nobuyoshi Kikuma Nagoya Institute of Technology, Japan

ThP-62

Design of a Dual-Polarized Slot Array Antenna with Monopulse Corporate-Feed Waveguides for Two-Dimensional Orthogonal 8-Multiplexing in the Non-Far Region

Kentaro Wada, Ryotaro Ohashi, Takashi Tomura, and Jiro Hirokawa *Tokyo Institute of Technology, Japan*



Design of an 112×64-Element Corporate-Feed Hollow-Waveguide Slot Array Antenna

Shuki Wai, Takashi Tomura, and Jiro Hirokawa *Tokyo Institute of Technology, Japan*

ThP-64

Suppression of E-Plane Sidelobes Using Double Slit Layers in a Corporate-Feed Waveguide Slot Array Antenna Consisting of 2×2-Element Radiating Units

Haruka Arakawa, Hisanori Irie, Takashi Tomura, and Jiro Hirokawa *Tokyo Institute of Technology, Japan*

ThP-65

Radiation of a Semi-Rigid Cable Monopole Antenna Inserting into a 60GHz-Band Oscillator Chip Yuta Saito, Takashi Tomura, Jiro Hirokawa, and Kenichi Okada Tokyo Institute of Technology, Japan

ThP-66

Bandwidth Extension of Planar Microstrip-to-Waveguide Transition by Via-Hole Arrangement Thanh Tuan Nguyen, Kunio Sakakibara, and Nobuyoshi Kikuma Nagoya Institute of Technology, Japan

ThP-67

Differentially-Driven Dielectric Resonator Antenna Using TE₂₀ Mode Substrate Integrated Waveguide Abhishek Sharma, Anirban Sarkar, Animesh Biswas, and M. J. Akhtar *Indian Institute of Technology Kanpur, India*

ThP-68

A Planar Single-Polarized Ultra-Wideband Antenna Element for Millimeter-Wave Phased Array Sadegh Mansouri Moghaddam¹, Jian Yang¹, Andrés Alayón Glazunov^{1,2}, and Ashraf Uz Zaman¹

1 Chalmers University of Technology, Sweden, ² University of Twente, The Netherlands

ThP-69

Wideband E-Shaped Patch Antenna with Parasitic Strip for 60-GHz Unlicensed Band Application Tae Hwan Jang, Hong Yi Kim, Hong Hyun Bae, and Chul Soon Park *KAIST, Korea*

Integrated mmWave Log-Spiral Antenna for High-Speed Wireless Communication

Bernhard Klein, Ronny Hahnel, and Dirk Plettemeier Technische Universitat Dresden, Germany

ThP-71

Double Crossed THz Planar Bow-Tie Antenna on a High-Dielectric Extended Hemispherical Lens Covered with Matching Layer for Optimum Wave Propagation

Catur Apriono, Intan Nurfitri, Arie Pangesti Aji, and Eko Tjipto Rahardjo *Universitas Indonesia, Indonesia*

ThP-72

Coexist Design of Sub-6GHz and Millimeter-Wave Antennas for 5G Mobile Terminals

Zhouyou Ren, Shengjie Wu, and Anping Zhao Shenzhen Sunway Communication Co., Ltd., China

ThP-73

Design of Dual-Band Millimeter-Wave Antenna Array for 5G Communication System

Shengjie Wu, Anping Zhao, and Zhouyou Ren Shenzhen Sunway Communication Co., Ltd., China

ThP-74

Impacts on Gain Index Values in AGC of Receiver according to Building Entry Propagation in mm Wave Band YoungKeun Yoon, JongHo Kim, JuYeon Hong, and YoungJun Chong *ETRI, Korea*

ThP-75

Optimized Design of Broadband Radar Absorbent Material

Yuka Ishii, Naobumi Michishita, and Hisashi Morishita National Defense Academy, Japan

ThP-76

Electromagnetic Field Distributions of Open Cabinet in Nuclear Power Plants

Jong-Eon Park¹, Jaeyul Choo², and Hosung Choo¹

¹Hongik University, Korea, ²Korea Institute of Nuclear Safety, Korea



An Improved Head Imaging Algorithm Based on Huygens Principle

Lijia Chen, Li Xia, Hao Li, Shufeng Zhang, and Shengchang Lan *Harbin Institute of Technology, China*

ThP-78

Reconstruction of Buried Cylindrical Objects by Variational Born Iterative Method

