Hal W. Canary

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Technical Skills

- Languages: Python, C++, C, Java, JavaScript, Shell Scripting, PHP, HTML, DOM, Caché
- Software Tools: GCC, Make, Emacs, CMake, Qt, VTK, OpenGL, ParaView, Git, Github, Redmine
- Operating systems: Unix and Linux workstations and servers.
- Specialties: scientific and numerical computing, computer graphics, databases and database interfaces.

Education

- University of North Carolina at Chapel Hill, M.S. Computer Science, August 2013.
- University of Wisconsin-Madison, B.S. Physics and Mathematics, May 2001.

Experience

- **Software Engineer**, Google, Inc. 2013-present
  - Member of the Skia 2D graphic library team.
- **Research Assistant**, UNC-Chapel Hill, Computer Science Department. 2011-2013
  - Created novel tools for visualizations of high-dimensional statistical distributions.
  - Built visualizations for scientific data (nuclear quantum-chromodynamic plasma simulation, meteorologic simulation, and cosmological galactic formation simulation datasets) using VTK and ParaView.
  - Iteratively designed and developed the MADAI Distribution Sampling Tools and the MADAI Visualization Workbench.
  - Developed new VTK filters and ParaView macros.
  - Collaborated with domain scientists to develop visualization and statistical product requirements.
- **Receiving Manager**, Barnes & Noble. 2006-2011
- **College Math Tutor**, Edgewood College. 2004-2005
- **Programmer and Student Researcher**, UW-Madison Math Department. 2001-2004
- **Interface Analyst and Programmer**, Epic Systems Corporation. 2001-2002
  - Developed database interface software in InterSystems Caché.
  - Installed and configured client's software.
  - Resolved customer issues with troubleshooting.
  - Developed custom software for clients.
- **System Administrator**, UW-Madison Physics Department Computational Physics Lab. 2000-2001
- **Undergraduate Researcher**, UW-Madison Physics Department. 1999-2000

Publications

- **Hal Canary**, Russell M. Taylor II, Cory Quammen, Scott Pratt, Facundo A. Gómez, Brian O'Shea, Christopher G. Healey. "Visualizing Likelihood Density Functions via Optimal Region Projection." *Computers & Graphics* 41 (2014): 62-71.
- Steffen A. Bass, Hannah Petersen, Cory Quammen, **Hal Canary**, Christopher G. Healey, Russell M. Taylor II. "Probing the QCD Critical Point with Relativistic Heavy-Ion Collisions." *Central European Journal of Physics* (2012) 10, 1278-1281.
- **Hal Canary**. "Aztec Diamonds and Baxter Permutations." *The Electronic Journal of Combinatorics* 17 (2010), #R105