Shanmukha **Saketha Ramanujam** Samavedam

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Summary

MS by research student in Electrical Engineering specializing in Electromagnetics, Antennas and Microwave circuits. Seeking opportunities in RF, Antenna systems Application/Design/Measurements/Testing.

Education

M.S in Electrical Engineering — **Graduating Fall 2022**
Arizona State University, Tempe, AZ — GPA 3.00/4
B.Tech., Electronics and Communications Engineering — **April 2019**
Gayatri Vidya Parishad College of Engineering, Vizag, India — GPA 7.92/10

Relevant Coursework

Microwave Engineering, Antenna Analysis and Design, Millimeter Wave and Terahertz Measurements, Random Signal Theory

Technical Skills

Simulation Tools: Ansys HFSS, Keysight ADS, MATLAB
Measurement, Testing and Debugging: Vector Network Analyzer, Oscilloscope, Multimeter, Signal Generator, Smith Chart, S-Parameters, VSWR, Matching, Calibration
Programming: Python, JavaScript, C
Platforms: Linux/Unix, Windows, Raspberry Pi, Software Defined Radio, Arduino,

Professional Experience

Terahertz Research Laboratory: Student Researcher — Summer 2021 – Present

- Developing use case firmware for Texas Instruments AWR 2243 mm Wave Cascade Radar EVM to be used for non-line of sight imaging in real time.
- Researching and developing correction and reconstruction algorithms using Python, MATLAB for real time Non-Line of Sight imaging with ADAS radars.

Calhoun Lidar Laboratory, ASU: Graduate Services Assistant — March 2021 – August 2021

- Designed and prototyped a 2-axis scanning LIDAR scanner using Garmin Lidar Lite range finding sensor and Arduino.
- Assisted in developing a custom MEMS mirror-based solution.
- Involved in troubleshooting and assembly of off the shelf MEMS based lidar systems for custom navigational systems.

Relevant Academic Projects

Design of Low Noise Amplifier at 2.4GHz — Fall 2021
Designed and simulated a LNA with gain > 14dB Noise Figure < 1.4dB Return Loss < -15dB

Single section and dual section Microstrip Quarter wave Transformer — Fall 2021
Designed a single section and 2 section quarter wave transformers using Keysight ADS for matching a given load.

Design of X Band Circular and Rectangular Waveguides in Ansys HFSS — Fall 2021
Designed waveguides in HFSS and analyzed their dispersion characteristics for different modes of propagation.

FM Radio Receiver using GNU Radio Companion and SDR — Summer 2021
Implemented a signal flow graph for tunable FM receiver to receive local radio stations using RTL SDR.

RF Cavity Resonator with HFSS — Spring 2021
Designed and simulated an RF Cavity resonator centered at 9GHz in Ansys HFSS to study effects of Transverse Deflection Structures in cavities for Particle Accelerator chambers.

Network and Resource Monitor for Raspberry Pi — Spring 2021
Developed a network speed and resource utilization dashboard for home networks using Raspberry Pi, Influx-dB, Grafana, Python.

Academic Achievements and Volunteering

- Awarded with ***Master's Opportunity for Research in Engineering*** (MORE) program by ASU.
- Communication sub system team member, Hyperspectral CubeSat Team, Sun Devil Satellite Laboratory.