Camilo Tejeiro

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Relevant Skills

Areas of Knowledge
RF/Analog Integrated Circuit Design, Discrete PCB Design, Embedded Systems, Firmware and Software Development.

Technical Skills
Cadence Virtuoso/Spectre, SPICE, Altium Designer, MATLAB, Python, Eagle, KiCad, Linux, C, LaTeX, Verilog.

Personal Skills
English and Spanish bilingual proficiency, Team-oriented, Self-driven, Diligent, Perseverant.

Education

University of Toronto — Toronto, ON, Canada
Cumulative GPA — 3.94 on a 4.0 scale
M.A.Sc. Electrical and Computer Engineering — April 2020

Relevant IC Coursework
Integrated Circuits for Wireless Communications (ECE 1390), Analog Circuit Design I (ECE 1352), VLSI Design Methodology (ECE 1388), Analog & Mixed Signal Processing Circuits (ECE 1396), High Frequency Integrated Circuits (ECE 1365 – Audit), Advanced Analog Circuits (ECE 1371 – Audit), Digital Design for Systems on Chip (ECE 1373).

University of Washington — Seattle, WA, USA
Cumulative GPA — 3.54 on a 4.0 scale
Bachelor of Science in Electrical Engineering — June 2013

Relevant IC Coursework
Linear IC Design (EE 473), Analog Circuit Design (EE 433).

Engineering Experience

Intelligent Sensory Microsystems Laboratory — Toronto, ON, Canada
Research Assistant (Supervisor: Roman Genov) — January 2018 - Present
Development of wireless biomedical integrated circuits and systems, and flexible electrode interfaces for implantable devices. Responsible for the design of ultra-low-area-and-power data transmitter RF-ICs and clock generation ICs. Participated in two group tapeouts in 65nm CMOS and contributed seven RFIC blocks to two biomedical ASICs. Also contributed with the design of the ASIC application test board and electrode and interfacing boards. *Technical information upon request.*

V-mode Edge-combining RO-based Power-scalable TX	*CMOS RFIC, 65nm, Cadence Virtuoso, 3 designs*
I-mode Stacked Edge-combining RO-based Current-reuse TX	*CMOS RFIC, 65nm, Cadence Virtuoso, 2 designs*
ULP Programmable Prescaler for High Division Ratios	*CMOS AMS IC, 65nm, Cadence Virtuoso, 2 designs*
Microsystem Application Testboard	*PCB Design, Altium, 4 layers, 354 components*
Flexible Micro-electrode Arrays for In-vivo PNS Experiments	*PCB Design, Altium, 17 fabricated flex designs*
Depth Rigid-shank Electrodes for In-vivo CNS Experiments	*PCB Design, Altium, 5 fabricated rigid designs*
Electrode Interfacing Boards Framework	*PCB Design, Altium, 8 fabricated rigid designs*

Ashima Devices — Pasadena, CA, USA
Hardware/Firmware Design Engineer — June 2014 - May 2015
Development of the sensor, communication and flight control hardware for the Hexpuck unmanned aerial device.

Li-Ion Active Battery Balancer Hardware Design	*Analog PCB, Eagle CAD, 4 layers, 176 components*
Li-Ion Active Battery Balancer Embedded System	*Firmware Development, Python, ARM-M0, Linux, GCC, GDB*
Flight Controller Daughter Board	*Circuit Design, PCB Design, Eagle CAD, 48 components*
Motor ESC FET Driver Power Board	*Circuit Design, PCB Design, Eagle CAD, 43 components*
Battery Simulator Hardware Design	*Analog Circuits, PCB Design, Eagle CAD, 16 components*

Power Limiter Hardware Design — *Analog Circuits, PCB Design, QUCS, Eagle CAD, 22 components*

RGB Pixels Array Board — *Circuit Design, PCB Design, Eagle CAD, 58 components*

IMU Mag/Gyro Breakout Boards — *Circuit Design, PCB Design, Eagle CAD, 2 fabricated designs*

Flight Controller Interface Board — *Circuit Design, PCB Design, Eagle CAD, 10 components*

RTneuro Inc. Seattle, WA, USA
Lead Design Engineer July 2013 - May 2014
Design of the bio-medical sensors, the wireless embedded system and the communication software for the Rainbow wearable health device.

Wearable Wireless Health Device — *PCB, Altium, 4 layers, 92 components, C Firmware Development*

Low Power Reflectance Pulse Oximeter — *Analog Circuits, PCB Design, Altium Designer, Multisim*

Bluetooth LE Router Application — *Software Development, Java, Android API*

Electromyography Sensor — *Analog Circuits, PCB Design, Altium Designer, Multisim*

Galvanic Skin Response Sensor — *Analog Circuits, PCB Design, Altium Designer, Multisim*

The Daniel Lab Seattle, WA, USA
Undergraduate Research Assistant January 2013 - March 2013
Development of a software application to aggregate gesture and myography data for control purposes.

EMG Hand Tracking and Gesture Recognition — *Software Development, C++, Visual Studio*

Spacelabs Healthcare Issaquah, WA, USA
Internship January 2012 - June 2012
Design of multiple software applications for monitoring patient health in a mobile environment and displaying health data in a remote graphical interface.

WiMM Watch Wireless Health Monitoring System — *Software Development, Java, Android API, C#*

Neurobotics Laboratory Seattle, WA, USA
Undergraduate Research Assistant June 2011 - August 2011
Development of a manipulation experiment for researching feedback delivery techniques and design of a remote feedback device to help amputees.

Wireless Vibrotactile Feedback Device — *Embedded Systems, Firmware Development, C, MSP430*

Publications *(Two confidential unsubmitted pending manuscripts not listed here.)*

G. O'Leary, J. Xu, L. Long, J. Sales, **C. Tejeiro**, M. ElAnsary, C. Tang, H. Moradi, P. Shah, T. Valiante and R. Genov, "A Neuromorphic Multiplier-Less Bit-Serial Weight-Memory-Optimized 1024-Tree Brain-State Classifier and Neuromodulation SoC with an 8-Channel Noise-Shaping SAR ADC Array," in 2020 IEEE **ISSCC**, Feb. 2020, pp. 402–404.

C. Tejeiro, C. E. Stepp, M. Malhotra, E. Rombokas, and Y. Matsuoka, "Comparison of remote pressure and vibrotactile feedback for prosthetic hand control," in 2012 4th IEEE RAS EMBS **BioRob**, Jun. 2012, pp. 521–525.

Awards and Honors

University of Washington Dean's List (*GPA of 3.50 or above*) 2011, 2013

University of Washington Kaiser Aluminum Scholarship (*Good academic record and leadership*) June, 2012

North Seattle Community College Merit Scholarship (*Academic excellence*) June, 2010

Volunteer Experience

IEEE ISSCC Conference Student Volunteer (2018, 2019, 2020) Feb. 2018, Feb. 2019, Feb. 2020

STARS Middle/High-school Tutoring Program (Lake Avenue Community Foundation) April - June 2015

IEEE IMS/RFIC Symposium Student Volunteer June 2013

Teaching Experience

Engineering Strategies and Practice (ESP) Tutorial TA (APS 111, 112) Fall 2019, Winter 2020