



November 5/Tue. ~ 8/Fri., 2024 | Songdo Convensia, Incheon, Korea

[WeP] Poster Session 1

Session Date	November 6 (Wed.), 2024
Session Time	15:10~16:10
Session Room	Premier Ballroom C

[WeP\_01]

15:10~16:10

A Novel Transparent Antenna Design on Glass for Microwave Communications

Yifeng Liu and Kwai-Man Luk (City University of Hong Kong, Hong Kong, China)

[WeP\_02]

15:10~16:10

A Study of 3D-Printing High Equivalent Isotropic Radiated Power Circularly Polarized Self-Oscillating Integrated Antenna

Ming-Zhang Lai, Hsuan Wu, and Tzyh-Ghuang Ma (National Taiwan University of Science and Technology, Taiwan)

[WeP\_03]

15:10~16:10

Radiation Pattern of On-Glass Dipole Antenna Surrounded by Metal Frame

Shotaro Toku, Toru Uno, and Takuji Arima (Tokyo University of Agriculture and Technology, Japan); Osamu Kagaya and Keisuke Arai (AGC Inc., Japan)

[WeP\_04]

15:10~16:10

A Metasurface-Based Triple Band Transmittive Type Linear-to-Circular Polarization Converter

Ravi Kumar and Vishnu Kumar Mishra (Indian Institute of Technology (BHU) Varanasi, India); Biswajeet Mukharjee (University of Delhi, India); Vinit Kumar, Ambati Praveenkumar, and Jolly Dhar (Indian Space Research Organisation, India); Somak Bhattacharyya (Indian Institute of Technology (BHU) Varanasi, India)

[WeP\_05]

15:10~16:10

A Miniaturized Microstrip-Based Phase Inverter as a Phase Delay Component at 24 GHz

Sheng-Wei Wu, Ian Huang, Robin Jeanty, Zi-Hao Fu, Kun-You Lin, and Shih-Yuan Chen (National Taiwan University, Taiwan)

[WeP\_06]

15:10~16:10

GPU Accelerated Shooting Bouncing Rays – An Enabler for Future Radar in the Context of Autonomous Driving and Aerospace & Defense

Tung Nguyen (Ansys Japan K.K., Japan); Stefano Canta and Arien Sligar (Ansys Inc., USA)

[WeP\_07]

15:10~16:10

Wearable Wideband Antenna with Bending and Wet Conditions Analysis for 5G Communications

Shehab Khan Noor, Muzammil Jusoh, and Thennarasan Sabapathy (Universiti Malaysia Perlis, Malaysia); Samir Salem Al-Bawri (Universiti Kebangsaan Malaysia, Malaysia); Muhammad Ramlee Kamarudin (Universiti Tun Hussein Onn Malaysia, Malaysia); Akram Alomainy (Queen Mary University of London, UK)



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[WeP\_08]

15:10-16:10

Design of a Large Folded Rib Mesh Reflector Antenna for SIGINT Applications

En-yeal Yim (Hongik University, Republic of Korea); Doyoung Jang (Hanwha Systems, Republic of Korea); Hosung Choo (Hongik University, Republic of Korea)

[WeP\_09]

15:10-16:10

Compact and Simpler Configuration Binary Modulated Hologram Pattern for Beam-Scanning

Chan Yeong Park and Young Joong Yoon (Yonsei University, Republic of Korea)

[WeP\_10]

15:10-16:10

Characteristic of On-Glass Antenna with Automobile Window Shapes

Yuya Abe (Tokyo University of Agriculture and Technology, Japan); Osamu Kagaya and Keisuke Arai (AGC Inc., Japan); Takuji Arima and Toru Uno (Tokyo University of Agriculture and Technology, Japan)

[WeP\_11]

15:10-16:10

Highly Selective and Miniaturized Filtering Antenna Based on a Modified Substrate Integrated Cavity

Xin Zhou (University of Macau, China); Kam-Weng Tam (University of Macau, China & Macao Science Center, China); Gang Zhang (Nanjing Normal University, China); Zhuowei Zhang and Chi-Hou Chio (Zhuhai Wujing Technology, China); Qiwei Chen and Junxiao Liu (Zhuhai Wujing Technology Co., Ltd., China); Hon-Pan Sio (Macao Science Center, China); Sio-Weng Ting (University of Macau, China)

[WeP\_12]

15:10-16:10

CPW-Fed Monopole Antenna with 3.5/5.5 GHz Band-Notched Characteristics for Ultrawideband Applications

Nipont Tangthong (Rajamangala University of Technology Thanyaburi, Thailand); Pichet Moeikham (Rajamangala University of Technology Lanna Chiang Rai, Thailand); Patchadaporn Sangpet (Rajamangala University of Technology Thanyaburi, Thailand); Atthakorn Jamnien, Prayoot Akkarakthalin, and Nonchanutt Chudpooti (King Mongkut's University of Technology North Bangkok, Thailand)

[WeP\_14]

15:10-16:10

Study of the new MACKEY III with One-Layered Structure

Hayato Ide, Yoichi Murakami, Yuto Usuda, and Toru Fukasawa (Kanazawa Institute of Technology, Japan); Shimpei Akimoto (Mitsubishi Electric Corporation, Japan); Shigeru Makino (Kanazawa Institute of Technology, Japan)

[WeP\_15]

