

Lennart Rudolph

CONTACT INFORMATION	340 E Foothill Boulevard Claremont, CA 91711 (714) 805-2993	lrudolph@hmc.edu https://github.com/lrudolph1 https://lrudolph1.github.io/
EDUCATION	Harvey Mudd College , Claremont, CA <i>B.S. Physics</i> Concentration in Physics with Computers	Expected Graduation: May 2016
RELEVANT COURSES	Computer Science: Data Structures and Program Development, High-Performance Computing (in progress), Computability and Logic (in progress) Physics: Computational Methods in Physics, Statistical Mechanics & Thermodynamics Mathematics: Discrete Mathematics, Intermediate Probability, Differential Equations and Linear Algebra II, Fourier Series & Boundary Value Problems	
SKILLS	Proficient in: C++, Mathematica, L ^A T _E X Exposure to: Go, Java, Racket, C, Python, Prolog, GNU make, git, subversion, MATLAB, SolidWorks Languages: English, German	
WORK EXPERIENCE	Software Engineering Intern (BigNerve) - Work on the backend API for BigNerve's DailyNerve website - Integrating PayPal Express Checkout with the existing codebase by writing my own RESTful implementation in Google's Go programming language Assistant to System Administrator (HMC) - Assisted the engineering department's system administrator - Created new disk images for over sixty engineering department computers and installed solid state drives into these machines - Occasionally assisted the college's Computer Information Services department with help-desk support tickets - Wrote and edited batch scripts to optimize tasks	May 2015 - present May 2015 - Aug. 2015
PROJECT EXPERIENCE	Atomistic Simulations of White Dwarf Dynamics (LLNL) - Member of a joint computer science-physics clinic team working on a white dwarf project for the Lawrence Livermore National Laboratory's High Performance Computing Innovation Center - Run simulations on the Blue Gene Q supercomputer Wormhole Simulation (HMC) - Used concepts from general relativity to implement a ray-traced interpolation map for the light from a wormhole in Mathematica (See my GitHub for the code and examples)	Sept. 2015 - May 2016 Apr. 2015 - May 2015
OTHER EXPERIENCE	Physics Research Student - Developed a SolidWorks model of a vacuum chamber for an ion trapping experiment - Worked with Radia for Mathematica to simulate magnetic fields in the chamber Physics Grader (HMC) - Graded homework for a section of Mechanics & Wave Motion Homework Hotline Tutor (HMC) - Tutored student callers in mathematics and science from the elementary school level to the AP level - Tutored up to AP Physics, AP Calculus BC, AP Statistics, and AP Chemistry.	Jan. 2014 - May 2014 Jan. 2014 - May 2014 Sept. 2013 - May 2013
OTHER COURSES	Computer Science: Principles of Computer Science, Introduction to Computer Science Physics: General Relativity & Cosmology, Electromagnetic Fields (in progress), Quantum Mechanics, Theoretical Mechanics, Quantum Physics, Electromagnetic Theory & Optics, Mechanics & Wave Motion, Gravitation, Special Relativity, Optics Lab, Electronics Lab, Modern Physics Lab, Physics Lab Mathematics: Multivariable Calculus, Probability and Statistics, Intro to Differential Equations, Intro to Linear Algebra, Calculus, Putnam Seminar.	