# Mark Lipski

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### **Electronic Systems Engineer**

Bachelor of Engineering | Engineering Systems and Computing

University of Guelph – (Fall 2013 - Winter 2018)

- Electives focus on analog and digital electronics.
- Experienced with integrated circuit design and system modeling through work experience, currently enrolled in *VLSI*.
- Knowledgeable with digital systems including, Advanced Computer Architecture, FPGA design, and microcontroller fundamentals and programming.

## **Employment History**

• University of Guelph

Research Assistant

April 2016-August 2016

- Focused on developing and improving fully integrated DC-DC step-up converter designs.
- Modelled and tested DC-DC converter designs and configurations using both Cadence and Simulink.
- Designed an on-chip control system for the DC-DC converter.

#### • GE Water and Process Technologies

Technology Co-Op

April 2015-August 2015

- Created a model of the existing membrane systems to try and predict their effectiveness.
- Learned the importance of data organization and system standards which were reinforced through the different tasks performed.
- Experience with organizing and gathering data through working with an aging data archive system.

#### **Publications**

- Co-Authored a paper on integrated DC-DC converters for submission in the IEEE ICM 2016 conference, presently awaiting publication.

## **Past Projects**

- Designed and implemented a functional processor in VHDL using the Xilinx IDE. The design used a MIPS architecture and was pipelined to have 5 stages.
- Acquired data from a FPGA sensor for heart rate and temperature onto a Raspberry PI, then pushed the data to the cloud over Wi-Fi.
- Develop a multi core control system of a hot air plant model using LabView.

## **Technological Skills**

- Programming Languages: C, VHDL, Java, Python, Matlab/Octave, C++, ARM Assembly
- Hardware: K60 Board (Cortex M4 Processor), Raspberry PI, Arduino, PIC microcontrollers.
- Software Tools: Cadence, Simulink, LabView, Solidworks, UML, Excel

#### Soft Skills

- Proficient at teaching and explaining technical concepts
- Developed team leadership skills working on a large scale software project of 7 people
- Self-confident, adaptive and determined
- Strong independent learner