15:10-16:10

Performance Evaluation of the MACKEY C Model by Calculation and Measurement

Yoichi Murakami, Yuto Usuda, and Toru Fukasawa (Kanazawa Institute of Technology, Japan); Shimpei Akimoto (Mitsubishi Electric Corporation, Japan); Shigeru Makino (Kanazawa Institute of Technology, Japan)

[WeP\_16]

15:10-16:10

Agile Reconfigurable Pin-Diode Integrated Flexible Antenna for Vehicle-to-Everything Communications

Syed Naheel Raza Rizvi and Md. Abu Sufian (Chungbuk National University, Republic of Korea); Niamat Hussain (Sejong University, Republic of Korea); Anees Abbas, Rupali Kiran Shinde, and Nam Kim (Chungbuk National University, Republic of Korea)



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[WeP\_17]

15:10-16:10

GNSS L1/L2/L5-Band Patch Antenna with Proximity Quad Quadrature Coupled Feed

Chia-Kai Wang, Xin-Cheng Chen, and Tych-Ghuang Ma (National Taiwan University of Science and Technology, Taiwan)

[WeP\_18]

15:10-16:10

Glass-Printed Uniplanar Magnetic Dipole Array Antennas for Omni-Directional Radiation

Kiju Lee, Hae Soo Eun, and Gangil Byun (Ulsan National Institute of Science and Technology, Republic of Korea)

[WeP\_19]

15:10-16:10

Automotive In-Cabin Mountable mmWave Antenna for Blind Spotless 3-Dimensional Coverage

Da Young Ko, Jong Sik Min, Hyo Jae Shin, and Han Lim Lee (Chung-Ang University, Republic of Korea)

[WeP\_20]

15:10-16:10

Estimation Formula of Line-of-Sight Probability Considering Road Length for an Urban Environment

Shinsei Fujimura, Makoto Kurokawa, Hisato Iwai, and Shinsuke Ibi (Doshisha University, Japan)

[WeP\_21]

15:10-16:10

Analysis of Frequency Characteristics of Leaf Attenuation by a Finite-Difference Time-Domain Method

Yoshiki Nakanishi, Yusuke Hata, Sigeo Gotoh, Hisato Iwa, and Shinsuke Ibi (Doshisha University, Japan)

[WeP\_22]

15:10-16:10

Utilizing Floating Wind Turbine Foundations for Underwater-to-Air Radio Wave Propagation

Jialu Wang and Qiang Chen (Tohoku University, Japan); Nozomu Ishii (Niigata University, Japan); Qiaowei Yuan (Tohoku Institute of Technology, Japan); Masaharu Takahashi (Chiba University, Japan)

[WeP\_23]

15:10-16:10

Effect of the Transmitter Antenna Radiation Pattern on Propagation of Millimeter Wave Band in Urban Street Cell Environments

Sho Kitano and Mitoshi Fujimoto (University of Fukui, Japan); Koshiro Kitao and Satoshi Suyama (NTT Docomo Inc., Japan)

[WeP\_24]

15:10-16:10

Effect of Ground Gradient on Road-to-Vehicle Radio Propagation

Yu Morishita and Mitoshi Fujimoto (University of Fukui, Japan)



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[WeP\_25]

15:10-16:10

Channel Capacity of  $\cosec^2\theta$  Pattern in Indoor Propagation Scenario at 28GHz

Ryo Nishizono and Hiroyuki Arai (Yokohama National University, Japan)

[WeP\_26]

15:10-16:10

169 MHz Propagation Characteristics Between UAVs for Long Distance Communications

Jo Osoreda and Miyuki Hirose (Kyushu Institute of Technology, Japan); Takashi Matsuda and Takeshi Matsumura (National Institute of Information and Communications Technology, Japan)

[WeP\_27]

15:10-16:10

Acceleration of Time-Division Parallel FDTD Using Time-Reversal Technique

Hayato Sueyoshi, Seiya Kishimoto, and Shinichiro Ohnuki (Nihon University, Japan)

[WeP\_28]

15:10-16:10

In-Band Low RCS Circular Polarized Antenna Using Characteristic Modes

Gang Shi, Ying Liu, and Yongtao Jia (Xidian University, China)

[WeP\_29]

15:10-16:10

Planar Sparse Arrays Using Triangular Lattice Transformations

Juan A. Vasquez-Peralvo, Juan Carlos Merlano Duncan, and Vu Nguyen Ha (University of Luxembourg, Luxembourg); Rakesh Palisetty (Shiv Nadar Institution of Eminence Deemed to be University, India); Symeon (University of Luxembourg, Luxembourg)

[WeP\_30]

15:10-16:10

Time Domain Analysis of Scattering Waves by MoM Combined with Compressed Sensing

Kota Saito, Seiya Kishimoto, and Shinichiro Ohnuki (Nihon University, Japan)

[WeP\_31]

15:10-16:10

In-Band Low RCS Circularly Polarized Antenna Using Characteristic Modes

Gang Shi, Ying Liu, and Yongtao Jia (Xidian University, China)

[WeP\_32]

15:10-16:10

Isolation Improvement of LO-IF Port and RF-IF Port on Microstrip IQ Mixer by Using Open Stub Technique

Abdurasyid Ruhiyat (Universitas Indonesia, Indonesia); Farohaji Kurniawan (National Research and Innovation Agency, Indonesia); Catur Apriono (Universitas Indonesia, Indonesia)

[WeP\_33]