Tulun Durukan and Yasemin Altuncu
Nigde Omer Halisdemir University, Turkey

ThP-79

Reflection Suppression in the Short-Slot 2-Plane Coupler by Step Structure

Yuki Sunaguchi, Masahiro Wakasa, Takashi Tomura, and Jiro Hirokawa *Tokyo Institute of Technology, Japan*

[FrP] Poster Session III	
Date / Time	Oct. 26 (Fri.), 2018 / 12:30-14:10
Place	Grand Ballroom 4

A Compact Rx Antenna System for 3D Direction Finding Passive Radar

Hojoo Lee¹, Dae Woong Woo², and Jaehoon Choi¹

*Hanyang University, Korea, *ADD, Korea

FrP-02

MACKEY Type T Covering WiFi 2 GHz / 5 GHz Bands

Ken Hirano, Shigeru Makino, Keisuke Noguchi, Tetsuo Hirota, and Kenji Itoh *Kanazawa Institute of Technology, Japan*

FrP-03

Design of a UWB Antenna for Microwave Imaging

Lijia Chen, Shufeng Zhang, Li Xia, Hao Li, Hongmei Li, and Shengchang Lan *Harbin Institute of Technology, China*

FrP-04

A Dual Polarized Pattern Reconfigurable Antenna Array Using Liquid Crystal Phase Shifter

Jun Shu, Hong-Li Peng, Yao-Ping Zhang, and Jun-Fa Mao *Shanghai Jiao Tong University, China*

FrP-05

High-Gain Polarization Reconfigurable Antennas

Guoying Lin, Yuehui Cui, and RongLin Li South China University of Technology, China

FrP-06

Withdrawn



Polarization-Reconfigurable Slot Antenna Using Metasurface

Ganlin Feng, Chunyu Chang, Guopeng Tang, Chenjiang Guo, and Jun Ding Northwestern Polytechnical University, China

FrP-08

High Gain Switchable Dielectric Resonator Antenna Array for 5G Applications

N. H. Shahadan¹, M. H. Jamaluddin², M. Hashim Dahri², M. R. Kamarudin³, and K. H. Yusof ¹Politeknik Ibrahim Sultan, Malaysia, ²Universiti Teknologi Malaysia, Malaysia, ³Cranfield University, UK, ⁴Mahsa University, Malaysia

FrP-09

A Wideband Reconfigurable Feeding Network for Quadruple Polarization Antenna

Ghoo Kim, Kwang-Seok Kim, Soo-Chang Chae, Hyun-Young Cho, and Jong-Won Yu KAIST, Korea

FrP-10

Polarization Reconfigurable Microstrip Patch Antenna for Wireless Communication Applications

W.I. Roseli¹, N.H Moktar¹, and M.T Ali²

¹Polytechnic Sultan Idris Shah, Malaysia, ²Universiti Teknologi MARA, Malaysia

FrP-11

Inter-Cell Interference Reduction in Multi Layered Cell Based on Flexible Null Area Control

Keiya Uchida and Mitoshi Fujimoto *University of Fukui, Japan*

FrP-12

Wind Influence of Air Wire Antenna Suspended from Drone

Kohei Kawabata and Hiroyuki Arai Yokohama National University, Japan

FrP-13

E-Plane Beam-Forming Performance of Rotman-Lens in Multi-Layer Substrate

Yosuke Otsuka¹, Shugo Yamauchi¹, Kunio Sakakibara¹, Nobuyoshi Kikuma¹, and Kojiro Iwasa² ¹Nagoya Institute of Technology, Japan, ²Nippon Pillar Packing Co., Ltd., Japan

Performance Degradation of Deployable Antenna from Panel Misalignment with Random Surface Errors

Seung Joo Jo, Ji Yong Lee, Seong Sik Yoon, Taek-Kyung Lee, and Jae W. Lee *Korea Aerospace University, Korea*

FrP-15

Design of Dual-Frequency Reflectarray Using Particle Swam Optimization

Takuto Ohsawa¹, Tamami Maruyama¹, Manabu Omiya², and Noriharu Suematsu³

¹National Institute of Technology, Hakodate College, Japan, ²Hokkaido University, Japan, ³Tohoku University, Japan

FrP-16

X-Band Directivity Improvement Using Reflector

M.M. Gajibo¹, M.K.A. Rahim¹, O. Ayop¹, N.A. Murad¹, H.A. Majid², and M. A. Baba¹

¹Universiti Teknologi Malaysia, Malaysia, ²Universiti Tun Hussein Onn Malaysia, Malaysia

