Boce Lin

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EDUCATION:

Southern Methodist University   Dallas, TX

Bobby B. Lyle School of Engineering

   Bachelor of Science in Electrical Engineering

Dedman College of Humanities & Science   Grad Date: May 2019

   Bachelor of Science in Mathematics   GPA: 3.95

Georgia Institution of Technology   Atlanta GA

College of Electrical and Computer Engineering   Grad Date: Dec 2020

   Master's degree in Electrical and Computer Engineering   GPA: 4.00

Swiss Federal Institute of Technology in Zürich   Zürich, Swizterland

Dept. of Information Technology and Electrical Engineering

   Ph.D. Candidate in Electrical and Electronic Engineering   Grad Date: Dec 2025

RELEVANT COURSES: Wireless IC Design, Interface IC design, Systems and Signals, Electromagnetic Fields Waves, Filter Design, Principle of Computer Science, Microelectronic Technology, Microelectronic

SKILLS: COMSOL, Cadence Virtuoso, Python, C++, Java, Assembly, MATLAB, ADS, Ansys HFSS

BILINGUAL: Fluent in English (Speaking and writing) and Chinese.

EXTRACRICULAR ACTIVITIES: **Yunji Technologies**, Internship, Qingdao, China   06/01/2019-08/10/2019

- Assisted and Designed CAN communication Module
- Researched and Programed an Embedded System

PROJECT: **Dual-Polarization Receiver with Autonomous Polarization Misalignment Correction**

- A 26-32GHz receiver front-end with autonomous polarization alignment
- Utilizing an IF analog/mixed-signal computation unit to achieve fast alignment
- Worked on design verification and measurements including modulation testing
- B. Lin, A. Ahmed, and H. Wang, "A 26-32 GHz Dual-Polarization Receiver Frontend with Rapid-Response Mixed-Signal Polarization Alignment for Ultra-Reliable Low Latency Communications," IEEE Solid-State Circuits Lett., vol. 4, pp. 222-225, 2021.

2D 2x2 Receiver Front-end Array with Autonomous Beamform and Spatial Filtering Technique

- A 23-37GHz MIMO receiver front-end with rapid Full-FOV Spatial filtering for unknown strong blocker signal for future mobile and dynamic mmWave applications
- Utilizing phase domain negative feedback loops to fast and rapidly detect, extract, and filter out strong blocker signals without losing Full-FOV or MIMO capability.
- Worked on implementing and measuring the 2D receiver array including system functionality simulation and verification, design tape-out and testing.
- B. Lin, T. Huang, and H. Wang, "A 23-37GHz Autonomous Two-Dimensional MIMO Receiver Array with Rapid Full-FoV Spatial Filtering for Unknown Interference Suppression," Proc. IEEE Custom Integrated Circuits Conference (CICC), Apr. 2022.

Cryogenic CMOS circuits and Systems for Quantum Computing Applications

- A 4.2-9.2GHz LNA with transformer feedback architecture achieve broadband simultaneous noise and power matching for quantum computation applications
- Achieve 0.065dB NF at 16K and 1.41dB NF at 300K with 77.97% relative bandwidth
- B. Lin, R. Al Hadi, H. Mani, P. Marsh, H. Wang, "A 4.2-9.2GHz Cryogenic Transformer Feedback Low Noise Amplifier with 4.5K Noise Temperature and Noise-Power Matching in 22nm CMOS FDSOI," Proc. IEEE Radio Frequency Integrated Circuits (RFIC), Jun. 2022.