15:10-16:10

A Voltage-Controlled Oscillator with Dual-Band Structure in 0.18- $\mu$ m CMOS Technology

Yu-Hsin Chang and Sih-Sian He (National Formosa University, Taiwan)



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[WeP\_34]

15:10-16:10

Ka-Band Switch Design with High Isolation Using Lange Coupler

Dae-Ho Shin, Hyeon-Bhin Jo, Soo-Chang Chae, Jin-Sup Kim, and Ki-Jin Kim (Korea Electronics Technology Institute, Republic of Korea)

[WeP\_35]

15:10-16:10

A Balanced-to-Single-Ended Filtering Unequal Power Divider Using Isosceles Right-Angled Triangular Patch Resonators

Jer-Yeu Lin and Yi-Hsin Pang (National University of Kaohsiung, Taiwan)

[WeP\_36]

15:10-16:10

Ka-Band CMOS SPDT Switch with Enhanced Linearity and Low Insertion Loss

Seung-Ho Han (RF-NISSI Co., Ltd., Republic of Korea); Hyeyon-bhin Jo, Soo-Chang Chae, Jin-Sup Kim, and Ki-Jin Kim (Korea Electronics Technology Institute, Republic of Korea)

[WeP\_38]

15:10-16:10

High Linearity and Low Noise mm-Wave GaN HEMT RX Frontend

Ji-Seung Seo, Hyeyon-Bhin Cho, Soo-Chang Chae, Jin-Sup Kim, and Ki-Jin Kim (Korea Electronics Technology Institute, Republic of Korea)

[WeP\_39]

15:10-16:10

Reconfigurable High Power Dual-Band Dual-Polarized Single-Chip Transmitter Circuit for mm-Wave Satellite Applications

Yi-Fan Tsao (National Yang Ming Chiao Tung University, Taiwan); Arpan Desai (Pandit Deendayal Energy University, India); Hao-Yu Luo (National Yang Ming Chiao Tung University, Taiwan); Hsi-Tseng Chou (Natioan Taiwan University, Taiwan); Heng-Tung Hsu (National Yang Ming Chiao Tung University, Taiwan)

[WeP\_40]

15:10-16:10

A Cross-Shape Locally Resonant Metamaterial Based Waveguide Bandpass Filter with Steep Skirt Characteristic

Wonkyo Kim and Mee-Su Lee (Chungnam National University, Republic of Korea); Eunyoung Park (Pusan National University, Republic of Korea); Kyoung-Bae Kim (Genohco Inc., Republic of Korea); Kyoung-Youl Park and Ji-Haeng Cho (Agency for Defense Development, Republic of Korea); Sangkil Kim (Pusan National University, Republic of Korea); Ick-Jae Yoon (Chungnam National University, Republic of Korea)

[WeP\_41]

15:10-16:10

A Ku-Band Low-Noise Amplifier MMIC Using 0.15- $\mu$ m GaN HEMT Technology

Woojin Chang, Jongmin Lee, Hong Gu Ji, Junhyung Jeong, Kyu Jun Cho, Byoung-Gue Min, Junhyung Kim, and Dong Min Kang (Electronics and Telecommunications Research Institute, Republic of Korea)

[WeP\_42]

15:10-16:10

Development of Proximity-Coupled Fed IBFD Filtering Antenna

Sisi Indriani (Institut Teknologi Bandung, Indonesia); Budi Syihabuddin (Institut Teknologi Bandung, Indonesia & Telkom University, Indonesia); Achmad Munir (Institut Teknologi Bandung, Indonesia)



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[WeP\_43]

15:10-16:10

Enhancing Power Amplifier Linearity by Eliminating  $\Delta\omega$  Using Center-Tap Transformer

Tae Wook Kim and Young Ho Jung (Yonsei University, Republic of Korea)

[WeP\_44]

15:10-16:10

Design of Subarrayed Phased Array With Uniform Beam Scanning Range

Lun Wei Mou and Yu Jian Cheng (University of Electronic Science and Technology of China, China)

[WeP\_45]

15:10-16:10

Characteristics Assessment of X-Band Wave Absorber Using Constitutive Material Parameters

Budi Syihabuddin (Institut Teknologi Bandung, Indonesia & Telkom University, Indonesia); Rheyuniarto Sahlendar Asthan (Institut Teknologi Bandung, Indonesia & Institut Teknologi Sumatera, Indonesia); Dharu Arseno (Telkom University, Indonesia); Achmad Munir (Institut Teknologi Bandung, Indonesia)

[WeP\_46]

15:10-16:10

Reducing Target-Ground Coupling in Near-Field Scattering Measurements by Elevation Adjustments

Zongkai Yang, Jingcheng Zhao, Yijia Chen, Changyu Lou, and Jungang Miao (Beihang University, China)

[WeP\_47]

15:10-16:10

Partially Shared Aperture Active Integrated Array Antenna for Ka-Band Satellite Terminal

Seung-Soo Han, Seung-Won Oh, Eunji Kim, Kangjie Jin, and Han Lim Lee (Chung-Ang University, Republic of Korea)

[WeP\_48]

15:10-16:10

Development of Switchable Linear-to-Circular Polarizer Using Reflective Electromagnetic Surface

Dwi Andi Nurmantris (Institut Teknologi Bandung, Indonesia & Telkom University, Indonesia); Radial Anwar (Telkom University, Indonesia); Achmad Munir (Institut Teknologi Bandung, Indonesia)