FrP-17

Analysis of Cylindrical Monopole Plasma Antenna Design

H. Ja'afar¹, R. Abdullah¹, F.N.M. Redzwan¹, and Fatemeh Sadeghikia²

¹Universiti Teknologi MARA, Malaysia, ²Ministry of Science, Research and Technology, Iran

FrP-18

Converged Microwave Beam in Wireless Communication

Ju Yeon Hong, Young Keun Yoon, Young-Jun Chong, and Woo Jin Byun ETRI, Korea

FrP-19

Wide-Beam Dual-Frequency Circularly Polarized Antenna for Beidou Navigation System

Chunyu Chang, Ganlin Feng, Bao Cao, Bo Tao, and Chenjiang Guo Northwestern Polytechnical University, China

FrP-20

A Study on Near-Metal-Insensitive Antenna for Installation on Metal Walls

Yuta Nakagawa, Naobumi Michishita, and Hisashi Morishita National Defense Academy, Japan



Dual-Band and Dual-Polarization Microstrip Antennas Loaded with Split Ring Resonators

Bo Tao, Yin He, Guopeng Tang, Chunyu Chang, and Jun Ding Northwestern Polytechnical University, China

FrP-22

Localization of Near-Field Sources Using Compressed Sensing

Masahiro Inami, Nobuyoshi Kikuma, and Kunio Sakakibara Nagoya Institute of Technology, Japan

FrP-23

Beam Codebook Based Direction Finding Using Time-Modulated Array

Kyung-Jin Baik, Sangjoon Lee, Zhi-Hao Long, and Byung-Jun Jang *Kookmin University, Korea*

FrP-24

Performance Evaluation of Terminal Position Detection Based on DOA in an Indoor Environment

Takuma Inui, Hisato Iwai, and Hideichi Sasaoka Doshisha University, Japan

FrP-25

Path Loss Analysis for Anomalous Propagation with Atmospheric Refractive Index

Jinhyung Oh, Jongho Kim, and Youngjun Chong ETRI, Korea

FrP-26

3-Year Observations on Overreach Propagation from Korea to Japan in V-Low Band

Koki Kanekura, Koichi Shin, and Masahiro Nishi *Hiroshima City University, Japan*

FrP-27

Measurement of Anomalous Propagation in the South Seashore of Korea

Jong Ho Kim, Jin Hyung Oh, and Young Jun Chong ETRI, Korea

37 GHz Wideband Millimeter-Wave Radio Propagation Measurement in Foliage Environment

Ahmed M Al-Samman and Tharek Abd Rahman *Universiti Teknologi Malaysia, Malaysia*

FrP-29

Transmission Coefficient Estimation Based on the RF Reflected Signal under Plasma Sheath

Min Yang, Xiaoping Li, Yanming Liu, Bosheng Xue, and Xin Qi Xidian University, China

FrP-30

Simple Measurement Method of Shielding Effectiveness in Nuclear Power Plants

Hyunki Kim, Kwangdae Lee, and Heetaek Lim Korea Hydro & Nuclear Power Co., Ltd., Korea

FrP-31

Effect of Directivity of On-Vehicle Antenna on Spread and Channel Capacity

Naozumi Ando and Mitoshi Fujimoto University of Fukui, Japan

FrP-32

Design of 3dB Directional Coupler for Ka-Band Input Multiplexer of Satellite Payload Applications

Pil-Yong Lee¹, Duck-Ki Baek¹, Jong-Hee (Martin) Park², and Eun-Seok Choi²

¹PILAS Co., Ltd., Korea, ²QNION Co., Ltd., Korea

FrP-33

A Circulator Coupled 8-Channel Ka-Band Input Multiplexer Design of Communication Satellites

Jong-Hee (Martin) Park¹, Eun-Seok Choi¹, Duck-Ki Baek², and Pil-Yong Lee²
¹QNION Co., Ltd., Korea, ²PILAS Co., Ltd., Korea

FrP-34

Accurate Design of Negative Impedance Converter Using Circuit-Electromagnetic Co-Simulation

Seung-Ho Kim, Yong-Hyeok Lee, and Jae-Young Chung Seoul National University of Science and Technology, Korea



