

Hyoungjun Kim

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EDUCATION

Carnegie Mellon University	Pittsburgh, USA
<i>PhD in Electrical and Computer Engineering</i>	May. 2024 - Expected 2029
Sungkyunkwan University	Seoul, Korea
<i>Master of Science in Electrical and Computer Engineering</i>	Aug. 2022
Sungkyunkwan University	Seoul, Korea
<i>Bachelor of Science in Electronic and Electrical Engineering</i>	Feb. 2020

RESEARCH INTERESTS

Processing-in-Sensor (PIS), Deep Learning, VLSI, Sensor System, Energy Efficient Mixed Circuits

RESEARCH EXPERIENCE

Carnegie Mellon University	Pittsburgh, USA
Energy-Efficient Circuits and Systems Lab (Advisor: Prof. Vanessa Chen)	Mar. 2024 -
Project: Processing-in-Sensor Multimodal Machine Learning	
● Accepted to present at VLSI Symposium 2025 (VLSI25)	
Sungkyunkwan University	Seoul, Korea
Energy Efficient Mixed-signal Lab (Advisor: Prof. Jaehyuk Choi)	Mar. 2020 – Aug. 2022
1. Project: LiDAR SoC Full Chip Design for Automotive Car	
● Showcased a live demonstration of a 128-meter long-range LiDAR chip at SEDEX in Oct. 2022	
2. Project: LiDAR Differential Interference Filter	
● Presented at <i>IEEE International Conference on Electronics, Information, and Communication</i>	

PUBLICATIONS

H. Kim, J. Kim, E. Chen, and V. Chen, "A Multispectral Vision Sensor with Embedded Convolutional Neural Network using Programmable Fractional Weights and nMOS-Only PWM Pixels," in *IEEE Symposium on VLSI Circuits*, Kyoto, Japan, June 2025.

Hyungjun Kim and Jaehyuk Choi. "Time-to-Digital Converter With 52 ps Resolution and Interference Filter for CMOS LiDAR Sensors." IEEE International Conference on Electronics, Information, and Communication, Korea, Aug. 2021.

WORK EXPERIENCE

Samsung Electronics, Korea	Aug. 2022 – May. 2024
<i>Circuit Design Engineer, DRAM Design Team, Memory Business</i>	
● Designed DC-chain (BGR, TCSR, LDO) for High Bandwidth Memory (HBM3E, HBM4)	
Satrec-I, Korea	Jan – Mar. 2020
<i>Intern, Digital Circuit Design Engineer, Space-A Team</i>	

KEY SKILLS

- Cadence, Virtuoso, Spectre, Finesim/Primesim, HSPICE, DC compiler, IC compiler, Linux
- Software Language – Python, MATLAB, C, Verilog, VHDL