



Jeffrey Hafner

PHYSICIST

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"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

B.S./M.S. IN BIOPHYSICS AND MATHEMATICAL STUDIES

3.31 GPA

Berrien Springs, MI

Aug. 2001 – Aug. 2006

University at Buffalo

PH.D IN PHYSICS

3.50 GPA

Buffalo, NY

Aug. 2006 – Feb. 2012

Experience

Flying Moose Lodge

WILDERNESS GUIDE AND CAMP COUNSELOR

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

East Orland, ME

2005

Buffalo, NY

RESEARCH ASSISTANT

Produced three peer reviewed publications.

2008–2011

University at Buffalo

Baltimore, MD

POSTDOCTORAL

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

2012

University of Maryland

Towson, MD

ADJUNCT PHYSICS PROFESSOR

Teaching Light and Color, an introductory physics course

2013–2014

Towson University

Baltimore, MD

PHYSICS TEACHER

Teaching physics first at Mervo

2014–2015

Baltimore City Public Schools

Dobbs Ferry, NY

PHYSICS TEACHER

Teaching 11th and AP Physics B Mechanics

2015–2016

Masters School

Manhattan, NY

UNIX/AUTOMATION ENGINEER

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

2016–Current

IPsoft Inc

Projects

0.1 Courses

Penn State University

NSF REU

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

University Park, PA

Summer 2004

Andrews University

PHY447: ADVANCED LAB 2

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

Berrien Springs, MI

Spring 2005

University at Buffalo

PHY506: COMPUTATIONAL PHYSICS 2

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

Buffalo, NY

Spring 2008

University at Buffalo

PHY515: HIGH PERFORMANCE COMPUTING 1

Parallelized my dissertation utilizing ScaLAPACK.

Buffalo, NY

Fall 2008

University at Buffalo

CSE536: COMPUTATIONAL BIOLOGY

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

Buffalo, NY

Fall 2011

University at Buffalo

DOCTORAL DISSERTATION TITLED: *Validation and Refinement of Course Grained Protein Models*

- 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

Buffalo, NY

2008–2011

0.2 Vocational

physicsAMC

PHYSICS TEACHER

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

PhysicsAMC

multiple locations

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 CSC012981391

CCENT