

# Christopher Hoover

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Summary of qualifications      Systems engineer with a deep understanding of business and of hardware and software systems.

Education      1990      **Carnegie-Mellon University**      Pittsburgh, PA

**B.S. Computer Engineering**

- Honors
- Alumnus, Center for Silicon System Implementation

Professional experience      2000-present      **Hewlett-Packard Laboratories**      Palo Alto, CA

**Senior Research Scientist/Engineer**

*Sustainable IT Ecosystem Laboratory*

- Developed tools and methodologies to support an integrated (facilities, IT, and business) management practice for data centers with an emphasis on the use of least energy and least materials over the entire lifecycle.

*Storage and Systems Department, Information, Systems, Processes, and Information Laboratory*

- Developed a cluster-scale distributed caching system to reduce access latencies for geographically-distant storage (TiColi).
- Researched and developed advanced storage system architectures for cost-effective, long-term (>50 years) preservation of digital assets.

*Consumer Systems and Applications Laboratory*

- Collaborated with Berkeley Wireless Research Center (BWRC) on ultra-low power radio architectures and radio systems.
- Architected systems and applications of digital “datacasting” that piggybacked synchronous and asynchronous digital data delivery with legacy analog and digital television broadcasts. Developed business models for both developed and developing markets.
- Led a multi-disciplinary team to develop a “remote” camera. This [novel imaging device](#) had a variety of interesting social applications.
- Implemented multiple devices for the [Agile Computing](#) effort and developed the network discovery and transport layers.

1999-2000      **OneSpot**      Santa Clara, CA

**Founder and CTO**

- Architected and implemented a multi-tiered web and messaging infrastructure.
- Ran operations and managed all vendor relationships.
- In the same timeframe, wrote business plan and raised money for another venture providing outsourced messaging for small and medium businesses.

1990-1999

**Cadence Design Systems**

San Jose, CA

**Architect**

- Chief Architect on [Virtual Component Co-Design](#) (VCC), a hardware-software co-design platform developed in partnership with several major semiconductor and system companies. Liaison to key partners including Ericsson, Intel and National Semiconductor on VCC and BONeS. Worked closely with sales to support these accounts.
- Principal Engineer in Systems & Networks, Inc., a spin-out of Cadence. Responsible for network design and capacity planning simulation tools and for new product development.
- Key designer and developer of Block Oriented Network Simulator (BONeS), a popular discrete event simulation tool aimed at network design and network protocol development.

1986-1990

**Carnegie-Mellon University**

Pittsburgh, PA

**Developer**

- Implementer of CMU Common Lisp. Designed and implemented an efficient garbage collector, designed and implemented an operating system adaption layer, performed several ports, and implemented several compiler back-ends (MIPS, PA-RISC, 68K). This implementation is available today in the Debian Linux distribution and elsewhere.

Patents and selected publications

[US 6,882,965 Method for Hierarchical Specification of Scheduling in System-level Simulations](#)

[WO0227565 Performance Level Modeling and Simulation of Electronic Systems Having Both Hardware and Software](#)

Multiple patents pending with Hewlett-Packard Company.

Wilkes, Hoover, Keer, Mehra, Veitch, [Storage, data, and information systems](#), 5<sup>th</sup> edition, 2008, ISBN 978-1424317318.

Anderson, Hoover, Li, Tucek, *Efficient Tracing and Performance Analysis for Large Distributed Systems*, to appear in MASCOTS 2009.

Watson, Sharma, Charles, Shah, Patel, Marwah, Hoover, Christian, Bash, *Creating a Sustainable IT Ecosystem: Enabling Next-Generation Urban Infrastructures*, 2009 IEEE International Symposium on Sustainable Systems and Technology (ISSST).

Christian, Chen, Shih, Sharma, Hoover, Marwah, Shah, Gmach, *Automated Synthesis of Sustainable Data Centers*, 2009 IEEE International Symposium on Sustainable Systems and Technology (ISSST).

Bash, Hyser, Hoover, *Thermal Policies and Active Workload Migration within Data Centers*, 2009 ASME/Pacific Rim Technical Conference and Exhibition on Packaging and Integration of Electronic and Photonic Systems, MEMS, and NEMS (InterPACK)

