

Kwangmin Yu

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EDUCATION

- 2024 – Present Master of Science Candidate in Electronic Engineering
 Seoul National University of Science and Technology, Seoul, South Korea
- 2018 – 2024 Bachelor of Science in Electronic Engineering
 Seoul National University of Science and Technology, Seoul, South Korea

RESEARCH EXPERIENCES

Research Assistant, Dept. of Electronic Engineering, Seoul National University of Science and Technology. Advisor: Jae-Won Nam (2024 ~ Present)

- Full-custom SRAM-based Physically Unclonable Function (PUF).
- Physical attack detection and countermeasure system.
- Built-in-self-test (BIST) on PUF.
- Programming Language : Verilog HDL, Matlab
- EDA Tools : Cadence Virtuoso, Mentor Calibre, Synopsys VCS/DC/FM/STA/ICC2, Xilinx Vivado

Tape-out

- 2025.07. TSMC 180nm MS RF G, SRAM-based PUF ($2 \times 1.45 \text{ mm}^2$). (Top integration, Digital block)
- 2025.05. DBH 110nm CIS, SRAM-based PUF ($1 \times 1.5 \text{ mm}^2$). (Top integration, Digital block)
- 2024.02. Samsung 28nm LPP, SRAM-based PUF ($0.59 \times 0.46 \text{ mm}^2$). (Algorithm)
- 2023.09. TSMC 65nm LP RF CMOS, TI DSM DAC ($1.4 \times 2 \text{ mm}^2$). (Clock buffer / Layout support)
- 2023.09. TSMC 180nm MS RF G, CIS ROIC ($7 \times 7 \text{ mm}^2$). (Layout support)

HONORS / AWARDS

- Best Poster Award, IDEC Congress Chip Design Contest, Jul, 2025.
- Best Student Paper Silver Award, IEEE Seoul Section Student Paper Contest, Dec. 2024.
- Best Poster Award, ISOCC Chip Design Contest, Aug, 2024.
- Dean's Award (Best Capstone 2023 Award Winners), Seoul National University of Science and Technology, College of Information and Communication, Feb. 2024.

LIST OF PUBLICATIONS

- **K. Yu**, H. Yoo, D. Kim, J. Yoo, G. Lee, W. Jeong, S. Lee, J.-P. Hong, and J.-W. Nam, “Light Detection Sensor-based Decoy Data System for Physical Attacks in SRAM PUFs,” *IEEE Seoul Section Student Paper Contest*, Seoul, Dec. 2024.
- J. Yoo, **K. Yu**, J.-Y. Park, J.-P. Hong, J.-W. Nam, “SRAM-based PUF with Built-in-Self-Test Architecture,” *Int. SOC Conf. (ISOCC)*, Japan, Aug. 2024.
- W. Jeong, **K. Yu**, C. Lee, and J.-W. Nam, “Architecture Design of a Built-in-Self-Test Scheme for Evaluating the Reliability of SRAM-based PUF,” *Summer Annual Conf. of IEIE*, Jeju, June. 2025.

TEACHING EXPERIENCE

- **Teaching Assistant**, Dept. of Electronic Engineering, Seoultech.
- Integrated Circuit, Spring 2025.
- Electronic Circuit, Spring 2024.

TRAINING ACTIVITIES

- 2023.02.06-02.10, [KIRD Education] Linux (install / command), Cadence Allegro PCB Desinger.
- 2023.02.13-02.17, [KIRD Education] Advanced semiconductor design (VCO).
- 2023.07.31-08.04, [KIRD Education] Advanced semiconductor design (VGA).
- 2023.08.07-08.11, [KIRD Education] AVR micro-processor
- 2023.08.23-08.25, [IDEC Education] PCB design (Kicad)