Michelle Pirrone

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Education

PhD Student | University of Colorado Boulder | GPA – 3.75 **June 2020 - Present**

Major: Electrical Engineering Concentration: RF/Microwave Engineering

B.S. | State University of NY at New Paltz | GPA – 3.92 ***Summa Cum Laude*** **May 2020**

Major: Electrical Engineering Minor: Biology

Projects

Load Modulated Balanced Amplifier (LMBA) Design **July 2021 - Present**

- Design of an LMBA MMIC in WIN Semiconductors .15μm GaN HEMT process at 6-12 GHz.
- Emphasis on high efficiency performance and active load modulation behavior.

Optimized Tunable Matching Network **July 2021- Present**

- Application of optimization techniques (ex. gradient descent) on tunable matching network.
- Design, testing and comparison of simulations and device at 850 MHz using Rohde & Schwartz ZNA.

Microstrip Antenna Design With 3-D Printing **Jan. 2019 – Jan. 2021**

- Design of microstrip antennas using ANSYS HFSS.
- Production of dielectrically-loaded antennas using 3-D printing.
- Characterization of substrate using Keysight and LabVolt technology.

MTT-IMS High Efficiency Power Amplifier **June 2020 - Oct. 2020**

- Design of high efficiency, high linearity PA at S- band frequency.
- Awarded 2nd place at IEEE competition.

Skills

- Keysight ADS
- MATLAB
- ANSYS HFSS
- Cadence AWR
- SolidWorks
- PSpice
- Amplifier design
- MMIC design

Experience

Research Assistant | University of Colorado Boulder | Boulder, CO **July 2020 - Present**

- Performs graduate research including amplifier architectures and optimization techniques.
- Testing of devices using network analyzers, spectrum analyzers and signal generators.

Circuits Class Teaching Assistant | SUNY New Paltz | New Paltz, NY **Aug. 2019 - May 2020**

Research and Development Intern | Fair-Rite | Wallkill, NY **May 2019 - Aug. 2019**

- Characterized and tested ferrite materials including distortion at high frequencies.
- Established standards for size and orientation of material behavior in company publications.

Affiliations

- Women in Microwaves (WIM) **Aug. 2021-Present**
- McNair Scholars Program Member **Sept. 2020- Present**
- Eta Kappa Nu (IEEE) Member **March 2019- Present**

Additional Information

Awards: Engineering Graduate Fellowship, Dean's Excellence Scholarship, IMS Project Connect Recipient, Outstanding Graduate Award, Presidential Scholarship, NY State Regents Scholarship, AYURE Grant, SURE Grant

Certificates: Keysight RF and Microwave Industry-Ready Student Certification Program - Level 1