Contact Information
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Carlos A. Wong

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U.S. Citizen

EDUCATION

Florida State University: FAMU-FSU College of Engineering Tallahassee, FL
Ph.D. in Electrical Engineering — May 2021
Bachelor of Science in Computer Engineering — May 2018
Minor: Physics
GPA: 4.0/4.0

COMPUTER SKILLS

Programming Languages: C++, Python, MATLAB
Software: MS Office, MS Excel, MS PowerPoint, MS Access, AutoCAD, Blender, RSCAD, KiCAD, LabView
Operating Systems: Microsoft Windows OS, Apple Macintosh OS, Linux Ubuntu
Foreign Languages: Spanish – Fluent written/spoken; Mandarin – Beginner; Russian – Beginner

EXPERIENCE

Center for Advanced Power Systems Tallahassee, FL
Graduate Research Assistant — May 2018 - Present

- Implementing a Fault Management system, that identifies, isolates, reconfigures and an API that communicates directly with the Power Management system of a high fidelity notional 4 zone shipboard power system topology in less than 8 ms to ensure that critical load needs are satisfied at all times.
- Designed custom amplifier PCBs, created MATLAB script to auto generate Factory Acceptance Tests & created a Modbus API to communicate between proprietary hardware and the real time digital simulator; while working in an expert controlled environment.
- Successfully implemented C code on a DSP to read an indicator off an embedded computer for isolation of fault.

FAMU-FSU College of Engineering Tallahassee, FL
FREEDM Undergraduate Researcher — Aug 2017 - May 2018

- Implemented a system of ODEs in conjunction with the Newton Raphson method in C++ to model & simulate the charge and discharge characteristics of Li-S batteries, with the goal to reduce the transport shuttling effect.
- Producing 3D visualizations in Blender of the internal dynamics of lithium sulfur species interacting with the cathode interface, to provide a clear picture of the research being produced.

Florida State University: Utilities and Engineering Services Tallahassee, FL
Control Systems Internship — Mar 2015 - May 2018

- Organizing and managing HMI programs with Siemen's APOGEE Building Automation Software to be accessible by the Field Technicians, Engineers and the Florida State University management.
- Programming of enhanced alarms for fault detection purposes that require temperature sensitive research environments, producing a safe contingency plan for the researcher's work.

PROJECTS & LEADERSHIP

Senior Design: Fault Prediction System for Drone Motors
Team Leader – Sponsored by GA Electromagnetic Systems — Aug 2017 - May 2018

- Created an electric motor testing system equipped with a low inertia 1 kW dynamometer in torque mode acting as a load for the coupled 2.5 kW BLDC drone motor, where any excess power is routed to the resistive bank.
- The testing platform provides nominal flying conditions with natural air flow which is necessary for a reliable, repeatable, and reproducible system that can capture back electromotive force, three-phase current and line to line voltage of the motor under test.

COMMUNITY OUTREACH

PeaceJam Southeast Tallahassee, FL
Mentor — Fall 2017

A nonprofit organization that facilitates groups of youth in workshops and sustainable service projects to spark a commitment to justice and peace, build cross-cultural understanding and increase global awareness with the help of noble peace prize laureates.