Minjing Lee

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RESEARCH INTEREST

My research interest is in Analog and RF integrated circuits design. Currently, I am interested in the tunable RF front-end circuits exploiting n-path techniques. I hope to contribute to efficient and green integrated circuits and communication systems to improve the quality of life and help protect the beautiful earth I love.

EDUCATION

Shanghai Jiao Tong University

Shanghai, China

B.Eng in Microelectronics Science and Engineering, minor in Philosophy

Sep 2019 - June 2023(Expected)

• GPA: 90.25/100, 3.87/4.3 (Ranked 4 out of 67 students)

RESEARCH EXPERIENCE

RF Front-End Circuits exploiting N-Path Filters with 3x Passive Gain

July 2022 – Present

Center for Analog/RF Integrated Circuits(CARFIC), Shanghai Jiao Tong University

Shanghai, China

- Advisor: Prof Xiaoming Liu and Prof Jing Jin
- $\bullet\,$ Developed an N-Path Filter with 3x Passive Gain.
- Proposed a passive LNA by cascoding 3x Gain N-Path Filters to replace the conventional transformer, thus occupying less chip area than prior arts. To be taped out with 55nm CMOS Technology and measured.
- Proposed a gain-boosted high order N-Path filter.

Low Power Successive Approximation Register Analog-to-Digital Converter Mar 2021 – Aug 2021 Center for Analog/RF Integrated Circuits (CARFIC), Shanghai Jiao Tong University Shanghai, China

- Advisor: Prof Jing Jin
- Researched on calibration techniques for SAR ADC and dynamic amplifier design for pipelined SAR ADC.

Projects

A Spice Circuit Simulator | MR325 Introduction to Design Automation

Sep 2022 – Present

A Wideband Blocker-Tolerant Receiver | Center for Analog/RF Integrated Circuits

Mar 2022 – Aug 2022

- Implemented a 0.5-2GHz 4-path mixer-first receiver with 2nd order baseband TIA in 65nm CMOS Technology.
- Completed systematic tape-out flow including schematic design, simulation, layout and post-layout verification.
- Won 1st Prize in National Final at the 6th China College IC Competition(IEEE Cup).

Awards & Honors

National First Prize, The 6th China College IC Competition(IEEE Cup)	2022
Undergraduate Excellence Scholarship, Shanghai Jiao Tong University	2021
Taiwanese Student Scholarship, Shanghai Jiao Tong University	2019,2020,2021

COMMUNITY & LEADERSHIP

Outdoor Association, SJTU	Dec 2021 – Present
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President

Philosophy Club, SJTU 2021

Co-Founder

Baseball Team, SJTU Sep 2020 – Present

Member

TECHNICAL SKILLS

Languages: Mandarin(Native), English Programming: C++, C, Verilog, Spice EDA Tools: Cadence Virtuoso, Cadence ADE