NIMASHA HIRUNI PILIPPANGE

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EDUCATION

PhD student in Electrical and Computer engineering at Florida International University.
CGPA - 3.83/4.00
courses: RF Circuit Design, CMOS RF Transceivers, Advanced VLSI Design, Digital communications, Neural Networks

B.Sc. in Electrical and Information Engineering at University of Ruhuna, Sri Lanka.
CGPA - 3.43/4.00

TECHNICAL PROFICIENCIES

- Analog circuit design : cadence virtuoso
- Digital signal processing : Matlab simulink, Xilinx Vivado FPGA design
- RF and Antenna: AWR, ADS, Ansys HFSS
- Languages : Matlab, VHDL, Sytem Verilog, Python, ROS

EXEPERIENCE

Graduate Research Assistant at RAND-Lab(RF, Analog, and Digital Laboratory For Advanced Signal Processing Circuits) Aug 2021 to present

Research Interests in analog IC design, RF system design, neural networks

Software Engineer Whale Cloud Technology | March 2021- August 2021

- Database handling, Server back up and file management for billing system in Hutch Sri Lanka
- Debugging and solving customer issues related to the billing system.

Network Support Engineer Exetel Communications | July 2019- Feb 2021

- Troubleshooting all types of network issues in Fiber and ADSL technologies.
- Escalating the issues to the supplier management and providing network solutions to residential and SMB customers.

PROJECTS

- Designing tunable delays using 65nm TSMC technology for high bandwidth AI/ML applications.
- Designing a system for solving specific partial differential equations using Cadence in 180nm TSMC technology.
- Implementation of an Extra-Low Frequency (ELF) based RF Sensing and Identification of UAS with Nonlinear DSP.
- Designing an ASK modulation scheme using Xilinx FPGA(RFSoc ZCU111). The system is designed for 2 antennas.
- Designing a BF16 adder using VHDL.

PUBLICATIONS

- Nimasha Hiruni Silva, Arjuna Madanayake, Soumyajit Mandal, Justin Delva

Inductorless Analog Time-Delays for Nonlinear RF Signal Processing Circuits in 180nm CMOS, Accepted to IEEE MAPCON 2023

- Hiruni Silva, Kamitha,Bodhinayake, Hasitha Nanayakkara, T.D. Gamage(2020)

Accuracy Evaluation of SLAM Algorithms in RGB-D Sensors, 5th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media

- Arjuna Madanayake, Hiruni De Silva, Jarred Glickstein, Soumyajit Mandal

Extremely Low Frequency (ELF) Radio Sensing of Unmanned Aerial Systems, 2022 United States National Committee of URSI National Radio Science Meeting (USNC-URSI NRSM)