

# Sean Barker

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- EDUCATION
- ◇ **University of Massachusetts Amherst, Amherst, MA** *Sept. 2009 – Present*
    - First year M.S./Ph.D. program in Computer Science
    - Research affiliation with the Laboratory for Advanced System Software (LASS)
  - ◇ **Williams College, Williamstown, MA** *Sept. 2005 – May 2009*
    - B.A. with Honors in Computer Science, June 2009
    - Elected to Associate Membership in Sigma Xi
- RESEARCH EXPERIENCE
- ◇ **Laboratory for Advanced System Software, UMass Amherst, Amherst, MA** *Sept. 2009 – Present*

Advisor: Prashant Shenoy

    - Working in the fields of cloud computing, green computing, and distributed systems.
    - Recent work on data center performance characteristics and virtual machine memory sharing.
  - ◇ **Honors Thesis Project, Williams College, Williamstown, MA** *Sept. 2008 – May 2009*

Advisor: Jeannie Albrecht

    - Thesis title: “Kudzu: A Decentralized and Self-Organizing Peer-to-Peer File Transfer System”
    - Explored decentralized and scalable peer-to-peer systems through the design, construction, and wide-area evaluation of a fully functional file-transfer system.
    - Experiments performed through large-scale deployment on the global PlanetLab testbed.
  - ◇ **Research Assistant, Williams College, Williamstown, MA** *Jan. 2007 – Jan. 2008*

Advisor: Morgan McGuire

    - Worked on online system for collaborative document editing and hierarchical document organization.
    - Deployed prototype and received feedback from students in an introductory computer science course.
- PUBLICATIONS
- ◇ **Empirical Evaluation of Latency-sensitive Application Performance in the Cloud**  
Sean Barker and Prashant Shenoy. *Proceedings of the First ACM Multimedia Systems Conference (MMSys 2010), Scottsdale, AZ, February 2010.*
  - ◇ **Kudzu: A Self Balancing P2P File Transfer System**  
Sean Barker, Marius Catalin Iordan, Jeannie Albrecht, and Barath Raghavan. *Poster session of the Third Workshop on Tackling Computer Systems Problems with Machine Learning Techniques (SysML), December 2008.*
- WORK EXPERIENCE
- ◇ **Engineering Intern, Google Inc., Mountain View, CA** *June 2008 – Aug. 2008*
    - Created an add-on library for Google App Engine providing an extended interface to the distributed datastore used by App Engine applications.
    - Worked on internal and external developer APIs.
  - ◇ **Teaching Assistant, Williams College, Williamstown, MA** *Sept. 2006 – May 2009*
    - Course: Digital Computation and Communication / Intro to Computer Science
    - Worked with students on Java and Python laboratory assignments designed to promote programming fundamentals.
    - Duties included lab assistance, consulting hours, and grading of completed labs and homework.
  - ◇ **Network programmer, Williams College, Williamstown, MA** *June 2006 – Aug. 2006*
    - Updated and extended an online software package used to monitor and administrate Cisco hardware on the Williams College network.
    - Responsible for the day-to-day operation of the Linux server running the package and provided continued support into the academic year.

- SKILLS
- ◇ Languages: Java, C/C++, PHP, Perl, SQL, Javascript, L<sup>A</sup>T<sub>E</sub>X.
  - ◇ Operating Systems: Mac OS X, GNU/Linux.
  - ◇ Miscellaneous: Subversion, Perforce, Eclipse.
  - ◇ Non-technical: Excellent oral and written communication. Comfortable giving technical presentations.
- GRADUATE COURSEWORK
- ◇ Distributed Operating Systems
  - ◇ Artificial Intelligence
  - ◇ Green Computing
  - ◇ Multi-Agent Systems
  - ◇ Computational Complexity
- REFERENCES
- ◇ References available upon request.