# ISAP 2024

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## [FrP] Poster Session 2

Session Date	November 8 (Fri.), 2024
Session Time	13:50–14:50
Session Room	Premier Ballroom C

[FrP\_01]

13:50–14:50

A Miniaturized Wideband Dual-Polarized Antenna for 5G Base Station

Nannan Wang, Lu Yu, and Jinghui Qiu (Harbin Institute of Technology, China)

[FrP\_02]

13:50–14:50

Meandered Line and Inverted L-shaped loaded Tri Band Flexible Antenna

Anees Abbas (Chungbuk National University, Republic of Korea); Niamat Hussain (Sejong University, Republic of Korea); Domin Choi, Md. Abu Sufian, Jaemin Lee, and Nam Kim\* (Chungbuk National University, Republic of Korea)

[FrP\_03]

13:50–14:50

Design of a Wideband Microstrip Antenna Fed by an L-Probe with Double-Layered Radiation Elements

Yuta Ozaki and Yuichi Kimura (Saitama University, Japan)

[FrP\_04]

13:50–14:50

Design of a Circularly Dual-Polarized Wideband Microstrip Antenna Fed by Two Orthogonally-Arranged L-Probes and a Hybrid Coupler

Ryunosuke Makino and Yuichi Kimura (Saitama University, Japan)

[FrP\_05]

13:50–14:50

Input Impedance Reduction Techniques for the Resistive Dipoles on Printed Circuit Board

Jaeuk Choi and Kangwook Kim (Gwangju Institute of Science and Technology, Republic of Korea)

[FrP\_06]

13:50–14:50

A Broadband of Elliptical Microstrip Antenna for C-Band CP-SAR

Yohandri, Fivit Andriani, and Fauzan Alhaqqi (Universitas Negeri Padang, Indonesia)

[FrP\_08]

13:50–14:50

A Bias Voltage Supply Method to Reduce Reflection Loss in Liquid Crystal Reflectarray

Yue Cui, Hiroyasu Sato, Kai-Da Xu, Hideo Fujikake, and Qiang Chen (Tohoku University, Japan)

[FrP\_09]

13:50–14:50

Switchable Circularly Polarized GPS Antenna Based on PIN Diodes

Achmad Munir (Institut Teknologi Bandung, Indonesia); Elmi Cahyaningsih (Institut Teknologi Bandung, Indonesia & Center for Materials and Technical Products, Indonesia); Fadjrianah (Institut Teknologi Bandung, Indonesia); Dwi Andi Nurmantris (Institut Teknologi Bandung, Indonesia & Telkom University, Indonesia)



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[FrP\_10]

13:50–14:50

Resonant Frequency Control of a Varactor–Loaded Double–Layer Dual–Band Miniaturized Microstrip Antenna Fed by an L–Probe with Straight Shorted Elements

Taiki Yamaguchi and Yuichi Kimura (Saitama University, Japan)

[FrP\_11]

13:50–14:50

3D–Printed Dielectric Resonator Antenna with Omnidirectional Radiation Pattern

Sandra Zulueta, Yair Zarate, and Francisco Pizarro (Pontifical Catholic University of Valparaíso, Chile)

[FrP\_12]

13:50–14:50

Utilization of ABS Material for In–Band Full–Duplex Antenna Implementation Using 3D Printing Technology

Avelia Fairuz Faadhilah (Institut Teknologi Bandung, Indonesia); Trasma Yunita (Institut Teknologi Bandung, Indonesia & Telkom University, Indonesia); Achmad Munir (Institut Teknologi Bandung, Indonesia)

[FrP\_13]

13:50–14:50

Pattern Synthesis of Spherical Phased Array Antenna Based on NSGA–II Algorithm

Nannan Wang, Zixu Tang, Pengcheng Wang, and Jinghui Qiu (Harbin Institute of Technology, China)

[FrP\_14]

13:50–14:50

A Multibeam Circularly Polarized Antenna Array Based on Miniaturized Butler Matrix Network

Wei Li, Fan Zhang, Ying Suo, and Zhijia Zhang (Harbin Institute of Technology, China)

[FrP\_15]

13:50–14:50

Array Filtering Antenna with Polarization Diversity for 5G Application

Dwi Astuti Cahyasiwi (Universitas Muhammadiyah Prof. DR. HAMKA); Fitri Yuli Zulkifli (Universitas Indonesia, Indonesia); Dian Widi Astuti (Universitas Mercu Buana, Indonesia); Muhammad Adnan Widodo (Universitas Muhammadiyah Prof. DR. HAMKA, Indonesia); Eko Tjipto Rahardjo (Universitas Indonesia, Indonesia); Yus Natali (Telkom University, Indonesia)

[FrP\_16]

13:50–14:50

Effect of Array Antenna Weight Coefficient Quantization in Wireless Power Transmission

Yoshihiro Shinagawa and Mitoshi Fujimoto (University of Fukui, Japan)

[FrP\_17]

13:50–14:50

Low–Complexity Wide–Scanning Flat–Panel mmWave Active Integrated Array Antenna

Seung–Soo Han, Seoyeon Kim, Gilsu Jeong, and Han Lim Lee (Chung–Ang University, Republic of Korea)

[FrP\_18]

13:50–14:50

Wideband Circularly Polarized Sectoral Antenna Array Fed by Proximity–Coupled Method

