

## PLENARY SPEAKER



### Semiconductor Technology: Innovations in the Intelligent and Connected World

**Dr. Jun Jin Kong**

*Master*

*DRAM Product & Technology, Memory Business*

*SAMSUNG ELECTRONICS*

#### ABSTRACT

The increased demand for semiconductor devices gained momentum accordingly to the rapid development of information and communication technology (ICT) including artificial intelligence (AI), internet of things (IoT), and autonomous driving cars. The number of connected devices is unprecedented, expecting to exceed 50 Billion by 2020, with approximately 44 Zetta-Bytes being exchanged annually. Semiconductor technology with high bandwidth and capacity capable of processing massive data are pivotal to the aforementioned systems. As an example, the bandwidth and capacity available in automotive DRAM and NAND flash storage has grown exponentially and is expected to reach approximately 14Gbps and 4TB respectively for autonomous driving technology in 2021 whereas connected cars currently require around 3.7Gbps and 128GB. The keynote presentation will cover the history of technological advances at Samsung along with current and future directions of semiconductor research and development.

#### BIOGRAPHY

Jun Jin Kong received the B.S. and M.S. degrees in Electronics Engineering from Hanyang University, Korea, in 1986 and 1988, respectively, and the Ph.D. degree in Electrical and Computer Engineering from the University of Minnesota, USA, in 2005. He joined Samsung Electronics Co., Ltd. in July 1989, where he is currently a Master in the Memory Business. He has over 30 years of industrial experiences in the field of application specific integrated circuit (ASIC) design and error correcting codes (ECC) for communication and memory/storage systems.

Dr. Kong was a General Vice Co-Chair and a General Co-Chair of The Korean Conference on Semiconductors (2013, 2014, 2016), and a General Co-Chair of International SoC Design Conference (2014 - 2019), and a Tutorial Chair of Asia Pacific Conference on Circuits and Systems (APCCAS 2016), and an Industrial Coordinator of International Symposium on Circuits and Systems (ISCAS 2012). He is currently a Technical Committee member of IEEE Circuits and Systems Society (CASS) VLSI Systems and Applications (VSA), Vice President of The Institute of Electronics and Information Engineers, and a Member of Council in Korea Institute of Communication Science (KICS). He is a recipient of a Silver Tower Award in the Order of Industrial Service Merit from Korea Government in 2014.