

NIMASHA HIRUNI PILIPPANGE

Graduate Research Assistant

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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.

B.Sc. in Electrical and Information Engineering at University of Ruhuna, Sri Lanka.

CGPA - 3.54/4.00

SKILLS

- 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

EXPERIENCE

Graduate Assistant

Aug 2021 to present

- Design of tunable delays using 65nm TSMC technology for high bandwidth applications.
- Designing a system for solving specific partial differential equations using Cadence in 180nm TSMC technology.
- Implementation of a Extra-Low Frequency (ELF) based RF Sensing and Identification of UAS with Machine-Learning and Nonlinear DSP.
- Designing a mm wave receiver for beamforming at digital baseband in Xilinx FPGA. The system is designed for 2 antennas and will be scaled to 6.
- Designing a digital solution for solving a Finite Difference Frequency Domain Iterative Algorithm on FPGA.

Software Engineer

Whale Cloud Technology | March 2021- August 2021

- Database management
- Server back up and file management
- Customer interface troubleshooting
- Troubleshooting application issues

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
- Configuring network elements
- Providing network solutions to residential and SMB customers
- VOIP technologies
- Working in multiple systems and databases in a dynamic environment

Trainee Engineer

- Mobitel (Pvt) Ltd| Dec 2016- March 2017 (12 weeks)
- Ceylon Electricity Board| Nov 2017- Feb 2018 (12 weeks)

VOLUNTEERING AND LEADERSHIP ACTIVITIES

- Vice president in **IEEE WIE and YP Miami section**
- Member of **Theta Tau Omega Gamma chapter** at Florida International University
- Organizing committee member in **IET PATW 2016, IEEE day 2016, Invictus2016**
- Organizing committee member in Xbotix 2016, Xbotix 2017, Xbotix 2018 : Annual Robots competition organized by the engineering students to inspire school participants and undergraduates
- **Project Demonstrator at Techno exhibition 2018:** National Engineering and Technology exhibition organized by Institute of Engineering Sri Lanka
- Member of AIESEC in 2015 to 2017
- Gavel club member
- Committee member of IET University of Ruhuna Chapter 2016
- Social secretary in EIES 2017
- Participated in National Leadership Development Seminar 2015

PUBLICATIONS

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

SPORTS

- **Sports captain** in sports club 2016
- **First runners up** in Elle - Inter faculty fresher's meet -2015
- Junior treasurer in sports club 2015
- Participated in **inter-university Basketball matches-2017**
- **First runners up** in inter-faculty Basketball tournament 2017
- **Second runners up** in inter-faculty basketball tournament 2018
- Junior treasurer in faculty sports club 2015
- **Second runners up** in inter-faculty basketball tournament 2018