Trasma Yunita (Institut Teknologi Bandung, Indonesia & Telkom University, Indonesia); Chairunnisa (Institut Teknologi Bandung, Indonesia); Aloysius Adya Pramudita (Telkom University, Indonesia); Achmad Munir (Institut Teknologi Bandung, Indonesia)



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[FrP\_19]

13:50–14:50

Evaluation of Unit Cell Arrangement of Reflectarray Antenna with Independent Control of Polarization

Yosuke Maruno, Makoto Sano, Takeshi Fukusako, and Ryuji Kuse (Kumamoto University, Japan); Kazuma Tomimoto, Toshiki Hozen, and Ryo Yamaguchi (SoftBank Corp., Japan)

[FrP\_20]

13:50–14:50

Design of a Single-Layer Ring Microstrip Antenna with a Varactor-Loaded Open Stub for Pattern Reconfigurable Reflectarrays

Shogo Yoshida and Yuichi Kimura (Saitama University, Japan)

[FrP\_22]

13:50–14:50

Precision Enhancement in EMC Measurements: Optimizing Multi-Layer Lens for Horn Antenna Applications

Wahaj Abbas Awan, Anees Abbas, Domain Choi, and Md Abu Sufian (Chungbuk National University, Republic of Korea); Niamat Hussain (Sejong University, Republic of Korea); Nam Kim (Chungbuk National University, Republic of Korea)

[FrP\_24]

13:50–14:50

Received RF Amplifier with Bluetooth Antenna

Wen-Cheng Lai (University of Technology, Taiwan)

[FrP\_25]

13:50–14:50

A Local Reflectivity Modulation Method for Analyses of the Clutter Sources in the Quiet Zone of CATR

Xiang Li, Puwen Xia, Ning Leng, Da Huang, Zhanjian Liang, and Ming Bai (Beihang University, China)

[FrP\_26]

13:50–14:50

An in-situ Array Antenna Diagnosis Method Using Optically Modulated Scattering Technique

Zhanjian Liang, Ning Leng, Xiang Li, Da Huang, Jiahui Zhao, and Ming Bai (Beihang University, China)

[FrP\_27]

13:50–14:50

Design of D-Band Sidewall Shorted Microstrip Antenna for Bandwidth and Gain Enhancement in GaAs-Based IPD Process

Ta-Yeh Lin, Shuw-Guann Lin, Yin-Cheng Chang, Chaoping Hsieh, and Da-Chiang Chang (Taiwan Semiconductor Research Institute, National Applied Research Laboratories, Taiwan)

[FrP\_28]

13:50–14:50

A Wideband Circularly Polarized Magneto-Electric Dipole Antenna Array With Sequential Rotated Feeding For Wireless and Satellite Communication

Zhichao Sun (Nanjing University of Aeronautics and Astronautics, China & University of Technology Sydney, Australia); Zhenxi Liang, Xiaojing Lv, and Jiexin Lai (University of Technology Sydney, Australia); Shaobin Liu (Nanjing University of Aeronautics and Astronautics, China); Yang Yang (University of Technology Sydney, Australia)



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[FrP\_29]

13:50–14:50

Analysis of 3-D Printed Pattern-Reconfigurable Antenna Using Property Variation of Material Infill Process\*  
Ji-Hoon Lee, Hyeon-Jeong Cho, Chanhee Lee, Young-Jun Lim, Sungjun Cho, and Jong-Won Yu (Korea Advanced Institute of Science and Technology, Republic of Korea)

[FrP\_31]

13:50–14:50

Aircraft Body Optimized VHF Blade Antenna  
Melih Aslan (Abdullah Gul University, Türkiye)

[FrP\_32]

13:50–14:50

Design BandPass Filter with Antenna for Ground Penetrating Radar (GPR) Applications  
Wen-Cheng Lai (University of Technology, Taiwan)

[FrP\_33]

13:50–14:50

Modelling of an Inverted Discone Antenna on an Infinite Soil Plane for Radio Astronomy  
Luke McKay, Bahare Mohamadzade, Aaron Chippendale, Ravi Subrahmanyam, and Alex Dunning (Commonwealth Scientific and Industrial Research Organisation, Australia)

[FrP\_34]

13:50–14:50

Horn Antenna With a Paraboloid Reflector for 24 GHz Radar Applications  
Eka Setia Nugraha, Catur Apriono, and Fitri Yuli Zulkifli (Universitas Indonesia, Indonesia)

[FrP\_36]

13:50–14:50

Design of a Flexible End-Fire Antenna with Low RCS Property  
Yuan-Chang Hou and Zi-Yao Huang (National Ilan University, Taiwan)

[FrP\_37]

13:50–14:50

Metaloop Antenna with Patches  
Hisamatsu Nakano and Tomoki Abe (Hosei University, Japan); Amit Mehta (Swansea University, UK); Junji Yamauchi (Hosei University, Japan)

[FrP\_38]

13:50–14:50

Mutual Coupling Reduction in MIMO Antenna Using Via-Less EBG  
Aditya Inzani Wahdiyat, Fitri Yuli Zulkifli, and Eko Tjipto Rahardjo (Universitas Indonesia, Indonesia)

[FrP\_39]

13:50–14:50

Design of Three-Element Periodic Metasurface and its Application in Wideband Low RCS Antenna  
Zhixuan Peng, Ying Suo, Liru Dai, and Wei Li (Harbin Institute of Technology, China)



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[FrP\_40]

