

LARISA THORNE, MS

760.212.9926 • larisathorne@gmail.com

EDUCATION

Carnegie Mellon University PhD, Physics	2014 – Present
Carnegie Mellon University Master of Science, Physics	2014 – 2016
University of California, Santa Barbara Bachelor of Science, Physics	2011 – 2013

INTERNSHIP/RESEARCH EXPERIENCE

Graduate Research Assistant	Jan 2015 – Present
Medium Energy Physics Group, Carnegie Mellon University	
<ul style="list-style-type: none">• Compton Scattering Simulation<ul style="list-style-type: none">◦ Writing Compton electron generator module in GEANT4 simulation package.• Compton Scattering Analysis<ul style="list-style-type: none">◦ Wrote C++/ROOT scripts to run electron beam asymmetry-calculating algorithms, including error analysis. Improved results using GEANT4 simulations of system.• Fast-pulsing LED array<ul style="list-style-type: none">◦ Measured, analyzed, and minimized LED crosstalk using fiber optic signal sent to PMT.	
Forensic Technician	April 2013 – Jan 2014
Orion Architecture	
<ul style="list-style-type: none">• Completed calculations for structural/waterproof building failure investigation.	
Worster Fellow	June 2012 – Sept 2012
Mazin Physics Group, University of California at Santa Barbara	
<ul style="list-style-type: none">• Millisecond pulsar timing simulations (Python, IDL) for optical through near-IR range.	
Summer Undergraduate Research Fellow	June 2011 – Aug 2011
LIGO Crackling Lab, California Institute of Technology	
<ul style="list-style-type: none">• Characterized crackling noise in married-steel cantilever blade springs.	

PROJECTS

Laser Cutter
<ul style="list-style-type: none">• Wrote original software (Python) whose instructions are relayed via serial to an Arduino Uno, to control laser cutting hardware (Adafruit MotorShields, stepper motors, timing pulleys, 405nm laser, self-designed 3D printed parts). See documentation and video demo on personal website below.
Webpage design
<ul style="list-style-type: none">• Designed and constructed personal website (www.lthorne.com) in HTML, from scratch.

SKILLS

Software (Python, C++/ROOT, HTML/CSS, Fortran)
Shop Equipment (Mill, drill press, bandsaw in aluminum, steel, acrylic)
OS (Linux, OSX, Windows)
Language (English, German, Spanish)
Instruction/Leadership (Supplemental Instruction Leader, Recitation Teaching Assistant x3)

COURSEWORK

Machine Learning (grad) *Fall 2016*
Mathematical Methods (undergrad + grad)
Electricity & Magnetism (undergrad + grad)
Quantum Mechanics I, II (undergrad + grad)
Statistical/Thermal Mechanics (undergrad + grad)
Intro to CS Fundamentals (undergrad)
Nano Photonics (grad, engineering)
Particle Physics (grad)
Astrophysics (grad)