Bret Comnes
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Portland OR **Web:** http://bret.io/

Experience

- **Academic & Research Computing Systems Administrator** May 2013 - Present
  PSU Office of Information Technology *Portland, OR*
  - Responsible for installing, maintaining and testing research software packages on a Rocks Cluster in addition to many typical sysadmin responsibilities.
  - Built poorly documented and buggy research software from source.
  - Communicated and worked with students and research groups in order to meet their research computing needs.
  - Learned Python and Django development.
- **Research Assistant to Dr. Erik Sánchez** May 2013 - Present
  PSU Sánchez Nano Development Lab *Portland, OR*
  - Put a Scanning Electron Microscope online by interfacing a vintage Jeol JXA-6400 SEM and custom image scanning software with node.js, sockets.io and webRTC for remote operation and STEM outreach.
- **Research Assistant to Dr. Andres La Rosa** September 2012 - Present
  PSU Nano-Optics and Structures Lab *Portland, OR*
  - Implementing a digital image accusation system for a vintage Hitachi S4160 SEM.
- **Teachers Assistant** September 2012 - Present
  Portland State University *Portland, OR*
  - First quarter teaching PSU's General Physics 202 course.
  - Developed two new labs covering micro controllers using Arduino and FPGAs using a Digilent Nexys 3 FPGA card for PSU's Experimental Physics 315 course.
- **Texbook Development Consultant** January 2012 - July 2012
  Cardinal TS *Telecommute*
  - Provided consultation on mathematics and content interpretation to a team of developers creating a cross platform, web application calculus textbook prototype under contract of Wiley Publishing.
  - Developed JavaScript based mathematics demonstrations with no prior JS experience.
  - Worked alongside developers following the Scrum development process.
- **Research Assistant to Dr. C.D. Hoyle** May 2009 - September 2011
  HSU Gravitational Research Laboratory *Arcata, CA*
  - Assisted research to test the Weak Equivalence Principal and gravitational inverse-square law at sub-millimeter distance scales.
  - Responsibilities included research and development of lab instrumentation, and software development.
  - Managed the scheduling and collaboration tools and Git repository used to organize the students participating in the project.
- **Research Assistant to Dr. David Kornreich** November 2009
  The Arecibo Legacy Fast ALFA Survey *Arecibo, Puerto Rico*
  - Learned and operated one of the worlds largest radio telescopes, and rapidly introduced myself to using the IDL programming language.
- **Academic Assistant** January 2009 - May 2011
  Humboldt State University *Arcata, CA*
  - Graded student homework and lab write-ups for an introductory electronics course for ∼60 undergraduate physics and engineering students.
  - Responsibilities included understanding the range of solutions to a given problem, applying a grading rubric to the work, entering grades into a database, managing a course wiki and following privacy guidelines.

Skills

Operating Systems, Languages, & Applications

- **Fluent:** Windows, OS X, Unix, Git, HTML, IRC, Mathematica, LabVIEW, Arduino, LaTeX, rbenv/rvm, gem, pip, github, bundler, jekyll, ssh
- **Almost There:** CSS, JavaScript/Node.js, Python, SVN, Vim, C, virtualenv, travis-ci, rake
- **Still Getting Started:** Ruby, Haskell, MatLab, Go, Shell Scripts, Assembly, SVN, SQL, MongoDB, Puppet, Ansible

Miscellaneous: Demonstrated proficiency with public communication skills. Excellent troubleshooting and debugging skills. Adept at rapidly learning new languages and application suites. Local and remote collaborative skills. Excels at teaching others. Goal driven.

Github: `https://github.com/bcomnes`

Education

- **PhD in Applied Physics (In Progress)** — September 2012 - Current
  Portland State University — *Portland, OR*
- **Bachelor of Science in Physics** — August 2006 - May 2011
  Humboldt State University — *Arcata, CA*

Publications & Talks

- **Various IndieWebCamp Demos** — 2013
  IndieWebCamp and OSFW3C — *Portland & San Francisco*
  - Presented Demos of my IndieWeb Projects at OSFW3C, IndieWebCamp 2013 and various hack session in Portland discussing tools and standards that could help enable the decentralized social web.
- **"Sub-millimeter Positioning and Sensing for Short-Range Gravity Tests"** — 2011
  Proceedings of the 25th National Conference on Undergraduate Research (NCUR) — *Ithaca, NY*
- **"Studying the Weak Equivalence Principal Below 50 Microns"** — 2011
  Humboldt State University Physics Seminar — *Arcata, CA*