Jinhyeok Park

Samsung Electronics (System LSI Business) RFIC Design Engineer
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OBJECTIVE

To utilize my abilities and maximize my potential through a Ph.D. program and have a high-level engineering position in the future. Research interests include mm-wave integrated circuits (ICs) for the 5G, 6G communication systems, automotive radar sensors, and satellite communication systems.

EDUCATION

03.2021 – 02.2023 **M.S.** in Electrical Engineering, **KAIST, Korea**

- **Advisor : Prof. Songcheol Hong**
- Dissertation : "Bidirectional VGA and Vector Modulator for 5G Communication Beamforming IC"
- **Project 1** : Multi-band true-time-delay phase shifter and bidirectional VGA for 5G wireless communication (Supported by Samsung Electronics)
- **Project 2** : Broadband beamforming IC for mm-wave 5G/B5G communication (Supported by Samsung Electronics)

03.2014 – 02.2021 **B.S.** in Electrical Engineering, **Sungkyunkwan University, Korea**

- Relevant coursework : Circuit Theory, Electronic Circuits, Physical Electronics, Semiconductor Electronics, Integrated Circuits
- GPA : 3.77/4

EXPERIENCE

03.2023 – present Engineer, **Samsung Electronics (System LSI)**, RF Development Team, Korea

- **Advisor : Hyun-chul Park**
- 28/39GHz phased-array transceiver IC for the mobile device application
  - Full path transceiver verifications and tests
  - Design RX feedback system (power detector, attenuator, and mixer)
- FMCW radar for the short-range detecting in mobile device
  - Design BIST (Built-In-Self-Test) system
    (SPDT switch, attenuator, RF/Baseband power detector, Loopback path)

07.2022 – 08.2022 Research Intern, **Samsung Electronics (System LSI)**, RF Development Team, Korea

- **Advisor : Hyun-chul Park**
- EM simulations and characterizations for passive devices at mm-wave frequencies
- TEG Design for TRL calibration in GF22N FDSOI process

01.2020 – 02.2020 Student Researcher, **Seoul National University**, Mobile Multimedia Systems Group, Korea

- **Advisor : Prof. Dongsuk Jeon**
- Study of analog circuits (Wide bandwidth amplifier and folded cascode amplifier)

09.2019 – 12.2019 Student Researcher, **Samsung Electronics (Memory)**, Solution Development Team, Korea

- Verification and analysis of analog circuits(PMIC, temperature sensor) used in SSDs

PUBLICATIONS

Journal Publications

1. **J. Park,** S. Hong. "Wideband Bidirectional Variable Gain Amplifier for 5G Communication," *IEEE Microwave and Wireless Technology Letters* **(MWTL)**, 2023.

Peer-Reviewed Conference Publications

1. G. Lee, J. Lee, **J. Park**, S. Hong, "A 24-30GHz Wideband Power Amplifier with High-Coupling-Coefficient Transmission Line Transformer and Staggered Tuning." *2022 14th Global Symposium on Millimeter-Waves & Terahertz* **(GSMM)**, IEEE, 2022.

Presentations

1. **J. Park,** S. Hong. "Bidirectional Active Vector Modulator Using Impedance-Invariant Variable Gain Amplifier," *Radio Science and Communications Conference. Korean Institute of Electromagnetic Engineering and Science* **(KIEES)**, 2022.

AWARDS & HONORS

Awards

Best Paper Award, Radio Science and Communication Conference, KIEES *11.2022*
Best Paper Award Finalist, Global Symposium on Millimeter-Waves & Terahertz, IEEE *05.2022*
Dean's List Award, Sungkyunkwan University, Korea *04.2019*
Excellence Tutor Award, Sungkyunkwan University, Korea *12.2018*

Scholarships

03.2021 – 02.2023 **EPSS (Educational Program for Samsung Semiconductor) Scholarship for MS students,** Samsung Electronics Co., Ltd., Korea
03.2014 – 02.2021 **Samsung Science Talent Scholarship,** Samsung Co., Ltd., Korea

TECHNICAL SKILLS

Languages

Korean (Native)
English (Proficient)

Computational & Design Tools

Advanced Design System (ADS), Cadence Virtuoso (Advanced)

- Design wideband bidirectional VGA, bidirectional phase shifter, power detector, mixer, switch, attenuator
- Used Samsung 28-nm bulk and FDSOI CMOS process, GF22N FDSOI process

Python (Intermediate)

- Basic of deep learning and machine learning
- Pandas (Data analysis)

MATLAB, C (Novice)

Measurement Skills

Vector Network Analyzer, Vector Signal Generator, Signal Analyzer, mm-Wave component RF probing skills

OTHER ACTIVITIES

Visiting Student, University of Colorado Boulder (Advisor : Prof. Zoya Popovic) *01.2023 – 02.2023*
Circuit Theory Tutor, Sungkyunkwan University, Korea *Fall 2018*
Air Force Sergeant (TI&E), honorable discharge, Republic of Korea Air Force *12.2015 – 12.2017*