13:50–14:50

Simulation of Low RCS Microstrip Antenna Loaded with Artificial Magnetic Conductor Surface

Jingwang Wen, Ying Suo, Zhijia Zhang, Liru Dai, and Wei Li (Harbin Institute of Technology, China)

[FrP\_41]

13:50–14:50

A Unidirectional Radiation Antenna with Water Layers

Dongmei Liu, Haonan Jin, Ming Su, and Yuanan Liu (Beijing University of Posts and Telecommunications, China)

[FrP\_42]

13:50–14:50

Waveguide Slot Array Antenna for Near-Field Heating of Underground Coal Seams

Jiankai Xu, Hailiang Zhu, Yujie Di, Huairen Zhou, and Yujing Liu (Northwestern Polytechnical University, China)

[FrP\_43]

13:50–14:50

Investigation of Parameters Influenced by Antenna Boresight for 5G Receive Signal Level

Hajiar Yuliana, Iskandar, and Hendrawan (Institut Teknologi Bandung, Indonesia); Hurianti Vidyaningtyas (Telkom University, Indonesia)

[FrP\_45]

13:50–14:50

A Series-Fed Microstrip Patch Antenna Using Modified Polyimide for Sub-THz Radar

Jaewoong Jung, Yunsik Park, and Jongin Ryu (Korea Electronics Technology Institute, Republic of Korea)

[FrP\_46]

13:50–14:50

A Comparative Simulation Study of the Optimal Electrode for Through-The-Earth Communication Using Earth-Grounded Antennas at 350 kHz

Peerasan Khamsalee, Atawit Jantaupalee, Chokpiwat Pruekchatsiri, and Rangsan Wongsan (Suranaree University of Technology, Thailand)

[FrP\_48]

13:50–14:50

Wide-FoV 24GHz Radar With Analog Beamforming Tx and 4-Channel Rx

Hyo-jae Shin, Gilsu Jeong, Seo-yeon Kim, and Han Lim Lee (Chung-Ang University, Republic of Korea)

[FrP\_49]

13:50–14:50

Moving Target Detection from the Roadside by Millimeter-Wave Radar

Toshifumi Moriyama and Sora Matsumoto (Nagasaki University, Japan); Yang-Lang Chang (National Taipei University of Technology, Taiwan)

[FrP\_50]

13:50–14:50

Few-Shot Human Activity Recognition Using Millimeter-Wave Radar with WSCNN

Bin Zhao, Zechen Ding, Xinhui Zuo, Ayukocha Gandhi Bessemntoh Ayuknso, and Hongzhi Li (Harbin Institute of Technology, China)



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[FrP\_51]

13:50–14:50

Investigation of Space–Time Approach for Background Reduction in Millimeter–Wave FMCW MIMO Radar Imagery

Massala Mboyi Gilles Yowel and Dong–Hyun Oh (Jeju National University, Republic of Korea); Jung–Hoon Han (Korea Aerospace University, Republic of Korea)

[FrP\_52]

13:50–14:50

Active Calibration Model of Wide–Band Array Position Errors Using FMCW Signals

Ludan Liu, Yanmo Hu, Weibo Deng, Zhijia Zhang, and Xin Zhang (Harbin Institute of Technology, China)

[FrP\_53]

13:50–14:50

Analysis of Target Motion on Range Estimation in Single–Pulse Narrow–Band FMCW Systems

Zhijia Zhang, Yanmo Hu, Xiaochuan Wu, Weibo Deng, Ludan Liu, and Ying Suo (Harbin Institute of Technology, China)

[FrP\_54]

13:50–14:50

Wideband DoA Estimation Based on Antenna Current Green’s Function Using RBF Interpolation

Jeong–Wan Lee, Seung–Mok Kim, and Sung Jun Yang (Seoul National University of Science and Technology, Republic of Korea)

[FrP\_55]

13:50–14:50

Phase Synchronized Subtraction Method for Small Sized FMCW Radar Leakage Mitigation

Han–Sol Kim (Korea Advanced Institute of Science and Technology, Republic of Korea); Ju–Hye Kim, Dong–Sik Ko, and Seong–Ho Seo (Poongsan Corporation, Republic of Korea); Seong–Ook Park (Korea Advanced Institute of Science and Technology, Republic of Korea)

[FrP\_56]

13:50–14:50

3D Uplink Signal Direction Detection Method Using LTEsniffer Multichannel System

YooHo Jang and SeongOok Park (Korea Advanced Institute of Science and Technology, Republic of Korea)

[FrP\_57]

13:50–14:50

Design of the Miniaturized UWB Direction–Finding Antenna Using Ceramic Substrate

Sangwoon Youn and Hosung Choo (Hongik University, Republic of Korea)

[FrP\_58]

13:50–14:50

Detection of UAV in a Clutter Environment Using Pulse Doppler Radar

Kyung–Bin Bae, Ju–Hong Park, and Seong–Ook Park (Korea Advanced Institute of Science and Technology, Republic of Korea)

[FrP\_59]

13:50–14:50

Study of Radio Wave Propagation Characteristics in a Suburban Environment at 169 MHz

Funatsu Miu and Kitazawa Shoichi (Muroran Institute of Technology, Japan)



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[FrP\_60]

13:50–14:50

RCS Estimation of Chaff Cloud Based on PO

Hirokazu Kobayashi (Electromagnetic Wave System Laboratories, Japan); Yousuke Aoi (Sogo Electronics Inc., Japan); Ryoji Wakabayashi (Tokyo Metropolitan College of Industrial Technology, Japan)

