

**Stephen J. Longfield, Jr.**

**Campus**

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**Permanent**

12 Oak Knoll  
Ridgefield, CT, 06877

**EDUCATION**

**Franklin W. Olin College of Engineering – Needham, MA**

May 2009

Candidate for Bachelor of Science in Electrical Computer Engineering; GPA as of Fall 07: 3.60

- Received four-year full-tuition \$130,000 Olin Scholarship
- Coursework Includes: Software Design, Principles of Engineering, Computer Architecture, Linear Algebra, Differential Equations, and Probability and Statistics, Artificial Intelligence, Intro to Microelectronic Circuits, Signals and Systems, User Oriented Collaborative Design, Analog and Digital Communications, Foundations of Business and Entrepreneurship, Discrete Math, Human Factors and Interface Design, Robotics, Advanced Digital Systems, Mixed Analog VLSI\*, SCOPE\* (\* Currently enrolled).

**Ridgefield High School – Ridgefield, CT**

June

Weighted GPA: 4.4

**Skills**

- LaTeX, Microsoft Office, Adobe Photoshop, SolidWorks, MatLab, Linux, Xilinx FPGAs, Microchip PICs, PCAD
- Programming Skills: Verilog, C, C++, Perl, MATLAB and Python
- Trained in use of mill, drill press, band and disc sander, band saws (horizontal and vertical), and MIG welding

**EXPERIENCE**

**Course Projects, Olin College – Needham, MA**

***Video game system on an FPGA***

Fall 2008

- Implementing a simple video game system on a single Xilinx FPGA, included MicroBlaze processor, video and sound outputs, and PS/2 mouse input.

***Independent Study in Stereo Vision on an FPGA***

Spring 2007-Present

- Implementing parallel stereo vision algorithm on single Xilinx FPGA in Verilog HDL

***User Oriented Collaborative Design***

Spring 2007

- Interviewed Park Rangers to develop concept for new communications system

***Independent Study in Olin Intelligent Vehicle Laboratory***

Fall 2006

- Designed and created scanning Radar sensor for robotics use

***Computer Architecture***

Fall 2006

- Programmed Cellular Autonomata Game of Life on Xilinx FPGA
- Created and simulated single-cycle CPU in Verilog HDL

***Independent Study in Olin Intelligent Vehicle Laboratory***

Spring 2005

- Created a MATLAB interface and guide for wiring Galil Motor Controller

***Integrated Course Block: Math and Physics***

Fall 2005

- Designed and modeled self-balancing two-wheeled cart

**DEKA – Manchester, NH**

Summer 2008

***EE Intern***

- Research Intern, creating circuits, board layouts, and embedded programming. (signed non-disclosure agreement)

**iRobot – Burlington, MA**

Summer 2007

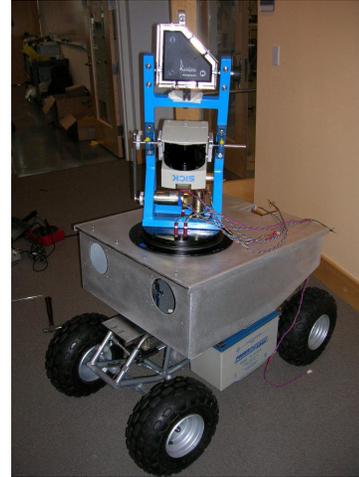
***EE Intern***

- Research intern, created board layouts, circuit designs, and programs (signed non-disclosure agreement)

**Olin Intelligent Vehicle Laboratory** – Needham, MA  
*Research Engineer*

Summer 2006

- Programmed a pure pursuit waypoint follower, stereo vision based obstacle detection and navigation, created electrical wiring and emergency stop circuit design for an autonomous tractor.



*Olin College Robotic Tractor and Sensor Testing Platform*

**Schlumberger Doll Research** – Ridgefield CT  
*Research Lab Assistant, Sensor Physics Department*

Summer 2005

- Ran tests involving precise titration and spectrophotometry (signed non-disclosure agreement)

**Keough's Paint and Hardware** – Ridgefield, CT  
*Customer Sales Associate*

August 2004- August 2005

- Rang sales and helped customers with home maintenance questions

**Town of Ridgefield** – Ridgefield, CT  
*Producer and Technician*

2004-2005

- Videotaped and edited the Board of Selectmen and Board of Education Meetings
- Helped to develop video archiving of town meetings

## **LEADERSHIP AND ACTIVITIES**

### **Boy Scouts of America**

- Eagle Scout Fall 2004
  - Collaborated with Town Recreational Center Manager to develop project
  - Coordinated approximately 30 volunteers

### **Volunteer**

#### **Engineering Discovery - Olin College**

Fall 2005-Spring 2006

- Perform science experiments for children in Needham elementary schools to introduce science and engineering content

### **Theatre Lighting Design**

2001-Present

- Designed, programmed and ran lighting setups for numerous plays for both school (Ridgefield High School and Olin College) and community theatre programs