Sribooshan Srinivasan

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Education

College of Engineering Guindy, Anna University — Chennai, India

- *Bachelor's Degree* in Electronics and Communication Engineering, CGPA: 8.72/10 — August 2017 – May 2021
- Relevant Coursework:
  - CMOS Analog IC Design, Mixed-Signal IC Design, RF Microelectronics, Digital VLSI, LPTV Systems

Sethu Bhaskara Matriculation Higher Secondary School — Chennai, India

- First Student in Sciences Group of Standard 12–Higher Secondary Course (HSC) in the school — 2003 – 2017
- Major: Mathematics, Physics, Chemistry and Biology — 99%

Research Interests

- Linear Periodically Time-Varying Systems – Analysis and Applications
- Energy Efficient, High-Speed and High-Precision Data Converters (future cognitive radios and bio-interface systems)
- Next-generation full-duplex RF/mm-Wave transceivers (MIMO and phased array systems)

Research Experience

Integrated Systems Lab, CEG — Chennai, India

Undergraduate Student Researcher – Advisor : Prof. Dr P. V. Ramakrishna — April 2019 – Present

- Design and Performance Studies of OFDM Radar Systems (ongoing)
  - Simulating high-level MATLAB/Simulink models of OFDM vs. FMCW Radar Systems.
  - Demonstrating practically at RF, OFDM Radar and FMCW Radar using SDR platforms.
- Machine Learning Assisted Verification of Analog/Mixed-Signal Systems - SRC Funded Project [Link](ongoing)
  - Studied fundamental benchmark circuits like bandgap, regulators, opamps, comparators, PLLs, ADCs, DACs.
  - Generated datasets for use in machine learning.
  - Participated in regular interactions with industry liaisons from Texas Instruments Inc.
- Design and Analysis of N-Path RF Filters (ongoing)
  - Surveyed the literature extensively to understand the origin and development of the N-Path architectures.
  - Designed and simulated 4 and 8 Path filters on LTspice using 180 nm CMOS models.
  - Studying comprehensively the characteristics of deep sub-micron technologies (45 nm, 28 nm) to put to use in implementing the N-Path filters/mixers.
- RF Emitter Location Estimation using joint TDOA-FDOA estimation from multiple satellite platforms
  - Studied the solution to the problem of RF Emitter location fixing with mathematical analyses.
  - Implemented the cross-ambiguity computation (the joint TDOA-FDOA) and location estimation alogrithms in MATLAB.
- Development of a data acquisition system using STM32 and AD7609 for temperature and pressure monitoring.
  - Interfaced the AD7609 ICs with the STM32F4 microcontrollers with SPI.
  - Programmed the controllers to store the acquired data on an SD Card.

Technical Skills

Hardware Tools

- *Instruments*: High-end Oscilloscopes, Spectrum Analyzers, Vector Network Analysers, Power Supplies, Logic Analyzers.
- *Communication Protocols*: SPI, CAN, USB, JTAG, I2C.

Software Tools

- *EE Tools*: Cadence Design Environment, LTSpice, MATLAB and Simulink, Xilinx Vivado, Intel Quartus Prime.
- *Programming*: MATLAB, Verilog HDL, VHDL, C, Python, Linux, Verilog-AMS (Beginner).
- *Publishing/Presentation*: Microsoft Office, LaTeX.

Professional Affiliations

Institute of Electrical and Electronics Engineers (IEEE) — Chennai, India

Student Member - #96931710 — July 2020 – Present

- *Society Memberships*: Solid-State Circuits Society; Microwave Theory and Techniques Society; Circuits and Systems Society
  - Participated in IMS 2020 and ISCAS 2020 (online).

Skills

Languages

- *Professional Working Proficiency*: English (TOEFL iBT Score-114), Tamil, Hindi
- *Elementary Proficiency*: Kannada, Sanskrit

Additional Courses

- *Introduction to Time-Varying Electrical Networks* under Prof. Shanthi Pavan via NPTEL [Link] January 2021 – April 2021

Miscellaneous

- Student of South Indian Classical Music - Carnatic Vocal (Beginner).

Awards and Honours

Rashtrapathi Puraskar — New Delhi, India

- *The President's Award* awarded by the Hon'ble President of India for achievements in the field of *Scouting*. January 2017

School First Student — Chennai, India

- Scored 499/500 in the State-level SSLC Exam. May 2015
- Secured a scholastic scholarship for two years of Higher Secondary Education.

Last Updated: May 5, 2021