

# Mason Manning

Phone: (270)978-3205  
09mmanning@gmail.com

*As a graduate in Optical Engineering, I have undertaken many extracurricular projects which have demonstrated my ability to work with a team in a fast-paced environment. This includes designing and manufacturing a fully-functional satellite, as well as numerous scientific payloads for high-altitude balloon missions. Currently, I am seeking a position with a science and engineering organization to which I can bring and further develop my current skillset.*

## BSE Optical Engineering – University of Alabama in Huntsville

Graduation Date: Spring 2015

GPA: 3.550

## Work Experience

### RadioBro Corporation

Position: Product Engineer

Period of Employment: April 2015 – Present

Description: Currently work as a product engineer, specializing in embedded software development for use in an aircraft testing system, among other embedded systems projects.

### UAH Center for Space Plasma and Aeronomic Research

Position: Research Assistant II, S3

Period of Employment: May 2013 – March 2014

Description: Worked as a member of the team developing the electrical and software subsystems for the JEM-EUSO Global Light System (GLS) calibration project. JEM-EUSO is an internationally collaborated project to develop an instrument for detecting high-energy cosmic rays in the Earth's atmosphere. Duties included using Altium Designer to create prototype embedded circuits and then developing the controlling software using Visual Studio and LabVIEW.

### UAH Research Experiences for Undergraduates

Position: CubeSat Flight Software Developer

Period of Employment: January 2013 – June 2013

Description: Worked as a member of the ChargerSat-1 development team to create a simple RTOS which would fulfill the mission goals of the project. This involved working closely with both the mechanical and electrical subsystem teams in order to ensure repeatable and reliable operation of the satellite.

### UAH Advanced Materials Research Lab

Position: Student Specialist II

Period of Employment: June 2011 – August 2011

Description: Worked in a research laboratory setting to help develop advanced energy harvesting methods utilizing piezoelectric materials. Duties included working with others to design and perform experiments, as well as designing data recording programs using LabVIEW.

## Applicable Skills

- C, C++, C#, WPF, MATLAB, LabVIEW
- Altium Designer, CadSoft EAGLE, IAR Embedded Workbench, Synopsys Code V, Microsoft Visual Studio
- PCB design/prototyping/testing
- Embedded software design/debugging
- Optical system design/simulation using Code V

## Activities/Organizations

- **UAH Space Hardware Club - [space.uah.edu](http://space.uah.edu)**
  - Served as the Space Hardware Club President from October 2013 through April 2014.
  - Developed the majority of the RTOS for the UAHuntsville pico-satellite, ChargerSat-1, which was launched into orbit Nov 19, 2013.
  - Developed data logger for a neutron counter as a high-altitude balloon payload in conjunction with the National Space Science Technology Center.
  - Developed the flight electronics and software for a UAH CanSat mock-satellite.
  - Gained experience with the development and launch of high-altitude balloon payloads for scientific and educational purposes.
  - Gained experience developing composite layups using fiberglass and carbon fiber materials for amateur rocketry platforms in UAH's student machine shop.

## Applicable Coursework

- **Electrical Engineering**
  - EE 305: Electronic Devices & Design Lab
  - EE 307: Electricity & Magnetism
  - EE 308: Electromagnetic Engineering
  - EE 310: Solid State Fundamentals
  - EE 313: Electrical Circuit Analysis II
  - EE 315: Introduction to Electronic Analysis & Design
  - EE 382: Analytical Methods of Continuous Time Systems
  - EE 383: Analytical Methods of Multivariable & Discrete Time Systems
  - EE 384: Digital Signal Processing Lab
  - EE 385: Random Signals & Noise
  - EE 386: Introduction to Control & Robotic Systems
- **Computer Engineering/Computer Science**
  - CS 317: Introduction to Design & Analysis of Algorithms
  - CPE 321: Computer Organization
  - CPE 323: Introduction to Embedded Computer Systems
  - CPE 422: Advanced Logic Design
- **Optical Engineering**
  - OPT 341: Geometrical Optics
  - OPT 342: Physical Optics
  - OPE 451: Optoelectronics
  - OPE 453: Laser Systems
  - OPE 454: Optical Fiber Communications
  - OPE 456: Photonics Systems
  - OPE 459/460: Optical Engineering Design I/II