

Session Title: [TA1] Millimeter-Wave and 5G RFIC Innovations

Session Date: December 4 (Thu.), 2025

Session Time: 08:30-10:10

Session Room: Room A (Halla A)

Session Chair(s): Hong-Yeh Chang (National Central University, Taiwan)

Yun Seong Eo (Kwangwoon University, Korea)

[TA1-1] [Invited] 08:30-08:50

Ultra-Wideband RF and Analog Circuit Design for 5G NR FR1/FR3

Yun Wang and Hongtao Xu (Fudan University, China)

[TA1-2] [Invited] 08:50-09:10

Sub-THz and THz CMOS Electronics for Sensing and Communication Applications

Chun-Hsing Li, Tse-Ying Chen, Yen-You Li and Wei-Tang Tseng (National Taiwan University, Taiwan); Te-Yen Chiu and Chun Wang (National Tsing Hua University, Taiwan)

[TA1-3] 09:10-09:30

A 120 GHz AiP Transmitter and Receiver with 21.5 dBm EIRP and 10 dB Noise Figure in 40-nm CMOS

Dong-Yeol Yang (Sungkyunkwan University, Korea (South)); Jae-Hyun Park (Samsung Electronics, Korea (South)); Seung-Yeon Kim and Seuk-Won Kang (Sungkyunkwan University, Korea (South)); Sungho Lee (Korea Electronics Technology Institute, Korea (South)); Byung-Sung Kim (Sungkyunkwan University, Korea (South))

[TA1-4] 09:30-09:50

An 84-95 GHz CMOS Downconverter with a 22-to-35 GHz IF for Multi-Band Radiometers

Chien-Hao Hsiao, Rou-Yin Huang, Yi-Fu Chen, Shih-Hao Lai and Hong-Yeh Chang (National Central University, Taiwan)

[TA1-5] 09:50-10:10

A 21.5-35.5 GHz CMOS LNA with Integrated 180° Phase Shifting Using Partially Coupled Transformer for 5G NR Applications

Min-Seok Baek, Han Woong Choi, Joon-Hyung Kim, Jae-Hyeok Song, Jae-Eun Lee, Jeong-Taek Son, Byeong-Chan Lee, Jong-Seong Park, Ilhun Kim, Eun-Gyu Lee and Choul-Young Kim (Chungnam National University, Korea (South))