310 N Geneva St. Apt 7, Ithaca NY 14850 • 503-757-2496 • mtf53@cornell.edu

#### **EDUCATION**

Cornell University Ithaca NY, MA Applied Mathematics (expected May 2013)

Graduate Courswork

Dynamical Systems Probability Real Analysis Statistical Mechanics

Reed College Portland OR, BA Physics May 2008

Senior Thesis: Modified Electrodynamics: Fixing Relativistic Field Theories

Undergraduate Coursework

Multivariable Calculus I & II Linear Algebra Abstract Algebra Ordinary Differential Equations Complex Analysis Real Analysis

Classical Mechanics Electrodynamics I & II Classical Field Theory

Quantum Mechanics I & II

Computer Experience

Proficient in Ruby, Python, JavaScript, SQL, HTML, CSS, MATLAB, Mathematica, R, git, IATEX Some experience with C, Illustrator, Photoshop

### **EXPERIENCE**

Research Assistant, Cornell University, Ithaca NY, Jun 2012–Aug 2012

Working under Prof. Ginsparg, wrote python based code to perform unsupervised analysis of large time-scale language patterns in the arXiv e-print database of science articles.

Teaching Assistant, Cornell University, Ithaca NY, Aug 2011–May 2012

Spring: grader for introductory course in real analysis. Fall: lead teaching assistant for introductory course in programming with MATLAB.

Junior Software Developer, Intersect.com, Seattle WA, Sep 2009–May 2011

Worked with team of six developers to build a web platform for community journalism. Responsible for code development (HTML, CSS, JavaScript, ruby, SQL, C), fixing defects, QA, data-analysis; designed and implemented spectral clustering of geo-temporal data and content ranking system. Assisted Prof. Ondrizek with steel aluminum and paper art fabrication and installation

**Editorial Associate**, under Dr. Joel Franklin, Reed College, June 2008–Aug 2008, June 2009 Performed comprehensive editing, for accuracy, style, and content, of his undergraduate physics text, *Advanced Mechanics: An Introduction to General Relativity*, Cambridge University Press.

REU Fellow, Santa Fe Institute, Santa Fe NM, June 2007–Aug 2007

Conducted independent research under Dr. Eric Smith concerning the plausibility of a metabolismfirst scenario for the origin of life and graph theoretic formalisms for describing chemical reactions

Nuclear Reactor Operator, Reed Research Reactor, Portland OR, Aug 2005–May 2006 Responsible for reactor operation, sample preparation, operator training, and emergency response

#### PATENTS (PENDING)

Inventors: Peter Rinearson, Kristofor Selden, Michael Flashman US 20120005209, SYSTEMS AND METHODS FOR IDENTIFYING INTERSECTIONS USING CONTENT METADATA

# HONORS

Phi Beta Kappa, Reed College, 2008 Commendation for Academic Excellence, Reed College, 2005–2008 California State Arts Scholar, 2004 High School Salutatorian, 2004

### WEB

cam.cornell.edu/~mtf53
github.com/flashman
bonerbucks.org

# INTERESTS AND ACTIVITIES

ceramics (9 yrs.), sculpture (5yrs.), soccer(14 yrs.), taxidermy (3 yrs.), bm(2 yrs)