KyoungSoo Park

CONTACT INFORMATION

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EDUCATION

Princeton University September 2002 - January 2007

Ph.D. in Computer Science, April 2007
Thesis title: Towards Highly Reliable and Scalable Distributed Systems
Master of Arts in Computer Science, 2004, GPA 3.88/4.0
Advisor: Vivek S. Pai

Seoul National University March 1993 - August 1997

B.S. in Computer Science, August 1997, GPA 3.86/4.3

RESEARCH INTERESTS

Performance analysis of large-scale distributed systems
Practical security measures in open Internet services
Distributed systems, operating systems, and networking

PROFESSIONAL EXPERIENCE

Princeton University, Princeton, NJ
Research Scientist February 2007 – Present

- Exploring the space to apply the CDN technologies (my Ph.D. work) beyond traditional uses.
- PlanetLab infrastructure management

Intel, Hillsboro, OR
Summer Intern June - September 2006

- Scalable virtual machine migration project - how to reduce the bandwidth consumption in transferring similar large contents (e.g. VM images). More information in our USENIX'07 paper.
- Mentor/Manager: Mic Bowman

IBM T.J. Watson Research Center, Hawthorne, NY
Summer Intern June - September 2005

- Web robot detection project - automatically detecting humans vs. robots in the Web traffic in real time to prevent robot-oriented abuse or to provide application-level quality of service(QoS). More details in our USENIX'06 paper.
- Mentor: Kang-Won Lee, Manager: Seraphin Calo

Hangul and Computer, Seoul Korea
Software Engineer August 1997 - February 2001

- Redesigned and implemented the drawing tools in the *Hangul* word processor.
- Designed and implemented highly scalable Internet messaging services for Windows NT

Computer Graphics Lab, Seoul National University, Seoul Korea
Research Assistant 1996 - 1997

- Virtual Lego block project whose rendering engine scales to a very large number of 3D blocks.

Teaching Experience

Princeton University
Teaching Assistant

- COS 461 Computer Networks, taught by Larry Peterson — Spring 2005
- COS 109 Computers in Our World, taught by Brian Kernighan — Fall 2004
- COS 461 Computer Networks, taught by Vivek S. Pai — Spring 2004

Refereed Publications

1. **KyoungSoo Park**, Sunghwan Ihm, Mic Bowman, and Vivek S. Pai. Supporting Practical Content-Addressable Caching with CZIP Compression. In *Proceedings of the USENIX Annual Technical Conference (USENIX '07)*, Santa Clara, CA, June 2007.
2. **KyoungSoo Park**, Vivek S. Pai, Kang-Won Lee, and Seraphin Calo. Securing Web Service by Automatic Robot Detection. In *Proceedings of the USENIX Annual Technical Conference (USENIX '06)*, Boston, MA, June 2006.
3. **KyoungSoo Park** and Vivek S. Pai. Scale and Performance in the CoBlitz Large-File Distribution Service. In *Proceedings of the Third Symposium on Networked Systems Design and Implementation (NSDI '06)*, San Jose, CA, May 2006.
4. **KyoungSoo Park** and Vivek S. Pai. Connection Conditioning: Architecture-Independent Support for Simple, Robust Servers. In *Proceedings of the Third Symposium on Networked Systems Design and Implementation (NSDI '06)*, San Jose, CA, May 2006.
5. Brian Biskeborn, Michael Golightly, **KyoungSoo Park** and Vivek S. Pai. (Re)Design Considerations for Scalable Large-File Content Distribution. In *Proceedings of the Second Workshop on Real, Large Distributed Systems (WORLDS '05)*, San Francisco, CA, December 2005.
6. **KyoungSoo Park**, Vivek S. Pai, Larry Peterson, and Zhe Wang. CoDNS: Improving DNS Performance and Reliability via Cooperative Lookups. In *Proceedings of the Sixth Symposium on Operating Systems Design and Implementation (OSDI '04)*, San Francisco, CA, December 2004.
7. **KyoungSoo Park** and Vivek S. Pai. Deploying Large File Transfer on an HTTP Content Distribution Network. In *Proceedings of the First Workshop on Real, Large Distributed Systems (WORLDS '04)*, San Francisco, CA, December 2004.
8. Limin Wang, **KyoungSoo Park**, Ruoming Pang, Vivek Pai, and Larry Peterson. Reliability and Security in the CoDeeN Content Distribution Network. In *Proceedings of the USENIX Annual Technical Conference (USENIX '04)*, Boston, MA, June 2004.
9. Vivek S. Pai, Limin Wang, **KyoungSoo Park**, Ruoming Pang, and Larry Peterson. The Dark Side of the Web: An Open Proxy's View. In *Proceedings of the Second Workshop on Hot Topics in Networking (HotNets-II)*, Cambridge, MA, November 2003.

Invited Publications

10. **KyoungSoo Park** and Vivek S. Pai. CoBlitz: A Scalable Large-file Transfer Service. In *;login: The USENIX Magazine*, August 2006, Volume 31 Number 4.
11. **KyoungSoo Park** and Vivek S. Pai. CoMon: A Mostly-Scalable Monitoring System for PlanetLab In *ACM SIGOPS Operating Systems Review*, January 2006.

Invention Disclosures

12. Bot Detection for Network Distributable Markup, with Kang-won Lee(IBM Research), Seraphin Calo(IBM Research), YOR9-2007-0208, Disclosure filed.

Talks

1. "Supporting Practical Content-Addressable Caching with CZIP Compression", USENIX 06/2007
2. "CoBlitz: A Scalable Large-file Transfer Service", Brown University, 11/2006
3. "'Scale and Performance in the CoBlitz Large-File Distribution Service", University of Washington, 08/2006
4. "Securing Web Service by Automatic Robot Detection", USENIX, 06/2006
5. "Scale and Performance in the CoBlitz Large-File Distribution Service", NSDI, 05/2006
6. "(Re)Design Considerations for Scalable Large-File Content Distribution", WORLDS, 12/2005
7. "CoDNS: Improving DNS Performance and Reliability via Cooperative Lookups", OSDI, 12/2004
8. "Deploying Large File Transfer on an HTTP Content Distribution Network", WORLDS, 12/2004
9. "Co* Project: CoDNS, CoDeploy and CoMon", PlanetLab meeting, 09/2004
10. "Reliability and Security in the CoDeeN Content Distribution Network", USENIX, 06/2004

Honors and Awards

USENIX Association travel fellowship	2006
Princeton University scholarly travel grant	2006
The Korea Foundation for Advanced Studies (KFAS) fellowship (http://www.kfas.or.kr)	2002-2007
Merit-based scholarship in Seoul National University	1993-1997

References

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Larry Peterson
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Kang-Won Lee
Research Staff Member
IBM T. J. Watson Research Center

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