

High Performance Computer System Laboratory

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Director



NAME Jangwoo Kim

EDUCATION

2001-2008 Electrical and Computer Engineering, Carnegie Mellon University, Ph.D.

1997-2001 Computer Science, Cornell University, M.Eng.

1993-1997 Electrical Engineering, Cornell University, B.S.

EXPERIENCES

2017-Now Electrical and Computer Engineering, Seoul National University, Professor

2010-2016 Computer Science and Engineering, POSTECH, Associate Professor

2009-2010 System Architecture Group, Oracle Corporation, USA, Senior Engineer

2008-2009 CPU Architecture Group, Sun Microsystems, USA, Technical Staff

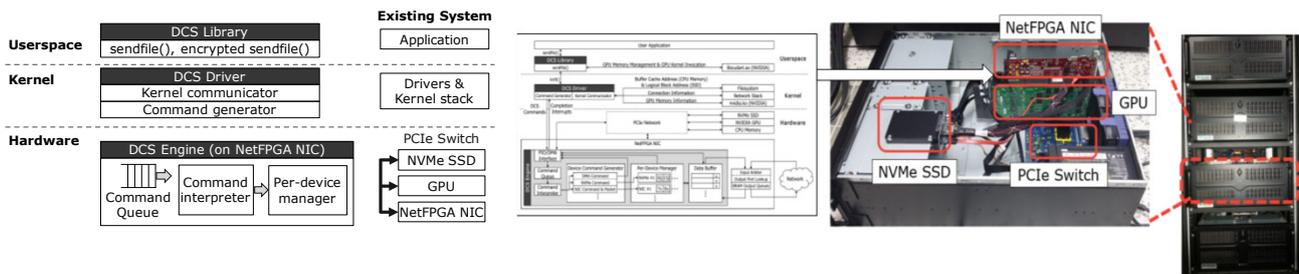
EDITORIAL EXPERIENCES

2010-Now Frequently Invited to Technical Program Committee in Top-tier Computer Architecture Conferences (ISCA, MICRO, ASPLOS, HPCA, ATC, EuroSys, PACT, SC, ISPASS, IISWC, ISLPED, etc.)

Current Research Areas

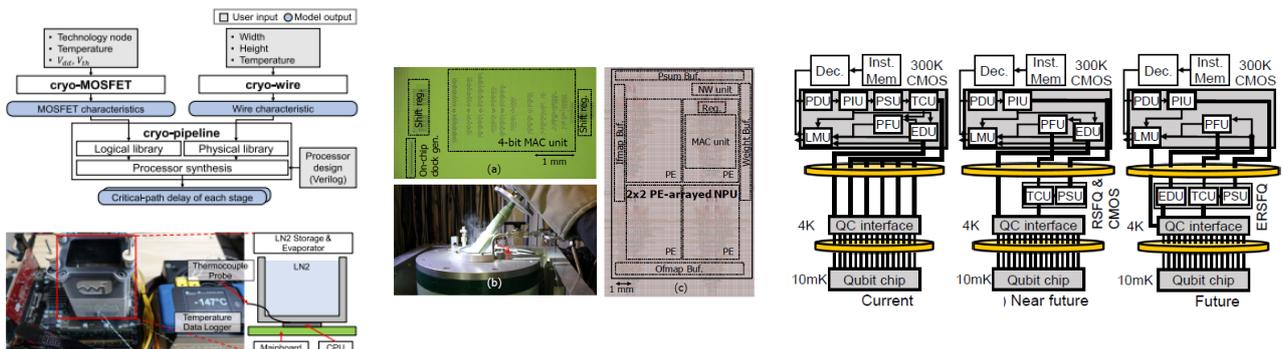
Device-Centric Server Architecture [HPCA'19, MICRO'19, MICRO'20, OSDI'20, ATC'21]

We design new servers and systems to enable fast and scalable inter-device operations. We prototype the device-centric systems and optimize their hardware/software architectures. We expect our new server architectures to shape future datacenter designs.



Cryogenic/Superconducting/Quantum Computing [TopPicks'21, ISCA'21, ASPLOS'22, ISCA'22]

We design and build various cryogenic computer devices and systems. Cryogenic computers run at extremely low temperatures (e.g., 4K, 77K) to dramatically reduce the wire latency and leakage current. We develop various cryogenic computer modeling tools and provide our processor, cache, memory, accelerator, server, and quantum control processor designs.



Computer System Modeling and Analysis [ASPLOS'18, MICRO'18 #1, MICRO'18 #2, MICRO'21]

We design various system modeling and simulation methods to accurately model CPU, server and datacenters at low costs. To meet the goal, we apply various software, hardware, and mathematical methods. Our methodologies will lead to fast and accurate system developments.

