

# PAUL A. HOULE

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## Goals

- Be part of a vital IT community in the Cornell and Ithaca area
- Work on IT systems throughout the lifecycle of design, construction, and maintenance
- Build personal and organizational capabilities in areas such as teamwork, project management, documentation, issue tracking, and configuration management
- Stay on the forefront of interactive and community web systems
- Get CAPM certification from the Project Management Institute

## Experience

- **Cornell University Library**—Library Systems  
*Digital Library Programmer/Analyst: Summer 2002-current*
  - Developer, webmaster, and system administrator for more than 70 web sites, including: arxiv.org , glopad.org , and the library gateway
  - Maintained software in Java, Perl, PHP, C/C++, Cold Fusion, and Bash
  - Used CVS and Subversion for configuration management
  - Implemented user management and trust-based endorsement system for arXiv.org
  - Tracked down Linux kernel bugs; ported open-source software to Solaris
  - Identified and repaired security problems in web applications
  - Developed a web site deployment system that enables separate production, deployment, and test environments for multiple virtual hosts
  - Specified server, and fibre channel storage system for CUL's Commonsport implementation
  - Worked in a team to reverse-engineer Commonsport's Oracle schema and develop a script that migrates user identifiers when moving a site from test to production
  - Wrote status reports, project charters, and project initiation plans
  - Administered Apache, MySQL, and PostgreSQL servers in support of numerous projects
  - Developed full-text search systems for library web pages and glopad.org
  - Organized a presentation on web accessibility that included speakers from across campus
  - Developed monitoring systems using SNMP, Cricket, log analysis, and SMS notification
  - Served on a campus-wide committee to develop an interface between CUWebAuth, and Commonsport
  - Used a transparent web proxy to prototype new features for the library catalog
  - Worked with professors, and students on projects in text classification, information retrieval, machine learning, and data mining; also helped CS 501 students bring development products into production

- **Honeylocust Media Systems**— <http://www.honeylocust.com/>  
*Independent Consultant; 1999-*
  - Developed user registration system for a Brazillian voice chat site that gathered more than 200,000 users
  - Developed information-harvesting robots running on MacOS X and other environments
  - Worked with qmail and postfix to evolve survivable mail systems for the age of spam and viruses
  - Wrote, edited, and reviewed chapters in a number of books by Wrox Press on subjects such as XML, JSP, and VoiceXML
  - Administered Linux servers, participated in long-distance disaster recovery operations
  - Used djbdns for to support systems generating heavy volumes of DNS queries
  - Experimented with languages such as Ruby, Python, and ObjectiveCAML
- **Max-Plank Institute for the Physics of Complex Systems**—Dresden, Germany  
*Research Associate; 1998-1999*
  - Generated 2-d and 3-d visualizations connected with quantum chaos and nonlinear dynamics of spin and particle systems; Used JPython to script Java simulation and visualization objects.
- **Cornell University**—Laboratory of Atomic and Solid State Physics  
*Teaching/Research Assistant; 1993-1999*
  - Supervised another graduate student in the development of a spin- diagonalization code in Java using object-oriented techniques.
  - Applied unit testing methodology to scientific calculations and software
  - Developed algorithms that revealed the power-law character of the sound produced by crumpling paper

## Web Site Portfolio

- **polyhedra.org** —experimental site  
*An collection of interactive 3-d objects based on AJAX and the Canvas Element*
- **arxiv.org** —a repository of over 370,000 user-contributed scientific papers, serving a community of over 80,000 registered users  
*User management, trust-based access control, server move and trackback implementation*
- **www.glopad.org** —Global Performing Arts Database  
*Participated in planning, full-text search, preparation for production, and bulk import system*
- **www.library.cornell.edu** —The Library Gateway  
*Site redesign, lightweight templating system, maintainance, and handover from Mann Library to Olin*
- **www.tapir.org/weeds/** —Common Weeds of The Carribean  
*Illustrated Flora of weeds observed in the village of El Limon, Dominican Republic*

## Selected talks and publications

- **Implementing Universal Accessibility** —May 2006  
*Library Technology Exchange forum on Accessibility*
- **Migrating Commonsport Sites** —March 2006  
*Cornell Commonsport SIG*
- **Commonspot Installation at Cornell University Library** —August 2005  
*Cornell Commonsport SIG*
- **Novel Catalog Tutorial** —October 2004  
*presentation with Ira Revels at Endeavor Mid-Atlantic Users Group, Syracuse University*
- **Tapir User Manager** —October 2004  
*Presentation to CUL technical staff*
- Paul Ginsparg, Paul Houle, Thorsten Joachims, and Jae-Hoon Sul;  
*Mapping Subsets of Scholarly Information* ; PNAS 2004 **101** 5236-5240 (2004) [ [cs/0312018](#) ]
- Paul Houle, *Adding VoiceXML to an existing Web Site*, Chapter 8 of *Early Adopter VoiceXML* (Wrox Press, Birmingham UK, 2001)
- Paul Houle, *Weeds of El Limon 2* , Chapter 15 of *Professional Java Server Programming* : (Wrox Press, Birmingham UK, 1999)
- Paul Houle, *Weeds of El Limon: A Customized XML Based Web Publishing System*, Chapter 15 of *XML Applications* (Wrox Press, Birmingham UK, 1998) [ [related article](#) ]
- Paul Houle and Olivia Drenzo, *Ailanthus: Tree from the Devil's Garden*; Five minute video produced for PEGASYS Public Access Television, 1997
- P. A. Houle and C. L. Henley, Classical mechanics of a three spin cluster [ [nlin/0207040](#) ]
- P. A. Houle, N.G. Zhang, and C. L. Henley, Semiclassical mechanics of a nonintegrable spin cluster, *Phys. Rev. B* 60 15179 (1999) [ [cond-mat/9908055](#) ]
- P. A. Houle, The Phase Plane of Moving Breathers, *Phys. Rev. E* 56 1657 (1997) [ [cond-mat/9704188](#) ]
- **Crack Propagation Applet** —December 1996  
*Java in Scientific and Engineering Computing; NPAC, Syracuse NY*
- P. A. Houle and J. P. Sethna, Acoustic Emission from Crumpling Paper, *Phys. Rev. E* 54 278 [ [cond-mat/9512055](#) ]

## Recent training

- **Cornell Project Management Methodology**—March 2006  
*Two day workshop on project management taught by Chester Warzynski and Linda Gasser*
- **Crucial Conversations**—Spring 2006  
*Ten-week class on handling difficult situations taught by CUL HR specialist Linda Bryan*
- **Commonspot Advanced Developer Training**—Spring 2005  
*Intensive hands-on training with Paperthin Senior Developer Ron West*

## Education

- **Cornell University**—Ithaca, NY  
*Ph.D., Physics, 1993-1998*
- **New Mexico Institute of Mining and Technology**—Socorro, NM  
*BS Physics and Math, 1989-1993*