

Rajavardhan Talashila

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EXPERIENCE

Senior Application Engineer @ **Ansys** Sep 2021– Aug 2023 Bengaluru, India

- Assisted customers from across industries in meeting their simulation goals and promoting HFSS.
- Worked with customers for antennas, PCB boards, sensing devices etc.
- Addressed problems of EMI-EMC, SI-PI and Radiation domains.
- Contributed in a major way in simulating the digital beam-forming arrays for AFRL.

Project Associate @ **NIST** Jan 2024 – To date Boulder, USA

- Introduced a novel method of Rydberg atom sensing for angle of arrival estimation of RF fields (patent applied).
- Characterization of VHF and UHF band sensitivities of Rydberg atom sensors.

Project Assistant @ 5G Testbed IIT Madras Nov 2020– Oct 2021 Chennai, India

- Designed, tested successfully passive bandpass filter for 5G applications.
- Involved in designing and testing antennas for the 5G base stations in the testbed.

Junior Telecom Officer @ **BSNL** Aug 2010 – Jul 2012 Maharashtra, India

- Got trained on the wired telephone, 2G & 3G cellular and optical fiber network operations.
- Served as the front-end customer facing telecom officer.

EDUCATION

PhD (EE: Quantum Sensing)	University of Colorado Boulder (GPA: 3.83/4)	Expected: 2026
Masters (EE)	University of Colorado Boulder (GPA: 3.83/4)	2025
PhD (EE: RF & Microwave)	IIT Madras (GPA : 8.34/10)	2021
MTech (EE: Photonics) (Dual Degree)	IIT Madras (GPA : 8.34/10)	2021
BTech (ECE)	JNTU-Hyderabad (67.6 %)	2009

TECHNICAL SKILLS

- Software: Ansys HFSS, Ansys SIwave, CST Microwave Studio, Pathwave SystemVue, Labview, VNA Tools
- Instruments: VNA, Spectrum Analyzers, Oscilloscopes, Signal Generators, LCR meters, Semiconductor Lasers
- Coding: Python, Fortran, CUDA-Fortran, MATLAB

PROJECTS

- Planar filter design, fabrication and tested successfully for 5G applications at 5G Testbed, IIT Madras.
- Antenna design, fabrication and tested successfully for IITMSAT.
- Dynamic link budget analysis for IITMSAT.
- Montecarlo simulation of charge carrier dynamics in photoexcited semiconductors for THz generation.
- Simulation of wave propagation in gas pipes for corrosion detection @ JFWTC, GE, Bangalore.
- Multipole expansion of radiation from horn antennas and establishing similarity with the traditional methods.

RELEVANT PUBLICATIONS

- Talashila, R., Watterson, W. J., Moser, B. L., Gordon, J. A., Artusio-Glimpse, A. B., Prajapati, N., ... Holloway, C. L. (2025). Determining angle of arrival of radio-frequency fields using subwavelength, amplitude-only measurements of standing waves in a Rydberg atom sensor. Journal of Applied Physics, 138(11), 114402. doi:<https://doi.org/10.1063/5.0285778>
- Talashila, R., & Ramachandran, H. (2021). Effect of polarization on the link dynamics of a spinning low-earth orbits satellite aligned with geomagnetic field. Engineering Reports <https://onlinelibrary.wiley.com/doi/pdf/10.1002/eng2.12402>
- Talashila, R., & Ramachandran, H. (2019). Determination of Far Fields of Wire Antennas on a PEC Sphere Using Spherical Harmonic Expansion. IEEE Antennas and Wireless Propagation Letters, 18(4), 646–650. doi:<https://doi.org/10.1109/LAWP.2019.2900291>
- Talashila, R., & Ramachandran, H. (2020). Multipole Expansion of Radiation From Patch Antenna Using Quasi-Static Surface Currents. IEEE Antennas and Wireless Propagation Letters, 19(12), 2136–2140. doi:<https://doi.org/10.1109/LAWP.2020.3024706>