

Susanna Vital de Campos de Freitas

Master of Science Student
Edmonton, AB

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CAREER OBJECTIVES

Hard-working professional with over 2 years of work experience as a circuit designer and microcontroller programmer, receiving 6 prestigious awards as a student. Seeking to apply my engineering knowledge to create a better world. Dedicated team player with proven leadership and organizational skills who can be relied upon to help your company achieve its goals.

HIGHLIGHTS OF QUALIFICATIONS

- Strong interpersonal and communication skills developed by **presenting research results to sponsors and in conferences**, being a **programming teaching assistant**, participating in a Portuguese folk group, and mentoring young girls at **DiscoverE**.
- Proven leadership and organization demonstrated by working in research groups, resulting in the **first authorship of one patent, one journal and five conference papers**.

EDUCATION

Master of Science (MSc) in Electrical and Computer Engineering University of Alberta
Area of concentration: Electromagnetics and Microwaves Jan/2017 – Dec/2018

Bachelor of Electronic Engineering Federal University of Technology - Paraná
Area of concentration: Wireless Power Transfer and Communication Jul/2011 - Dec/2016
→ **Undergraduate Exchange Program** University of Alberta
Information: Science Without Borders Scholarship Sep/2014 – Dec/2015

Mechanical Technician Diploma Federal University of Technology - Paraná
Area of concentration: Maintenance and Manufacturing Feb/2008 - Jun/2011

WORK EXPERIENCE

Graduate Research Assistant Jan/2017 - Present
University of Alberta, Edmonton, AB, Canada

- Worked with a research group and an industrial partner to develop a wireless system to transmit data and power over metallic structures, with 85% efficiency.
- **Designed control boards and a matching network**, from scratch, for wireless and single-conductor power transfer.
- **First-authored** one patent, one journal and two conference papers.

Graduate Teaching Assistant Jan/2018 - Present
University of Alberta, Edmonton, AB, Canada

- Marked **over 500 assignments about C/C++** programming and digital circuits, during the Winter Term 2018, for the Embedded System Design course.
- Gave constructive feedback to students in order to help them further understand the subject and their grades.

Electronic Engineering Intern May/2016 - Dec/2016
Lactec Institutes, Curitiba, PR, Brazil

- **Designed power boards**, from scratch, for acoustic emission sensors, with over 100dB of noise reduction.
- Received advanced training in LabView.

Undergraduate Research Assistant

Sep/2013 - Jul/2014

Federal University of Technology - Paraná, Curitiba, PR, Brazil

- Implemented a ZigBee wireless sensor network, in C/C++, to interpret greenhouse's temperature and humidity data, increasing the range **from few meters to one kilometer**.
- Provided **written reports and presentations to sponsors** about the results obtained.

Undergraduate Teaching Assistant

Feb/2012 - Aug/2013

Federal University of Technology - Paraná, Curitiba, PR, Brazil

- Assisted over 150 students with **C/C++ programming projects** through one-on-one consultations.
- Created exercises and handouts for students.
- Supported the professor in laboratory classes answering students' doubts 3 hours a week.

Mechanical Technician Internship

Jan/2011 - Jul/2011

Institute of Technology of Paraná (TECPAR), Curitiba, PR, Brazil

- Controlled the stock of the company's maintenance department, and processed maintenance requests from other departments.
- Developed a **final internship report** to receive the diploma of Mechanical Technician.

SELECTED PUBLICATIONS

- *Systems and Methods for Wireless Power Transmission*, US Patent Application, 2018.
- *Contactless Power Transfer Using Capacitive Resonant Single-Conductor Structure*, IEEE Wireless Power Transfer Conference (WPTC), Montreal, Canada, June 2018.
- *A Novel Method for Data and Power Transmission Through Metallic Structures*, IEEE Transactions on Industrial Electronics, vol. 64, no. 5, pp. 4027-4036, May 2017.
- *Wireless channel modeling using the RSSI of ZigBee radios*, XIX SICITE, 2014.

VOLUNTEER EXPERIENCE

- **Mentor at DiscoverE**, seeking to motivate young girls about Engineering.
- Wrapped Christmas gifts for donations to the Bissell Centre in Edmonton, Canada.
- Contributed to the organization of the 2015 **International Week** at the University of Alberta, making banners and buttons, and arranging the sound equipment for presenters.
- Responsible for the reception of the 2011 XXIX Brazilian Telecommunication Symposium.
- Participated on a ballroom dance group and on a Portuguese folk dance group for 3 years.

HIGHLIGHTED AWARDS

- **2018 Best Student Paper Award**, Wireless Power Transfer Conference, 2018.
- **2nd Place - Student Seminar Competition**, IEEE NCS APS/MTTS Chapter, 2018.
- **Undergraduate Dean's Research Award**, University of Alberta, 2015.
- **Science Without Borders Scholarship**, University of Alberta, 2014.

SPECIAL SKILLS**Languages**

- Fluent English and Portuguese
- Intermediate French

Engineering

- **Programming Languages:** C/C++, Assembly, Matlab, Java and HTML.
- **Software:** Matlab/Simulink, Altium, Eagle, SolidWorks, AutoCAD, LabView, Ansys HFSS and Agilent ADS.
- **Embedded Systems:** ARM Cortex M, Intel 8051, Intel x86, Arduino.

