

Joseph Caezza

Atlanta, GA · [REDACTED] · caezza.org · U.S. Citizen

EDUCATION

Georgia Institute of Technology
PhD Electrical Engineering *GPA: 4.00*

Atlanta, GA
August 2023 - Present

University at Buffalo, The State University of New York
BS Electrical Engineering *GPA: 4.00*

Buffalo, NY
August 2021 - May 2023

RESEARCH EXPERIENCE

Silicon-Germanium Devices and Circuits Group
Graduate Research Assistant

August 2023 - Present
Georgia Institute of Technology – Dr. John D. Cressler

- Designed mm-wave RFICs in SiGe BiCMOS, including LNAs, wideband amplifiers, IF chains, and non-reciprocal active circuits
- Performed on-wafer probe station measurements and characterization of RF/mm-wave circuits up to G-band
- Selected circuits designed for different applications ranging from 1 GHz to 170 GHz:
 - W-band LNA with 10 dB of gain across entire band and 5 dB NF using balanced topology
 - D-band amplifier with 20 dB of gain from 120 GHz to 160 GHz, NF of 8.7 dB, and OP1dB of 6 dBm
 - 20 GHz to 40 GHz IF amplifier for radiometer system with 30 dB of gain
 - Two different active isolator circuit topologies with >30 dB of isolation operating from 1 GHz to 10 GHz

WN4SS Lab
Undergraduate Researcher

April 2022 - August 2023
University at Buffalo – Dr. Filippo Malandra

- Developed Python/MATLAB tools to monitor and optimize CBRS network performance
- Configured and tested wireless base stations and user equipment for propagation experiments
- Co-authored peer-reviewed papers on CBRS network performance and spectrum sharing

PUBLICATIONS

- [1] **J. A. Caezza**, C. R. Snyder, Y. A. Mensah, C. T. Coen, and J. D. Cressler, “A stability-informed design approach for RF circuits,” in *2025 IEEE BiCMOS and Compound Semiconductor Integrated Circuits and Technology Symposium (BCICTS)*, Oct. 2025, pp. 1–4.
- [2] C. R. Snyder, C. R. Ellis, Y. A. Mensah, **J. A. Caezza**, B. L. Ringel, C. T. Coen, and J. D. Cressler, “A 163–214-GHz SiGe cascode bootstrapped Gilbert cell push–push hybrid frequency quadrupler,” *IEEE Microwave and Wireless Technology Letters*, pp. 1–4, 2025.

WORK EXPERIENCE

BAE Systems
Technical Intern

Endicott, NY
June 2022 - August 2022

- Developed a historical data tool for the electromagnetic interference department to analyze test results
- Collaborated with Test Equipment engineers to refine quoting models, improving accuracy of cost and time estimates
- Supported EMI/EMC testing of avionics, including setup of test fixtures, test execution, and documentation

SKILLS

Circuit Design Tools:	Cadence Virtuoso, Spectre, Keysight ADS, EMX, HFSS
Programming Languages:	Python, MATLAB, C/C++, VHDL, Verilog
Laboratory Equipment:	VNAs, On-Wafer Probe Stations, Spectrum Analyzers, Signal Generators

AWARDS

President’s Fellowship

Georgia Institute of Technology – August 2023

Dean’s Undergraduate Achievement Award

University at Buffalo – July 2023