

Sang-Hoon Kim

CONTACT INFORMATION	Computer Architecture Laboratory Department of Computer Science School of EECS KAIST Daejeon 305-701, South Korea	+82-10-9344-4096 +82-42-350-7715 (Fax) sanghoon@calab.kaist.ac.kr http://calab.kaist.ac.kr/~sanghoon
RESEARCH INTERESTS	Storage systems, flash media, file systems, operating systems, distributed systems, high performance systems, networked systems	
EDUCATION	Ph.D. Candidate , in Computer Science, KAIST, South Korea Integrated Master's and Doctoral Degree Program Advisor: Seungryoul Maeng	Mar. 2006 – present
	B.S. , in Computer Science, KAIST, South Korea Thesis: Design and Implement Online English Writing Recognition System Advisor: Myung-Ho Kim	Feb. 2002
	Graduation , Gangwon Science High School, South Korea Specialized high school for gifted students in science and mathematics	Feb. 1996
HONORS AND AWARDS	– Excellent Teaching Assistant Award, KAIST Department of CS, Feb. 2008. – Excellent Teaching Assistant Award, KAIST Department of CS, Sep. 2007. – KAIST Student Fellowship, Korean Government, Mar. 2006 - Jan. 2012. – Excellent Research Staff Award, InZen Co., Oct. 2003. – KAIST Student Fellowship, Korean Government, Mar. 1996 - Dec. 1999.	
ACADEMIC EXPERIENCE	KAIST , Daejeon, South Korea <i>Graduate Student</i> Includes Ph.D. research, Ph.D. and Masters level coursework and research/consulting projects.	Mar. 2006 – present
	<i>Teaching assistant</i> Duties include guiding undergraduate students, oversight student inquiries, grading homeworks, and responsibilities for planning and leading coursework projects. Also includes office hours and lecturing introductory lab exercises. <ul style="list-style-type: none">• CS330 Operating System, Sep. 2008 – Dec. 2008 (Head TA).• CS202 Problem Solving, Feb. 2008 – May 2008.• CS230 System Programming, Sep. – Dec. 2007.• CS230 System Programming, Mar. – Jun. 2007 (Head TA).• CS230 System Programming, Sep. – Dec. 2006.• CC510 Introduction to the Computer Science, Mar. – Jun. 2006.	Mar. 2006 – Dec. 2008
	<i>IT assistant</i> Maintaining homepages, e-mail systems, and helpdesk of KAIST Department of Mathematical Science.	Feb. 2011 – present

PROFESSIONAL
EXPERIENCE

InZen Co., Seoul, South Korea

Part-time Software Engineer

Sep. 2005 – Nov. 005

Participated in a project as a consultant who is in charge of designing and implementing a SSL proxy system for large-scale corporation network.

Full-time Research Engineer

May 2003 – May 2005

Participated in projects of NIDS (Network-based Intrusion Detection System) and NIPS (Network-based Intrusion Prevention System). Roles include product manager, system programmer for designing and implementing common libraries, TCP/IP stacks, pattern matcher, process manager, live updater, and optimizing system performance.

Acting Team Manager

Sep. 2003 – Dec. 2003

Performed as an acting team manager during a team manager's sick leave for four months. Roles include managing team members, deciding product specifications, and communicating with other teams. Continued a part of manager's roles until I quitted the company.

FnBC, Seoul, South Korea

Full-time Research Engineer

Oct. 2001 – Apr. 2003

Participated in projects of online escrow payment solution and messenger delivery system. Roles include system programmer for designing and implementing server applications, client applications, and networking channels between components.

PUBLICATIONS

International Conference and Workshop

- **Sang-Hoon Kim**, Jin-Soo Kim, and Seungryoul Maeng, "*Using Solid State Drives (SSDs) for Virtual Block Devices*," Proceedings of 2nd Workshop on Runtime Environments, Systems, Layering and Virtualized Environments (RESOLVE'12), London, UK, Mar. 2012.
- **Sang-Hoon Kim**, Dawoon Jung, Jin-Soo Kim, and Seungryoul Maeng, "*HeteroDrive: Reshaping the Storage Access Pattern of OLTP Workload Using SSD*," Proceedings of 4th International Workshop on Software Support for Portable Storage (IWSSPS 2009), pp.13–17, Grenoble, France, Oct. 2009.
- **Sang-Hoon Kim**, Youngjae Lee, and Jin-Soo Kim, "*FlexRPC: A Flexible Remote Procedure Call Facility for Modern Cluster File Systems*," Proceedings of the 9th IEEE International Conference on Cluster Computing (CLUSTER 2007), Austin, TX, USA, Sep. 2007.

