

# SAMUEL J. ETTINGER

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## Skills

Analog electronics  
Digital electronics  
Product development  
Controls engineering  
Circuit design  
3D modeling  
3D printing  
Digital prototyping  
Physical prototyping  
Data analysis  
L<sup>A</sup>T<sub>E</sub>X  
Microsoft Office

## Languages

English (Native)  
C, C++, C#  
Python  
MATLAB  
LabView

## Experience

**Mechatronic Engineer, Spin Master Studios** ..... Nov. 2016 - Present

- Working as a cross-disciplinary Subject Matter Expert, liaising between brand managers, hardware/firmware/software developers, and producers
- Designing and developing connected toys and apps across the global portfolio
- Developing software controls for complex, high-tech toys with embedded systems
- Researching new technologies & creating cost-effective applications for existing ones
- Leading system analysis, design, testing, debugging, and documentation activities

**Associate Instructor, Robot Sapience Ltd.** ..... Dec. 2015 - Aug. 2016

- Designed and taught robotics courses for primary- and secondary-level students at comprehensive schools throughout Hong Kong
- Used programmable robots of my own design to teach geometry, electronics, mechanics, programming, and logic
- Worked closely with school administrators and teachers to influence education policies and improve school culture

**Graduate Researcher, Cornell University** ..... Fall 2014 - Summer 2015

- Researched new control systems as part of the Verifiable Robotics Lab for NSF-funded project, "Provably Correct Reactive Control From Natural Language"
- Developed software interfaces for existing robot controllers, natural language parsers, and linear temporal logic (LTL) parsers

**Graduate Researcher, GRITS Lab, Georgia Tech** ..... Fall 2012 - Fall 2013

- Developed a low-cost microscale airship drone for aerial swarm research
- Project confirms practical proficiency in system design/evaluation, CAD, circuit design, signal processing, differential geometry, and parameter adaptive control

**Clinic Developer, Harvey Mudd College** ..... Summer 2011

- Wrote tutorials to help students learn technical hardware and CAD/FEM software
- Created valuable lessons in 3D printing, PCB design, SolidWorks Analysis, and electronic testing procedures

**Clinic Member, Harvey Mudd College** ..... Fall 2010, Fall 2011 - Spring 2012

- Developed a novel liquid nitrogen flash freezer for producing ice pops
- Flash freezer was entirely conceived, prototyped, and tested by seven-student team
- Co-authored U.S. Patent #20130333404, "Safe and compact machine for rapidly producing frozen confections," published December 2013
- Analyzed and redesigned a commercial electronic IMU circuit for lifetime reliability on behalf of Northrop-Grumman
- Drew from circuit analysis, materials science, and reliability engineering
- End-of-year presentation earned "Best Clinic Presentation" award

## Education

### Master of Science in Electrical and Computer Engineering

Georgia Institute of Technology, Atlanta, Georgia

Graduated December 2013; Cumulative GPA: 3.7; Engineering GPA: 3.7

### Bachelor of Science in Engineering

Harvey Mudd College, Claremont, California

Graduated with Honors May 2012; Cumulative GPA: 3.5; Engineering GPA: 3.7