# LAURA KULOWSKI

## EDUCATION

2011-Present *Brown University*, Providence, RI.
Double concentrating in Mathematics and History.
Cumulative GPA: 3.83, Math GPA: 4.0, History GPA: 3.86

2007-2011 *Bristol Eastern High School*, Bristol, CT.
Class rank 1 out of 358.

## UNDERGRADUATE COURSEWORK

**Mathematics**
- Multivariable Calculus with Physics/Engineering Applications
- Linear Algebra
- Differential Geometry
- Ordinary Differential Equations
- Partial Differential Equations
- Abstract Algebra
- Combinatorial Topology

**Physics**
- Foundations of Electromagnetism and Modern Physics
- Beginning Astronomy
- Electricity and Magnetism
- Undergraduate Research in Physics
- Advanced Classical Mechanics
- Stellar Structure
- Computational Physics
- Quantum Mechanics

**History**
- Civil War and Reconstruction
- American Legal and Constitutional History
- Empires in America to 1890
- Medieval Japan
- Russia in the Era of Reforms, Revolutions, and World Wars
- European Intellectual History
- War and Peace in Modern Europe
- The Roots of Modern Science
- Science at the Crossroads

**Related**
- Chemistry: Equilibrium, Rate, Structure
- Principles of Economics
- Introduction to Engineering

## HONORS AND AWARDS

*Gochman LINK/SEW Award*, received top funding award ($6,050) from Brown for summer research at Harvard with Dr. Huiqun Wang, Summer 2014.

*Chambliss Student Poster Award Honorable Mention for 223 American Astronomical Society Meeting*, for Mars dust lifting research with Dr. Huiqun Wang, 2014.

*Karen T. Romer Undergraduate Teaching and Research Award (UTRA)*, for summer research in physics at Brown with Humphrey Maris, Summer 2012.

*Schreiber Family Brown Annual Fund Scholarship*, Brown University, 2011-2013.

*Connecticut Governor's Scholar Semi-Finalist*, 2010.

*Air Force Math and Science Award*, 2010.

*Daughters of the American Revolution Award*, 2010.

## EXPERIENCE

*Stanford/Lockheed Martin Solar and Astrophysics Laboratory (LMSAL) IRIS Research Experience for Undergraduates (REU)*, Summer 2014

Worked with Drs. Juan Martinez-Sykora and Mark Cheung to analyze our Sun's spectral data from the Interface Region Imaging Spectrograph (IRIS). Studied Doppler velocities and spectral line widths for the quiet Sun in the transition region.

*Harvard-Smithsonian Astrophysical Observatory Research Experience for Undergraduates (REU)*, Summer 2013.

Worked with Dr. Huiqun Wang to construct a database of locations of active dust lifting on Mars from existing Mars Daily Global Maps (MDGMs). Assessed the spatial, temporal, and size distribution of lifting areas and classified lifting events by structure.

*Research Assistant*, Department of Physics, Brown University, 2012-2013.

Studied the orientation and mobility of the 1P electron bubble in liquid helium under the guidance of Professor Humphrey Maris.

*Research Assistant*, Yale School of Engineering and Applied Science, Yale University, Summer 2010.

Aided Professor Daniel E. Rosner in completing his manuscript "Thermo-diffusion Effects in Combustion for Power Production or Chemical Synthesis."

## EXTRACURRICULAR ACTIVITIES

*Brown University MathWiSE (Women in Science and Engineering)*, 2012-Present.

Organize lectures, community events, and a Girl Scouts Math Workshop to encourage females to pursue studies in the mathematical sciences.

Lead a panel discussion for the film *Girl Rising*, which focused on girls in developing countries overcoming gender barriers.

*Brown University Math Department Undergraduate Group (DUG)*, 2012-Present.

Sponsor lectures to encourage undergraduate involvement mathematics.

Started the weekly undergraduate tea hour in the Math Department.

*Linear Algebra Grader*, Brown University, Spring 2014.

Graded and provided comments on weekly problems sets for Linear Algebra (MATH 0520)

*Engineers Without Borders (EWB)*, Brown University Student Chapter, 2012-2013.

Participated in a project to build latrines in Tireo, Dominican Republic.

*Algebra in Motion*, 2011-2012.

Tutored in science and mathematics at a high school in Providence, RI.

## SKILLS

**Academic:** Strong problem-solving and research skills; comfortable in unstructured academic settings that encourage independent thinking.

**Computer:** Comfortable with Linux, Macintosh, and PC; experienced with Mathematica, MATLAB, LaTeX, IDL, and Python.

**Languages:** French (conversational)