

Session Title: [FD4] Electromagnetic Scattering

Session Date: December 5 (Fri.), 2025

Session Time: 15:20-17:00

Session Room: Room D (Samda B)

Session Chair(s): Jae-Yong Kwon (KRISS, Korea)

Stephan Marini (University of Alicante, Spain)

[FD4-1] 15:20-15:40

Electro-Magnetic Wave Scattering by a Dielectric Wedge

Jung-Woong Ra (KAIST, Korea (South))

[FD4-2] 15:40-16:00

Near-Field Setup to Investigate Direction-Dependent Scattering of a Sub-Resonant Dielectric Sphere

Fatemeh Habibi (University of Stuttgart, Germany); Jan Hesselbarth (University of Stuttgart & IHF -- Institute of Radio Frequency Technology, Germany)

[FD4-3] 16:00-16:20

Accelerating Discontinuous Galerkin Domain Decomposition Method with MLACE and MLFMA for Multiscale Problems Based on GPUs

Xing Mu and Shuang Wang (Metax-tech Inc., China); Jun Hu (Nanjing University of Science and Technology, China); Kai-Lai Zheng (Nanjing University of Post and Telecommunications, China)

[FD4-4] 16:20-16:40

## Compact Ultra-Wideband Antenna for SFCW GPR-Based Concrete Scanning

Gyeongyong Jeong and Seung-Jun Park (University of Seoul, Korea (South)); Changbin Joh and Joo-Hyung Lee (Korea Institute of Civil Engineering and Building Technology, Korea (South)); Moon-Que Lee (University of Seoul, Korea (South))

[FD4-5] 16:40-17:00

Dual-Level GPU Acceleration for Time-Domain Physical Optics (TDPO): Facet-Observer Hybrid Parallelism in Electromagnetic Scattering Analysis

Jiaxuan Wang and Qiang Ren (Beihang University, China)