



## **PAWR Project Office**

### **Jungjun Park - COSMOS**

The convergence of communication and sensing is a key paradigm in 6G standardization. Existing approaches that jointly utilize communication and sensing signals face limitations in hardware complexity, spectrum efficiency, and bistatic synchronization. To address these challenges, we propose a UE-centric ISAC using Sidelobes without dedicated sensing hardware, thereby maximize spectrum efficiency by leveraging the sidelobe. By employing an I/Q imbalance or power-dividing codebook with adaptive power control, we dynamically adjust power to sensing sidelobe during empty time slots while preserving throughput. Furthermore, we introduce a bistatic Over-the-Air (OTA) synchronization method to resolve timing uncertainties in bistatic sensing environments.