

Session Title: [FF2] [SS] Al-Driven Design and Signal Processing in RF, mmWave,

and THz Systems

Session Date: December 5 (Fri.), 2025

Session Time: 10:30-12:10
Session Room: Room F (302)

Session Chair(s): Kritika Bansal (VIT-AP University, India)

Jungick Moon (ETRI, Korea)

[FF2-1] 10:30-10:50

Inverse Design of on-Chip Millimeter-Wave Wideband Filter via Equivalent Circuit-Based Learning Scheme

Jingwei Zhang (Zhejiang University, China)

[FF2-2] 10:50-11:10

Evaluating the Generalization of Supervised and Unsupervised Spectrum Anomaly Detection on Unseen Frequency Bands

Byungkwan Kim (Chungnam National University, Korea (South))

[FF2-3] 11:10-11:30

## Y-Slot Patch Antenna Using MLP Neural Networks Trained on ADS Circuit Datasets

Muhammad Kamran Shereen, Xiaoguang Liu and Xiaohu Wu (Southern University of Science and Technology, China); Ayesha Naseem (FAMU-FSU College of Engineering Tallahassee, Florida, USA); Muhammad Uzair (Florida A&M University, USA)

[FF2-4] 11:30-11:50

## Self-Supervised Deep Learning for THz-TDS Image Denoising

Seung-Hwan Jung and Woon-Ha Yeo (Sahmyook University, Korea (South)); Seung Jae Oh (Yonsei University, Korea (South)); Han-Cheol Ryu (Sahmyook University, Korea (South))

[FF2-5] 11:50-12:10

Analyzing the Effects of Raised-Cosine Tapering on WVD-CNN Detection of Pulsed Chirp Signals

Yunbae Kim, Jonghun Yoon and Bongsu Kim (Electronics and Telecommunications Research Institute (ETRI), Korea (South))