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OBJECTIVE

Obtain a challenging research in Electrical Engineering or related fields to develop technical and researching skills.

EDUCATION

University of Puerto Rico, Mayagüez Campus

- Bachelor of Science in Electrical Engineering
- **GPA**: 3.93/4.00 **Major GPA**: 4.00/4.00
- **Expected Graduation Date**: May 2019

Relevant Courses:

- Electronics II
- Digital Electronics
- Introduction to Control Systems
- Microprocessors
- Probability & Statistics
- Economic Analysis for Engineers
- Logic Circuits
- Analog Integrated Circuits Design
- Instrumentation
- Power Electronics
- Digital Design

EXPERIENCE

Digital Design Course – Mayaguez PR (February-May 2018)
Design of a Braille Translator System

- Successfully designed a translator from braille to roman alphabet and vice versa using digital logic.
- Successfully implemented the prototype using the Spartan 3E FPGA, a LCD1602, a solenoids array, a 4x4 matrix with different states to have access to the 26 letters + 10 numbers and a custom made braille keypad.

Research at IAP – Mayaguez PR (November 2017-May 2018)
Design of an Energy Harvesting IC for Microbial Fuel Cells

- Successfully designed a PMS with DC-DC Converter and MPPT circuits using cadence virtuoso.
- Implemented a new equivalent diode to increase the efficiency of the Dickson CP used as converter.

Analog Design Course – Mayaguez PR (August-December 2017)
Design a 6 bit Digital to Analog Converter

- Successfully designed a 6 bit DAC with layout in AMI05 technology using cadence virtuoso.
- Successfully designed DAC using OA converters V-I and I-V.

Power Electronics Course – Mayaguez PR (August-December 2017)
Design a MPPT Circuit for a 60W PV panel.

- Investigation about the difference topologies of MPPT for PV panels.
- Successfully designed a MPPT circuit using P&O method and applying OA configurations and NMOS switches to design the MPPT using PSIM.

Participative Investigation Action – Mayaguez PR (August-December 2017)
Community work in Corcovada Añasco PR

- Successfully organize a community day and help in the re-establish of the community after hurricane Maria.

Digital Electronics Course – Mayaguez PR (January-May 2017)
Design Four 2 Input Or Gates

- Successfully designed four 2 input Or gates in SLT, CMOS, ECL and BiCMOS technologies using PSPICE.

Electronics Laboratory I Course – Mayaguez PR (January-May 2017)
Design of a Sound Amplifier

- Successfully implemented a two stage sound amplifier

Microprocessors Course – Mayaguez PR (June-July 2016)
Design of a Battleship Multiplayer Game

- Successfully designed and implemented a LCD, push buttons & external components systems using an MSP430 micro-controller.
- Successfully developed and executed an Assembly interphase and algorithm for the game.
- Successfully accomplished a communication between two micro-controllers.

Logic Circuits Course – Mayaguez PR (August-December 2015)
Design a Traffic Light Controller for a Four Way Intersection

- Successfully designed a traffic light controller capable of control the delay between changes using Logic Works.

SKILLS/AWARDS

- Scholarship from Texas Instruments in 2018
- Matlab, C++, Assembly, Cadence, PSPICE, Lab View, Electric VLSI, Logic Works, Multisim, Arduino, PSIM