

## Travis M. Whitaker

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<https://github.com/TravisWhitaker>

**EDUCATION**     *Bachelor of Science*, Chemical Engineering - PGPA 3.4  
Rochester Institute of Technology, Rochester, NY, expected graduation: May 2016  
Minor: Computer Engineering  
Concentration: Japanese Language

**SKILLS**     *Languages & Software*: C, C++, Haskell, BASH, Python, 80x86 Assembly,  
ARM Assembly, AVR Assembly, Mathematica, MATLAB, L<sup>A</sup>T<sub>E</sub>X, SQL, VHDL  
*Hardware*: Logic Analyzers, Gas Chromatographs,  
Mass Spectrometers, Various Rheometry Apparatus

**EXPERIENCE**     *Systems Programmer*     June 2013 - Present  
Janssen Biotech, a Johnson & Johnson Company, Philadelphia, PA

- Lead team developing high-performance numerical modeling and analysis software, principally leveraging novel database technologies.
- Maintain numerous large C and Haskell codebases.
- Design domain-specific languages for modeling industrial processes.
- Numerics optimization (GPU Programming, LLVM)
- Distributed computing (Data Parallel Haskell, MPI, Ceph)
- Implement graph database for process flow tracking and real-time fault detection.
- Extensive use of AWS.

*Researcher/Laboratory Technician*     Summer 2012  
Applied Electrostatics Laboratory, SUNY Oswego, Oswego, NY

- Conducted experiments exploring potential applications of electrospray ionization.
- Wrote software application in C for tracking individual particles to aid the analysis of high-speed footage of clouds of electrostatic particles produced via electrospray ionization.

**PROFESSIONAL INTERESTS, HOBBIES, AND PROJECTS**

- *Resonator* – Library of Parallel Implementations of Common Engineering Numerics Routines, principally PDEs and Tensor-Valued Systems.
- *Octothorpe* – Cache-optimized thread-safe C data structures library.
- *libPOLY* – Portable real-time sound synthesis library.
- *FermiShell* – Small shell utility for solving chemical equations.
- Digital Signal Processing
- Computer Algebra
- Embedded Systems Programming
- High-Fidelity Audio
- Discrete Electronics

**PROFESSIONAL ORGANIZATIONS**     Computer Science House – Research & Development Director 2014-2015  
American Institute of Chemical Engineering  
American Mathematical Society  
American Chemical Society  
Association of Computing Machinery