[FrP\_61]

13:50–14:50

The Optimal Sample Region Required to Predict Monostatic RCS from Finite Near-Field Data

Changyu Lou, Jingcheng Zhao, Zongkai Yang, and Jungang Miao (Beihang University, China)

[FrP\_62]

13:50–14:50

Scattering Modulation Method Based on Antenna Self–Transceiver Characteristics

Jiahao Zhang, Ying Liu, Yongtao Jia, Gang Shi, Haoyu Lei, and Yixiang Fang (Xidian University, China)

[FrP\_63]

13:50–14:50

Design of 3D Low–Scattering Carrier with Controllable Parameters

Da Huang (Beihang University, China); Lei Zhao (Shenyang Aircraft Corporation, China); Xiang Li, Ning Leng, Zhanjian Liang, and Ming Bai (Beihang University, China)

[FrP\_64]

13:50–14:50

RCS Prediction Using Image–Based NFFT Algorithm with Interpolation

Seul Gi Ko, Sung–Geon Kim, and Jae Hyuk Kang (Yonsei University, Republic of Korea); Ic–Pyo Hong (Kongju National University, Republic of Korea); Hyun Sung Tae (Agency for Defense Development, Republic of Korea); Jong–Gwan Yook (Yonsei University, Republic of Korea)

[FrP\_65]

13:50–14:50

Dual–Wideband Transmissive Linear–to–Circular Polarization Converter

Cho Hilary Scott Nkimbeng, Heesu Wang, and Ikmo Park (Ajou University, Republic of Korea)

[FrP\_66]

13:50–14:50

A Novel Broadband Wide Angle–Insensitive Phase Gradient Metasurface for Both Monostatic and Bistatic RCS Reduction

Himansu Sekhar Senapati, Ravi Anand, and Anirban Sarkar (Indian Institute of Technology Mandi, India)

[FrP\_67]

13:50–14:50

Plasma Diagnostics Based on Miniaturized FSS with Angular Stability

Zhaoran Chen, Zirui Guo, Junjie Hu, and Xiayuan Yao (North China Electric Power University, China)

[FrP\_69]

13:50–14:50

Double–Crossed Bowtie Antenna–Coupled Carbon Nanotube Microbolometer with Meander Structures at 1THz

Matthew Gabriel Hasiholan (Universitas Indonesia, Indonesia); Arie Pangesti Aji (Universitas Dian Nusantara, Indonesia); Catur Apriono and Eko Tjipto Rahardjo (Universitas Indonesia, Indonesia)



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[FrP\_70]

13:50–14:50

2-Bit Dual-Polarized Electrically Tunable Reflective Metasurface for 5G mmWave Communication

Minjae Lee, Duc Anh Pham, and Sungjoon Lim (Chung-Ang University, Republic of Korea)

[FrP\_71]

13:50–14:50

On the Reconstruction Accuracy of MIMO Radar Channel by Reconfigurable Electronic Phantom

Ayumi Sato, Chihiro Segawa, Kentaro Murata, Naoki Honma, and Shinya Miyajima (Iwate University, Japan)

[FrP\_72]

13:50–14:50

A Study on Frequency Characteristics of Terminal-to-Terminal Interference Suppression in Millimeter-Wave Full-Duplex MIMO System

Nobuyasu Takemura (Chukyo University, Japan)

[FrP\_73]

13:50–14:50

Effectiveness of QRM-MLD on OAM-MIMO

Mikito Ito, Shuhei Saito, and Hirofumi Suganuma (Waseda University, Japan); Kayo Ogawa (Japan Women's University, Japan); Fumiaki Maehara (Waseda University, Japan)

[FrP\_74]

13:50–14:50

A Study of MIMO Antenna Array Control for Estimating Multi-Person Locations and Vital Signs Based on 3D mm-Wave Radar

Tatsunori Saito and Xuanyu Peng (Nihon University, Japan); Yaokun Hu (Nihon University, Japan & Fujitsu Ltd., Japan); Takeshi Toda (Nihon University, Japan)

[FrP\_76]

13:50–14:50

A Simple Analysis and Discussion of Poland Longwave Broadcasting Station Antenna

Chao Wu (Harbin Institute of Technology, China); Shuang Qiu (University of Macau, China); Jinghui Qiu, Olensandr Denisov, and Vasyl Molebny (Harbin Institute of Technology, China)

[FrP\_77]

13:50–14:50

A Front-End Readout Sensor with a DC Offset Cancellation for Biomedical Applications

Meng-Ju Tsai, Kuo-Tsun Hung, and Chia-Hung Chang (National Yunlin University of Science and Technology, Taiwan)

[FrP\_78]

13:50–14:50

An Investigation of  $R_g$  and  $R_{gs}$  Effects on MOSFET for EMI Reduction in a Full Bridge Inverter

Jeonghyeon Cheon, Sungjin Lee, Dong-Min Kim, Heegeon Park, and Dongwook Kim (Yeungnam University, Republic of Korea)

[FrP\_79]

13:50–14:50

Highly Efficient Simultaneous Wireless Information and Power Transfer System With Planar Integration and Wide Coverage

Kangjie Jin, Yong-Jin Jeong, Han Yan, and Han Lim Lee (Chung-Ang University, Republic of Korea)



