Jeffrey **Hafner**

Physicist

125 Radford St, Yonkers NY USA

+1-315-532-0278 | jphafner@buffalo.edu | jphafner.github.io | jphafner | jphafner

"Before you leave the house, look in the mirror and take one thing off."–Coco

Summary

I am a geek, a skeptic and I wear bowties for fun.

Education

Andrews University — *Berrien Springs, MI*

B.S./M.S. in Biophysics and Mathematical Studies — *Aug. 2001 – Aug. 2006*

3.31 GPA

University at Buffalo — *Buffalo, NY*

Ph.D in Physics — *Aug. 2006 – Feb. 2012*

3.50 GPA

Experience

Flying Moose Lodge — *East Orland, ME*

Wilderness Guide and Camp Counselor — *2005*

- Was responsible for takings boys, aged 8–16, on 10 day excursions throughout the state of Maine.
- State of Main licensed Wilderness guide, American Red Cross certified lifeguard.

Buffalo, NY — *2008–2011*

Research Assistant — *University at Buffalo*

Produced three peer reviewed publications.

Baltimore, MD — *2012*

Postdoctoral — *University of Maryland*

Implementation of Particle Mesh Ewald Electrostatics for Continuous Constant pH Molecular Dynamics in CHARMMM.

Towson, MD — *2013-2014*

Adjunct Physics Professor — *Towson University*

Teaching Light and Color, an introductory physics course

Baltimore, MD — *2014–2015*

Physics Teacher — *Baltimore City Public Schools*

Teaching physics first at Mervo

Dobbs Ferry, NY — *2015–2016*

Physics Teacher — *Masters School*

Teaching 11^{11} and AP Physics B Mechanics

Manhattan, NY — *2016–Current*

Unix/Automation Engineer — *IPsoft Inc*

Provide Unix related automation to clients through an ITIL framework utilizing Ansible and IPautomatas

Projects

0.1 Courses

Penn State University — *University Park, PA*

NSF REU — *Summer 2004*

Implemented a monte carlo modeler in Matlab to model kinesin processivity under William Hancock.

Andrews University *Berrien Springs, MI*

PHY447: Advanced Lab 2 *Spring 2005*

Validated predicted reverberation times based on blue prints of the Howard Performing arts center

University at Buffalo *Buffalo, NY*

PHY506: Computational Physics 2 *Spring 2008*

Implemented a cellular automata traffic modeler in python to investigate phase transitions in traffic

University at Buffalo *Buffalo, NY*

PHY515: High Performance Computing 1 *Fall 2008*

Parallelized my dissertation utilizing ScaLAPACK.

University at Buffalo *Buffalo, NY*

CSE536: Computational Biology *Fall 2011*

Implemented a 2D Hydrophobic-Hydrophilic Protein folder utilizing an Ant Colony Optimization Algorithm in Python.

University at Buffalo *Buffalo, NY*

Doctoral Dissertation titled: *Validation and Refinement of Course Grained Protein Models* *2008–2011*

- About a 100 pages of text, Over 5000 lines of C, and over 1000 lines of Python.
- Work was performed on the computing resources of UB Center for Computational Research

0.2 Vocational

physicsAMC *PhysicsAMC*

Physics Teacher *multiple locations*

2014–2016

- A comprehensive physics exam bank that utilizes an lpeg parser for question selection.
- This project enabled me to use an infinite redo policy on all assessments, without punishment, which was an important motivation for this project, and created some of my favorite memories.
- this project utilizes LaTeX, lua, lpeg, and tikz for graphics, and contains more than a 100,000 lines of code.
- sample-exam

Awards and Certifications

2013–2014 **Intramural Champion**, University of Maryland *Baltimore, MD*

2016 **Red Hat Certified System Administrator**, License 130-172-497 *RHCSA*

2016 **Cisco Certified Entry Networking Technician**, License CSCO12981391 *CCENT*