Aria Rouzmehr

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Summary

RF and Antenna Engineer with hands-on experience in satellite communications, test automation, and high-frequency design. Skilled in simulating and building waveguide and antenna systems, with projects spanning Ku to QV bands. Proficient in tools like HFSS, ADS, Python, and SDR platforms. Strong background in lab testing, RF safety, and system integration.

Education

Santa Clara University — Santa Clara, CA
B.S., Electrical Engineering — Sep 2019 – Jun 2023

Experience

Comtech Xicom Technology — Santa Clara, CA
RF Engineer, SSPA Systems — Apr 2024 – Jan 2025

- Designed Ka-band waveguide transitions and 3-way splitters in HFSS; optimized insertion loss and balance.
- Analyzed PA gate voltage telemetry to validate burn-in duration; presented findings to satellite client.
- Authored SCPI drivers for HP 437B power meter and temperature chamber; began Visual Basic to Python testbench migration.
- Participated in schematic reviews and thin-film DFM planning for upconverter chains.

Astranis Space Technologies — San Francisco, CA
Intern Engineer, Antennas — Nov 2022 – Dec 2023

- Built Ka-/QV-band helical antennas for OTA validation; optimized in HFSS and verified in anechoic chamber.
- Simulated and measured reflector feeds; generated .ffdd files for SBR+ and TICRA coverage planning.
- Characterized Ku-/Ka-/QV-band horn gain using three-antenna method in anechoic chamber and Python data processing.
- Led OTA test alignment and TWTA power backoff planning; modeled safe zones for high-power PIM testing.

Santa Clara University — Santa Clara, CA
Undergraduate Researcher, RF Systems — Jun 2022 – Sep 2022

- Designed Vee-dipole for 137 MHz NOAA reception; estimated gain via Friis equation with test reference.

Projects

SCRAP II – Hydrogen-Line Radio Telescope (Senior Capstone Project)

- Simulated multiple parabolic reflectors in FEKO and verified gain against analytical models; selected and secured funding for a 3-meter mesh reflector via School of Engineering partnership.
- Designed and tuned a 1.42 GHz cylindrical feed using a metal can and SMA dipole; achieved –15 dB return loss and 19% bandwidth in lab testing.
- Assembled and deployed the feed-reflector system for live hydrogen line sky scans; weatherproofed SDR and SAWBird front-end for extended field operation.

Skills

RF Design: LNAs, Mixers, PLLs, Filters, PA Chains
Testing: P1dB, IP3, ACLR, Return Loss, VNA, Spectrum Analyzers
Simulation: HFSS, MATLAB, Microwave Office
Languages: English (Fluent), Spanish (Working Proficiency)