

Session Title: [TG2] [SS] Emerging Electromagnetic Technologies for Medical

Diagnosis and Therapy

Session Date: December 4 (Thu.), 2025

Session Time: 10:30-12:10
Session Room: Room G (303)

Cheng Wang (University of Electronic Science and Technology of China,

Session Chair(s): China)

Joo Hiuk Son (University of Seoul, Korea)

[TG2-1] 10:30-10:50

# A Knowledge-Fusion Deep Learning Approach for Premature Beat Classification Using mmWave Radar in Clinical Settings

Yuchen Li, Jie Cao and Gaomin Xue (Shanghai Jiao Tong University, China); Xiaolei Xu, Qishan Chen and Li Zhang (Xinhua Hospital Affiliated to Shanghai Jiaotong University School of Medicine, China); Changzhan Gu (Shanghai Jiao Tong University, China)

[TG2-2] 10:50-11:10

#### Transcutaneous Auricular Vagus Nerve Stimulation for Cognitive Enhancement

Yena Lee, Suh Yeon Moon, Junyoung Shin, Shinhee Noh, Jee Eun Sung and Sang Beom Jun (Ewha Womans University, Korea (South))

[TG2-3] 11:10-11:30

### Preliminary Design of a Modified Birdcage Receiver RF Coil for 23Na Breast MRI at 7T

Sheikh Faisal Ahmad (Kyungpook National University & Institute of Advanced Convergence Technology, Korea (South)); Sukhoon Oh (Korea Basic Science Institute, Korea (South)); Hyun Deok Kim (Kyungpook National University, Korea (South))

[TG2-4] 11:30-11:50

# Wrist-Worn Frequency-Modulated Continuous Wave (FMCW) Radar for Respiration Monitoring

Iou Heng Chen, Ji–Xun Zhong, Ju–Yin Shih and Fu–Kang Wang (National Sun Yat–sen University, Taiwan)

[TG2-5] 11:50-12:10

### **Terahertz Radiation for Novel Cancer Therapy**

Joo-Hiuk Son (University of Seoul, Korea (South) & iNexus, Inc., Korea (South))