The Future of Advanced Industrial Fields Enabled by Physical AI

Sang Yeob Park[1]

[1]*LG CNS, Republic of Korea*

Within the next two years, robots will no longer be subjects of demonstration, but will establish themselves as real operational agents in industrial environments.

As machines that once repeated predefined motions evolve into Physical AI—capable of perceiving their surroundings and making autonomous decisions—the very way work is performed across industrial sites is being rewritten.

This keynote explores the latest advancements in AI and robotics, driven by the convergence of sensing and vision technologies, robot foundation models, and real-time control systems. It further examines how these innovations will be applied and scaled across advanced industrial ecosystems where research, manufacturing, inspection, and logistics are interconnected.

Finally, the session will share insights into the new modes of operation and future value that Physical AI will bring to industries where precision and reliability are paramount.