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[FrP\_80]

13:50–14:50

Hybrid Power Combining Flat-Panels Rectenna Array With Fully-Flexible Switch Matrix

Yan Han, Eunji Kim, Yongjin Jeong, and Hanlim Lee (Chung-Ang University, Republic of Korea)

[FrP\_81]

13:50–14:50

Vital Sign Detection in Sleep Using WiFi and High Directivity Antenna

Hao Wang, Shengchang Lan, and Xinyu Liu (Harbin Institute of Technology, China)

[FrP\_82]

13:50–14:50

Numerical Analysis of Implantable Human Body Communication for Abdominal Neurostimulator

Miyu Kodama and Dairoku Muramatsu (The University of Electro-Communications, Japan)

[FrP\_83]

13:50–14:50

An Integrated High-Performance RFID Timing System for Marathon Events

Chi-Sen Tai, Ming-Zhang Kuo, Tung-Ming Koo, Chung-I Shu, and Chia-Hung Chang (National Yunlin University of Science and Technology, Taiwan)

[FrP\_84]

13:50–14:50

RFID-UAV Displacement Acquisition Based on Tag Antenna Array and Machine Learning

Chao Yu Jiang (University of Macau, China); Kam-Weng Tam (University of Macau, China & Macao Science Center, China); Chi-Hou Chio (University of Macau, China); Wenhui Zhang (Soochow University, China); Qiwei Chen and Junxiao Liu (Wujing Technology, China); Hon-Pan Sio and Man-Chon Si (Macao Science Center, China); Cheng Teng (Laxcen Technology Inc., China); Ngai Kong (Crosstech Innovation, China)

[FrP\_85]

13:50–14:50

EM Emission Test of a VCO with Twisted Inductor Using Chip-Level Near-Field Measurement

Yin-Cheng Chang and Ta-Yeh Lin (Taiwan Semiconductor Research Institute, Taiwan); Jiayou Wang (National Tsing Hua University, Taiwan & University of Liverpool, UK); Hsin-Chieh Lin and Chao-Ping Hsieh (Taiwan Semiconductor Research Institute, Taiwan); Shawn S. H. Hsu (National Tsing Hua University, Taiwan); Kun-Ming Chen and Da-Chiang Chang (Taiwan Semiconductor Research Institute, Taiwan)

[FrP\_86]

13:50–14:50

Estimation of Shielding Effectiveness of Steel Fiber Reinforced Concrete under Percolation Threshold

Kyeongyong Cho, Sunghui Jo, and Jong-Gwan Yook (Yonsei University, Republic of Korea)

[FrP\_87]

13:50–14:50

An Experiential Study of CDE(Cable Discharge Event) Phenomenon

Soosul Hwang and Myunghwan Kim (Korea Aerospace Research Institute, Republic of Korea)

[FrP\_88]

13:50–14:50

Analysis of Polarimetric Scattering Properties for Multiclass Change Discrimination

Minhwa Kim and Sang-Eun Park (Sejong University, Republic of Korea); Seung-Jae Lee (Korea Aerospace Research Institute, Republic of Korea)



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[FrP\_89]

13:50–14:50

Damaged Building Detection Using Time Series Interferometric SAR Coherence

Yeji Lee and Sang-Eun Park (Sejong University, Republic of Korea); Seung-Jae Lee (Korea Aerospace Research Institute, Republic of Korea)

[FrP\_90]

13:50–14:50

A Compact Design of Comb-Lined Cavity Multiplexers in the FBCS Payload of GEO-KOMPSAT 3

Jiryeon Kim and Martin(Jonghee) Park (Qnion Co. Ltd., Republic of Korea); Changsoo Kwak (Electronics and Telecommunications Research Institute, Republic of Korea); Younwoo Kim (Qnion Co. Ltd., Republic of Korea)

[FrP\_91]

13:50–14:50

Investigation of Conductive Fabric for Unfurlable Mesh Reflector Antenna Application

Tae-Hak Lee (Yuhan University, Republic of Korea); Seunggoo Nam (Korea Electronics Technology Institute, Republic of Korea); Sang-Burn Ryu and Sang-Gyu Lee (Korea Aerospace Research Institute, Republic of Korea)

[FrP\_92]

13:50–14:50

Identification of Human Emotion Based on Speaking Using Convolutional Neural Network Method

Putri Octaviana Akbar S, Nur Ibrahim, and Bambang Hidayat (Telkom University, Indonesia)

[FrP\_93]

13:50–14:50

Efficient Computation of Large Sea Surfaces for Simulating Synthetic Aperture Radars

Anatolii Kononov, Yunha Jung, and Min-Ho Ka (Yonsei University, Republic of Korea)

[FrP\_94]

13:50–14:50

Design of Chip-Based D-Band Microstrip Coupled Line Power Divider

Ming-An Chung, Chia-Wei Lin, and Wei-Jen Lo (National Taipei University of Technology, Taiwan)

[FrP\_96]

13:50–14:50

Ultra-Wideband 3-Dimensional Self-Complementary Antenna and Its Applications

Hong-Kyun Ryu (Agency for Defense Development, Republic of Korea); Jong-Myung Woo (Chungnam National University, Republic of Korea)

[FrP\_97]

13:50–14:50

Programmable Space-Time Metamaterial Antenna-Receiver: Applications and Advancements

Jeongbae Kim and Min-Ho Ka (Yonsei University, Republic of Korea)