A Compact 1.5~3.8-GHz Tunable Wilkinson Power Divider Using Active Inductor Topology

Nien-Sheng Yang and Sen Wang
National Taipei University of Technology, Taiwan

FrP-36

TE₂₀ Mode Air Filled SIW Based Balun Bandpass Filter

Moitreya Adhikary, Anirban Sarkar, Abhishek Sharma, Animesh Biswas, and M. J. Akhtar *Indian Institute of Technology Kanpur, India*

FrP-37

Characterization of TE₁₀₈ Mode Waveguide BPF Made of Dielectric Frequency Selective Structure

Amanda Argadinata Ginting and Achmad Munir Institut Teknologi Bandung, Indonesia

FrP-38

Polarization-Insensitive Ultra-Thin Carpet Cloak

Guoxiang Dong, Yanming Liu, Xiaoping Li, and Min Yang Xidian University, China

FrP-39

Circularly-Polarized Beam-Controlling Metalens

Hongmei Li, Zhiying Yin, Shixiong Yin, Feiyang Deng, and Jiaran Qi Harbin Institute of Technology, China

FrP-40

Unit Cell Arrangement Analysis for Focusing Metasurfaces

Shaozhi Wang, Hongmei Li, Feiyang Deng, Shixiong Yin, and Jiaran Qi Harbin Institute of Technology, China

FrP-41

A Tunable Metamaterial for Beam Sterring Transmit-Array

Yin He, Bo Tao, Guopeng Tang, Jun Ding, and Chenjiang Guo Northwestern Polytechnical University, China

Circuit Modeling of Metascreen Using Generalized Sheet Transition Conditions and Babinet's Principle

Sun-Gyu Lee and Jeong-Hae Lee

Hongik University, Korea

FrP-43

A Broadband 90° Polarization Rotator Metasurface

Meraj E Mustafa, Ramiz Izhar, M. S. Wahidi, and Farooq A. Tahir *National University of Sciences and Technology, Pakistan*

FrP-44

An Anisotropic Dual-Broadband Reflective Polarization Converter Metasurface

Ramiz Izhar, Meraj E Mustafa, M. S. Wahidi, and Farooq A. Tahir *National University of Sciences and Technology, Pakistan*

FrP-45

A Broadband Linearly Polarized Beam-Splitter

M. S. Wahidi, Meraj E Mustafa, Ramiz Izhar, and Farooq A. Tahir *National University of Sciences and Technology, Pakistan*

FrP-46

Decoupling of Orthogonally Polarized Dipole Array on Patch Type Meta-Surface with Parasitic Cell

Yuki Kawakami¹, Ryuji Kuse², and Toshikazu Hori³

¹National Institute of Technology, Fukui College, Japan, ²Kumamoto University, Japan, ³University of Fukui, Japan

FrP-47

Microwave Circuit Model of Interdigital Capacitor with Multilayer Graphenes

Hee-Jo Lee¹ and Young-Pyo Hong²

¹Daegu University, Korea, ²KRISS, Korea

FrP-48

Two-Port UWB MIMO Antenna with Modified Ground for Isolation Improvement

Sungpeel Kim and Jaehoon Choi Hanyang University, Korea



On Optimum Element Arrangements of MIMO Radar Based on the Khatri-Rao Product Virtual Array Jumpei Konishi, Hiroyoshi Yamada, and Yoshio Yamaguchi *Niigata University, Japan*

FrP-50

A New Fast Doppler Shift and Doppler Rate Joint Acquisition Method for Hypersonic Vehicle Communications Congying Zhu, Xiaoping Li, Lei Shi, Yanming Liu, and Bo Yao Xidian University, China

FrP-51

The Loading Method of Security Camera Function to the Glass Window with Wireless Power Transmission Technologies

Ryota Ohata and Yoshinobu Okano Tokyo City University, Japan

FrP-52

Metamaterial Coupled Wireless Power Transfer System

Rupam Das¹ and Hyoungsuk Yoo²

¹University of Ulsan, Korea, ²Hanyang University, Korea

FrP-53

Self-Sustainable Hybrid Printed Antenna Module on Flexible Substrates

Sangkil Kim

Pusan National University, Korea

FrP-54

Broadband RF to DC Rectifier for Time Reversal Based Wireless Power Transfer

Hong Soo Park and Sun K. Hong Soongsil University, Korea

FrP-55

A Compact Rectenna for Nondirectional Ambient RF Energy Harvesting

S. H. Wang and S. Y. Zheng

Sun Yat-Sen University, China

Broad Range Impedance Matching Using Magnetic Resonance WPT Parameter Extraction with Coil Placement
Dae Kil Park and Kyung Heon Koo
Incheon National University, Korea

