# LARISA THORNE, MS

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## EDUCATION

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

## INTERNSHIP/RESEARCH EXPERIENCE

**Graduate Research Assistant** …… 01/2015 – Present
Medium Energy Physics Group, Carnegie Mellon University
- Compton Scattering Analysis
  - Wrote C++/ROOT scripts to run electron beam asymmetry-calculating algorithms, including error analysis. Improved results using GEANT4 simulations.
- Fast-pulsing LED array
  - Measured, analyzed, and minimized crosstalk in fast (~10ns) LED array using fiber optics to PMT.

**Forensic Technician** ……..... 04/2013 – 01/2014
Orion Architecture and Construction Consultants
- Drafted elevation drawings and prepared quantity takeoffs for cost estimation.

**Worster Fellow** ……..…… 06/2012 – 09/2012
Mazin Physics Group, University of California at Santa Barbara
- Wrote millisecond pulsar timing simulations (IDL, Python) in optical to near-IR range.

**Summer Undergraduate Research Fellow** …… 06/2011 – 08/2011
LIGO Crackling Lab, California Institute of Technology
- Qualified crackling noise in driven marriaged-steel cantilever blade springs.

**Undergraduate Research Assistant** …… 01/2011 – 06/2011
LIGO 40m Interferometer Prototype Lab, California Institute of Technology
- Assisted with general upgrade tasks. Started design calculations for a laser temperature control box.

## PROJECTS

Laser Cutter
- 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
- Designed and constructed personal website in HTML, from scratch.

## SKILLS

Software (Python, C++/ROOT, HTML/CSS, Fortran, DraftSight)
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

Mathematical Methods (undergrad + grad)
Electricity & Magnetism (undergrad + grad)
Quantum Mechanics I, II (undergrad + grad)
Statistical, Thermal Mechanics (undergrad + grad)
Intro to CS Fundamentals (undergrad, Python)
Nanophotonics (grad, engineering)
Particle Physics (grad)
Astrophysics (grad)
Analog, Digital Electronics (undergrad)