

LAKSHMI NARASIMHA VIJAY KUMAR

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📍 Atlanta, GA

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WORK EXPERIENCE

Wireless Localization Intern

Samsung Semiconductors Inc.

📅 May 2019 – Aug 2019

📍 San Jose, CA

- Worked in the 'SoC Localization R&D - Systems' department on GNSS technologies.
- Modelled the behavior of a GNSS processor for simplifying the process of the RTL design and verification.

Systems Engineer

Accord Software and Systems

📅 July 2015 – July 2018

📍 Bengaluru, IN

- Debugged aerospace grade GPS and ADS-B transponders both on the system level and board level for fault localization.
- Qualification and Regression Testing of aerospace grade Transponders as per RTCA and other standards.
- Acquisition, tracking and processing of GPS signals.
- Designed Software architectures and developed software for Automated Test Equipment (ATEs).
- Trainer for 'Programming with LabVIEW' and 'Test and Measurement systems'.

Desiadda Craftworks LLC

📅 July 2015 – August 2018

📍 Mysuru, IN

- Interact with artisans to procure their products.
- Interact with customers who are looking for that unique piece of art or meaningful gifts.

RESEARCH EXPERIENCE

Graduate Research Assistant

Packaging Research Center @ Georgia Institute of Technology

📅 August 2019 – Present

📍 Atlanta, GA

- Working on miniaturized glass based passive structures in the 5G domain.
- Designed and simulated passive antennas in the 5G domain.

PACE Portable Assisted Mobility Device (PAMD) Group

Sri Jayachamarajendra College of Engineering

📅 March 2013 – August 2014

📍 Mysuru, IN

- Built a working battery powered Mono-wheel convertible concept vehicle STAG/ X-STAG in collaboration with universities & industries around the globe. Presented at Pace forum 2014, Italy.

EDUCATION

PhD, Electrical and Computer Engineering

Georgia Institute of Technology

📅 August 2018 – May 2023

GPA: 3.71 / 4.0

B.E., Electronics and Communication Engineering

Sri Jayachamarajendra College of Engineering

📅 September 2011 – May 2015

GPA: 3.67 / 4.0

SKILLS

Programming: C C++ NI LabVIEW
MATLAB Python Simulink VHDL
Verilog

Design Tools: HFSS Siemens NX
Proteus Multisim Altium SPICE
OrCAD ADS COMSOL Multiphysics

Frameworks & IDEs: Windows Linux
NI TestStand Xilinx ISE Visual Studio
Keil μ Vision

Hardware: Multimeter Oscilloscope
VSA GNSS Simulators VSG
Network Analyzer

Misc. Tools: Microsoft Office \LaTeX
Adobe Illustrator CorelDRAW
Adobe Photoshop

LANGUAGES

Kannada
English
Hindi
French
German



AWARDS & HONORS

- Best Concept Design in PAMD for STAG/X-STAG at PACE Forum 2014, Turin, Italy.
- Awarded the 'GO PLM Basic and Intermediate NX™ 8.5' Certification at PACE Forum 2014.

PROJECTS

Design and Characterization of ICs

Georgia Institute of Technology

📅 April 2019 - April 2019 📍 Atlanta, GA

- Designed and stabilized analog opamp circuit using SPICE.
- Designed various building blocks like current mirrors, differential stages, feedback loops and output stages required.

Microwave Filters and Couplers

Georgia Institute of Technology

📅 March 2019 - May 2019 📍 Atlanta, GA

- Designed, fabricated and characterized LPF and BPF on a Rogers material operating at 1.2 and 4 GHz.
- Designed ideal and non-ideal lumped and transmission line directional couplers.

Analyzing the performance of various DOA algorithms

Georgia Institute of Technology

📅 October 2018 - April 2019 📍 Atlanta, GA

- Simulated Bartlett, Capon's, MUSIC and ESPRIT and its variations using MATLAB.
- Study performance parameters of the algorithms.

Wideband Direct Downconversion Receiver Design

Georgia Institute of Technology

📅 November 2018 📍 Atlanta, GA

- designed a differential LNA operating in the 2.4-5 GHz band and a mixer with an IF of 50 MHz using ADS.

Vector Helmholtz Equation Solver

Georgia Institute of Technology

📅 November 2018 📍 Atlanta, GA

- Developed a MATLAB script to evaluate the fields using Triangle and rectangular meshes for different TM and TE modes.

Freescale cup: Intelligent Car Racing

Sri Jayachamarajendra College of Engineering

📅 September 2013 - January 2014 📍 Mysuru, IN

- Co-developed the software for a high speed line follower bot. item Designed the algorithm to keep the bot on track on encountering an intersection

COURSEWORK

Graduate:

Applied Electromagnetics
Computational Electromagnetics
Wireless IC Microwave Design
EM Radiation and Antennas
Radiowave Propagation
Integrated Optics Analog IC

Undergraduate:

Engineering Electromagnetics
Mobile Communication Linear IC
Microwave and Antennas
Optical Fibre Communication
Channel Theory Linear Algebra
Computational Mathematics
Analog & Digital Electronic Circuits
Analog & Digital Communication

ORGANIZATIONS

Project ReachOut

📅 Sept 2013 - Present 📍 Mysuru, IN

An organization which concentrated its projects on education of children, women empowerment and differently abled.