International Journal

- **Sang-Hoon Kim**, Jin-Soo Kim, and Seungryoul Maeng, "*Modeling and Evaluation of Serial Multicast Remote Procedure Calls (RPCs)*," IEEE Communications Letters, Vol. 13, No. 4, pp.283–285, Apr. 2009.

Other Papers

- Wook Jung, Daewoo Lee, Eunji Pak, Youngjae Lee, **Sang-Hoon Kim**, Jin-Soo Kim, Taewoong Kim, and Sungwon Jun, "*BeanFS: A Distributed File System for Large-scale E-mail Services*," Journal of Korea Information Science Society, Vol. 36, No. 4, pp. 247–258, Aug. 2009.
- Wook Jung, Daewoo Lee, Eunji Pak, Youngjae Lee, **Sang-Hoon Kim**, Jin-Soo Kim, Taewoong Kim, and Sungwon Jun, "*BeanFS: A Distributed File System for a Large Number of Immutable Files*," Technical Report CS-TR-2008-289, KAIST Computer Science Department, Aug. 2008.

Patents

- Taewoong Kim, Sungwon Jun, Yuncheol Joo, Jin-Soo Kim, Wook Jung, Daewoo Lee, Eunji Pak, Youngjae Lee, **Sang-Hoon Kim**, and Myeongah Yang, "*Distributed File System and Method for Operating File Using Owner-based File Grouping*," Patent No. 1009149 (Jan. 11,

2011), Korea.

- Taewoong Kim, Sungwon Jun, Yuncheol Joo, Jin-Soo Kim, Wook Jung, Daewoo Lee, Eunji Pak, Youngjae Lee, **Sang-Hoon Kim**, and Myeongah Yang, "*Distributed File System and Method for Replica-based Fault Treatment*," Patent No. 0994342 (Nov. 12, 2010), Korea.
- Taewoong Kim, Sungwon Jun, Yuncheol Joo, Jin-Soo Kim, Wook Jung, Daewoo Lee, Eunji Pak, Youngjae Lee, **Sang-Hoon Kim**, and Myeongah Yang, "*Distributed File System and File Consistency Management Method Using Replica State Matching*," Patent No. 0988107 (Oct. 8, 2010), Korea.

RESEARCH
PROJECTS

SmartTV 2.0 Software Platform

Funded by *Korea Ministry of Knowledge and Economy (MKE)*

Dec. 2011 – present

Research on SSD-based Next-Generation System Software

Funded by *National Research Foundation of Korea (NRF)*

Sep. 2010 – present

Exploiting Object-based Interface for Solid State Disks

Funded by *Samsung Electronics Co.*

Jul. 2010 – present

Development of a Basis Technology for Trustworthy Computing

Funded by *Korea Ministry of Knowledge and Economy (MKE)*

Mar. 2008 – Feb. 2011

Development of a High-Performance FTL for Large-Capacity FlashSSDs

Funded by *Samsung Electronics Co.*

Dec. 2008 – Sep. 2009

Research on Storage System Technology for Large-scale Internet Service

Funded by *Korea Science and Engineering Foundation (KOSEF)*

May 2007 – Apr. 2011

A Distributed Storage System for Large-scale Online Portal Sites

Funded by *NHN Corp.*

Apr. 2006 – Aug. 2008

EXTRA-CURRICULAR
ACTIVITIES

- Student volunteer, The 3rd International Workshop on Software Support for Portable Storage (IWSSPS 2008), Mar. 2008 – Oct. 2008.
- Laboratory server management, Feb. 2008 – Jan. 2009.
- Activity in AdliB drummer, Rock Band in KAIST since 1998.
- Activity in Twilight drummer, Rock Band in KAIST since 1996.

TECHNICAL SKILLS

- Certification of Information Technology (1st grade), Human Resource Development Service of Korea, Aug. 2001.
- Languages: C/C++, Visual C++/MFC, Java, PHP, ASP, HTML, SQL, XML, Perl, Awk, Bash shell script.
- Operating Systems: Linux, UNIX(FreeBSD, Solaris), Windows NT/2000/XP
- Linux kernel programming
- Unix-based system maintenance

References are available upon request

2012/02/08