

Session Title: [TE1] Next-Generation Antenna Architectures: Lenses, Arrays, and

**Machine Learning** 

Session Date: December 4 (Thu.), 2025

Session Time: 08:30-10:10
Session Room: Room E (301)

Session Chair(s): Jian-Yu Li (Yuan Ze University, Taiwan)

Jae-Wook Lee (Korea Aerospace University, Korea)

[TE1-1] [Invited] 08:30-08:50

Low-Cost Lightweight 3D-Printed Luneburg Lenses Enabling Both Wide Angular and Long Distance Coverage for Radio Applications

Jun Xu, Wei Hong, Kai Chen and Yuechao Wang (Southeast University, China)

[TE1-2] 08:50-09:10

Ka-Band Omnidirectional Circularly Polarized Waveguide Slot Antenna for Low-Altitude UAV Applications

Jinlun Li and Yuqing Zhu (Southeast University, China); Chengcheng Yu (Sunway Communication, China); Hongxin Zhao (State Key Laboratory of Millimeter Waves, Southeast University, China)

[TE1-3] 09:10-09:30

An L-Band Dual-Polarized 8×8 Array with RFSoC-Based SCORE Digital Beamforming

Shiwen Tang, Peizhuo Yang and Koen Mouthaan (National University of Singapore, Singapore)

[TE1-4] 09:30-09:50

Dual-Polarized, Lightweight, and Conformal L-Band Antenna Array with RFSoC for UAV Platforms

Xunlei Wang, Mohammad Ameen, Peizhuo Yang, Gong Chen and Koen Mouthaan (National University of Singapore, Singapore)

[TE1-5] 09:50-10:10

A 60 GHz Four-Channel OAM Multiplexing Antenna Array for Short-Range Communication

Yuhan Wang, Xiaohe Cheng and Yuan Yao (Beijing University of Posts and Telecommunications, China)