

SAMUEL G. DEBRUIN

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EDUCATION

- University of Michigan**, Ann Arbor, MI April 2017
Ph.D. Candidate Computer Science, Hardware Focus
- University of Michigan**, Ann Arbor, MI April 2012
B.S.E. Computer Engineering, Major G.P.A.: 3.67/4.00
Magna Cum Laude
Minor, B.S. Physics

AWARDS

- Fellow, National Science Foundation Graduate Research Fellowship (GRFP) 2012 – 2017

MAJOR PUBLICATIONS

- S. DeBruin, B. Ghena, Y.-S. Kuo, and P. Dutta. PowerBlade: A Low-Profile, True-Power Plug-Load Meter. In *SenSys'15*, 2015.
- S. DeBruin, B. Campbell, and P. Dutta. Monjolo: An Energy-Harvesting Energy Meter Architecture. In *Sensys'13*, 2013.

DEMO & POSTERS

- S. DeBruin, B. Ghena, Y.-S. Kuo, and P. Dutta. Demo: PowerBlade A Low-Profile, True-Power, Plug-Through Energy Meter. In *Sensys'15 Demo Session*, 2015.
- B. Campbell, S. DeBruin, M. Clark, and P. Dutta. Disaggregating End Loads with Energy-Harvesting Sensors and Cloud Analytics. In *Sensys'13 Demo Session*, 2013.
- S. DeBruin, J. Grunnagle, and P. Dutta. Scaling the Wireless AC Power Meter. In *IPSN'12 Demo Session*, 2012.

EXPERIENCE

- Graduate Research Student** 2010 – Present
University of Michigan Computer Science and Engineering Dept.
- Designed and produced zero-standby power and low-profile power meters to enable ubiquitous deployments in residential and commercial spaces
 - Evaluated and implemented energy harvesting sensor systems utilizing state of the art technologies and practices
 - Generated an energy metering baseline dataset of a residential apartment covering 70 sensors over a period of 9 months
- Founder, Chief Engineer** June 2014 – Present
Endectra, LLC
- Designed system for conditioning and digitizing analog pulses generated by radioisotope sensor
 - Integrated custom radiation sensor module into wireless and handheld battery-powered systems
- Founder, Electronics Team Leader** February 2012 – Present
SkySpecs, Inc
- Designed and produced printed circuit boards (PCBs) for autonomous aerial vehicle control and flight
 - Analyzed flight data and feedback to optimize hardware for vehicle dynamics
- Technical Intern** May – August 2012
Northrop Grumman RF Combat and Information Systems (RFCIS)
- Assisted in implementing radio frequency (RF) radar warning receivers and test benches
 - Developed a database tool to assist NGC long range strategic planning

COMPUTER SKILLS

- Platforms:** Windows, Linux Ubuntu, Mac OS X
Languages: C++, C, Verilog, MATLAB, Python, Javascript, SQL
Applications: Mentor Graphics PADS, Solidworks, Cadsoft Eagle, Microsoft Office, Code Composer Studio

ACTIVITIES

- Michigan Autonomous Aerial Vehicles (MAAV) 2009 to 2012
Eta Kappa Nu (HKN) 2009 – Present
Institute of Electrical and Electronics Engineers (IEEE) 2010 – Present
Board Member, Alumni Association of the Peninsular Chapter of Alpha Delta Phi 2015 - Present