Prof. Sunghoon Kwon

Seoul National University, Republic of Korea

Sunghoon Kwon is a Professor in the Department of Electrical and Computer Engineering at Seoul National University and a pioneer in translational bioengineering spanning microfluidics, precision medicine, spatial omics, and AI-driven computational pathology. He received his B.S. in Electrical Engineering (1998) and M.S. in Biomedical Engineering (2000) from Seoul National University, followed by a Ph.D. in Bioengineering from the University of California, Berkeley (2004). He then completed postdoctoral training at the Molecular Foundry, Lawrence Berkeley National Laboratory (2004 ~ 2006).

Prof. Kwon has led research that bridges fundamental engineering innovation to real-world clinical implementation. He has co-founded three biotech companies: Celemics (2010), which develops high-throughput gene synthesis and targeted sequencing technologies; QuantaMatrix (2011), a company providing rapid microfluidic-based antibiotic susceptibility testing platforms; and Meteor Biotech (2022), which offers solutions for extracting spatially-resolved cells or regions of interest (ROIs) from tissue samples based on image-based analysis.

In recognition of his scientific and translational contributions, Prof. Kwon has received numerous honors, including the Inchon Award, the Jin-Pok Kim Award for the Best Cancer Research in Korea, the Presidential Young Scientist Award, and the Young Engineer Award from the National Academy of Engineering of Korea. His current research focuses on developing end-to-end platforms that connect biomarker discovery, single-cell and spatial multi-omics, digital pathology, and clinical decision-making to enable next-generation precision medicine.