FrP-57

Electric Field Coupling Wireless Power Transmission Using Disposal Electric Train Rail for Feeder Kaito Kawamori, Takuto Ohsawa, Kousei Ozeki, and Tamami Maruyama National Institute of Technology, Hakodate College, Japan

FrP-58

A Study of Improving Energy Harvested from Electromagnetic Wave Using Dual-Directional Antenna Nobuyasu Takemura and Syunta Ichikawa Nippon Institute of Technology, Japan

FrP-59

A Study on Wireless Power Transfer of Small Device Using Multi-Layer Coil Juwan Kim, Wonshil Kang, and Hyunchul Ku Konkuk University, Korea

FrP-60

Investigation of Microwave Wireless Power Transfer in the Near Field Yongwook Kim and Bomson Lee Kyung Hee University, Korea

FrP-61

Maximum WPT Efficiency Using Adaptive Impedance Matching Seung Hyun Boo and Bomson Lee Kyung Hee University, Korea

FrP-62

A Performance Comparison between a Conductive Strip Line and the Transmission Line in Improving On-Body Communication

Tran Thi Lan and Hiroyuki Arai Yokohama National University, Japan



Characteristic Impedance of Micro-Wire Textile for Data Communications

Seung-Hwan Yang¹, Yong-Il Kim², and Ki-Bok Kim²
¹KITECH, Korea, ²KRISS, Korea

FrP-64

Development of Bendable Antenna Reflector Based on Artificial Magnetic Conductor

Achmad Munir¹, Muhammad Aprizal², Levy Olivia Nur², and Bambang Setia Nugroho²

¹Institut Teknologi Bandung, Indonesia, ²Telkom University, Indonesia

FrP-65

RCS Analysis for Frequency-Coded Chipless RFID Tags Using Single-Sided Printed Resonators

Tong-Yang Jiang, Fei-Peng Lai, and Yen-Sheng Chen National Taipei University of Technology, Taiwan

FrP-66

Study on Tags Position Detection Technology with Matrix Formation Slot Apertures

Shinji Matsuoka and Yoshinobu Okano *Tokyo City University, Japan*

FrP-67

Development of Two-Dimensional Nearby Tags Detection Unit with UHF-RFID Technology

Yuki Toriya and Yoshinobu Okano Tokyo City University, Japan

FrP-68

A Modified Bow-Tie Antenna for Universal UHF RFID Application

Trivesh Kumar¹ and A. R. Harish²

¹PDPM-IIITDM Jabalpurr, India, ²Indian Institute of Technology Kanpur, India

FrP-69

Design of a Low-Cost Broadband Magnetic Near-Field Probe with Ferrite Sheet

Jihoon Bang¹, Yuntae Park¹, Kibum Jung², and Jaehoon Choi¹

¹Hanyang University, Korea, ²E&R Co., Ltd., Korea

Open-Ended Coaxial Line Probe for Local Exposure at 26.5 GHz

Yasutaka Murakami, Toru Uno, and Takuji Arima
Tokyo University of Agriculture and Technology, Japan

FrP-71

Design of 36 W Class LED Lighting Equipment Radiation Disturbance Reduction

Min-Joo Jeong, Niamat Hussain, Azimov Uktam, and Nam Kim Chungbuk National University, Korea

FrP-72

Analysis of Electromagnetic Effect Inside Large-Scaled Building by External Electromagnetic Wave Using PWB Method

Han-Hee Lee and Jae W. Lee Korea Aerospace University, Korea

FrP-73

Analysis of Electromagnetic Interference from Current Source on Digital Module

Jaeyul Choo and Dong-Jin Lee Korea Institute of Nuclear Safety, Korea

FrP-74

Evaluation of EMFs to Human Exposure from Wireless Power Transfer System

Seon-Eui Hong and Hyung-Do Choi *ETRI, Korea*

FrP-75

Design of a Broadband Electric Near-Field Probe with Improved Sensitivity Using Additional Tips

Yuntae Park¹, Jihoon Bang¹, Kibum Jung², and Jaehoon Choi¹

¹Hanyang University, Korea, ²E&R Co., Ltd., Korea