Andre Xian Ming Chang

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Education

Master of Science - Purdue University West Lafayette, IN, US — May 2016
Electrical and Computer Engineering: Machine Learning — (3.8/4.0)

Bachelor - Universidade Tecnológica Federal do Paraná (UTFPR), Brazil — July 2014
Electronic Engineering — (0.87/1)

Exchange Studies - Franklin W. Olin College of Engineering, MA, US — Jan. - Dec. 2012
Electrical and Computer Engineering — (3.77/4.0)

Awards/Certificates

International Toastmasters - Competent Communicator — May 2016
Eta Kappa Nu chapter beta - IEEE honor society — Alumni — May 2016
Award IIE Student of the Month — June 2015
Scholarship Brazil Science without Boarders - Masters — Aug. 2014
Scholarship Brazil Science without Boarders - Undergraduate Exchange Study — Jan. 2012
Tutorial education program of Education Ministry of Brazil — Oct. 2011
Certificate CAE Cambridge English: Advanced — Aug. 2011

Experience

Research Assistant e-Lab Purdue University IN, US — Sep. 2014 – May 2016
- Designed a low power micro-architectures for recurrent neural networks using Xilinx FPGA (Field Programmable Gate Array)
- Implemented compiler to interface with the developed hardware
- Used Torch7 code to verify the hardware

Research Engineering Sonoscan IL, US — May – Aug. 2015
- Developed Bluetooth LE interface for transducer tagging
- Implemented the firmware for the transceiver, an Android App to receive data on mobile phones and a C program to receive data on PC
- Designed the Bluetooth LE circuit board using nrf51822 chip

Technical Assistant Sapiens Eletrônica ltda PR, Brazil — June 2013 – Aug. 2014
- Programmed industrial controller for automatic length sensing for cutting cardboard

Research Assistant UTFPR PR, Brazil — Aug. 2013 – July 2014
- Designed and implemented hardware for ultrasound signal processing to generate real time B-mode medical images, using Altera's FPGA
- Implemented the firmware to control the FPGA's processor

Research Assistant UTFPR PR, Brazil — Mar. – Sep. 2013
- Designed a prototype that acquires ultrasound signals for wood characterization, using Texas Instrument's Micro-controller

Research Assistant Franklin W. Olin engineering college, MA, US — June – Aug. 2012
- Created simulation models of Wireless-Power-Transfer systems for optimization purposes

Publications

A.X.M. Chang, B. Martini, E. Culurciello. "*Recurrent Neural Networks Hardware Implementation on FPGA.*" arXiv preprint arXiv:1511.05552 (2015).

A.X.M. Chang, A.A. Assef, J.M. Maia and F.K. Schneider. "*Control system based on FPGA/DSP for acquisition, conditioning and processing of ultrasound signals*", in XXIV Brazilian Congress on Bio-medical Engineering Brazil, 2014, 193.

A.X.M. Chang, F.K. Schneider and J.M. Maia. "*System for acquisition and processing of ultrasound signal for wood characterization*", in XVIII SICITE2013 Brazil, 2013, 0075.

Skills

Software: C, C++, Java, Python, Lua, Torch7, Linux, Scheme, Matlab, LabView, Visual Basic and SCADA
Hardware: Verilog, VHDL, Assembly, ARM micro-controllers, FPGA Design and PCB
Languages: English Fluent, Portuguese Fluent and Chinese (Hu dialect)