

Sang-Min Park

116 Ivy Drive #7
Charlottesville, VA 22903
(M) 434-825-4939

<http://www.cs.virginia.edu/~sp2kn>
sp2kn@virginia.edu

OBJECTIVE

Research/development position in Cloud computing, distributed system, and high performance computing – for a permanent position from May, 2010

EDUCATION

- **UNIVERSITY OF VIRGINIA** Charlottesville, VA *expected May 2010*
Ph.D. Computer Science
- **UNIVERSITY OF VIRGINIA** Charlottesville, VA *May 2006*
M.S. Computer Science
- **AJOU UNIVERSITY** Suwon, South Korea *Feb 2004*
M.E. Digital Communication
- **AJOU UNIVERSITY** Suwon, South Korea *Feb 2002*
B.S. Computer Science

RESEARCH EXPERIENCE

Department of Computer Science, University of Virginia

Research Assistant

September 2004 – present

- Member of Grid computing/eScience group (Advisor – Prof. Marty Humphrey)
- Conducted significant research in the following areas:
 - i. Virtualized datacenter (the Cloud) and high performance clusters
 - ii. Data parallel programming system: MapReduce, Hadoop, and Dryad/LINQ
 - iii. High-performance data transfer scheduling (e.g., GridFTP)
 - iv. Service-oriented(WS-*) Grid middleware on Windows and Linux
 - v. Security systems using various protocols including X.509, SAML, and XACML

Department of Computer Science, Ajou University, South Korea

Research Assistant

March 2002 – Feb 2004

- Member of Distributed computing group
- Developed a multi-cluster job scheduler as part of a Bioinformatics-Grid project
- Initiated and organized a nation-wide Grid testbed (8 cluster sites)

AWARDS/HONORS

- NSF funding award based in part on my PhD dissertation research (award # 0916905), 2009
- Best student paper nominee – IEEE/ACM Supercomputing, 2008
- Student travel grant – IEEE/ACM Supercomputing, 2008
- Brain Korea 21 scholarship, 2002-2004

SKILLS

Programming Language: C#(LINQ), Java, C and C++ (particular strength in OOP design)

Development Platform: Microsoft Windows (.NET Framework), Linux, and Unix

Techniques: Web Services (WS-*/Apache/.NET/HTTP-REST), TCP/IP, SQL, Parallel programming (Multithread/MPI), and Unix system programming

Tools: Cluster, Grid, Virtual machine managements (Hyper-V/Xen), and Matlab

Language: English (fluent) and Korean (native)

PUBLICATIONS

- **Sang-Min Park** and Marty Humphrey. Predictable High Performance Computing using Feedback Control and Admission Control. In submission to journal IEEE TPDS
- **Sang-Min Park** and Marty Humphrey. Self-Tuning Virtual Machines for Predictable eScience. Proceedings of IEEE/ACM International Symposium on Cluster Computing and the Grid (CCGRID'09), May 18-21, 2009, Shanghai, China. (acceptance rate: 21%)
- **Sang-Min Park** and Marty Humphrey. Feedback-Controlled Resource Sharing for Predictable eScience. IEEE/ACM International Conference for High Performance Computing, Networking, Storage and Analysis (SC08), Nov 15-21, 2008, Austin, Texas. (**Best student paper nominee**) (acceptance rate: 21.3%)
- **Sang-Min Park** and Marty Humphrey. Data Throttling for Data-Intensive Workflows. 22nd IEEE International Parallel and Distributed Processing Symposium (IPDPS 2008), April 14-18, 2008, Miami, FL. (acceptance rate 25.6 %)
- M. Humphrey, **S-M. Park**, J. Feng, N. Beekwilder, G. Wasson, J. Hogg, B. LaMacchia, and B. Dillaway. Fine-Grained Access Control for GridFTP using SecPAL. 8th IEEE/ACM International Conference on Grid Computing (Grid 2007), Sept 19-21, 2007, Austin, TX.
- **Sang-Min Park**, Glenn Wasson, and Marty Humphrey. Authorizing Remote Job Execution based on Job Properties. 2nd IEEE International Conference on e-Science and Grid Computing (e-Science 2006), Dec 4-6, 2006, Amsterdam, Netherlands.
- M. Humphrey, G. Wasson, Y. Kiryakov, **S-M. Park**, D. Del Vecchio, N. Beekwilder, and J. Gray. Alternative Software Stacks for OGSA-based Grids. Proceedings of IEEE/ACM Supercomputing 2005, Nov 12-18, 2005, Seattle, WA.
- J.V.S. Watson, **S-M. Park**, and M. Humphrey. Toward GT3 and OGSI.NET Interoperability: GRAM Support on OGSI.NET. 2005 International Conference on Computational Science (ICCS 2005), May 22-25, 2005, Emory University, Atlanta, GA.
- **Sang-Min Park**, Jai-Hoon Kim, Young-Bae Ko, and Won-Sik Yoon. Dynamic Data Grid Replication Strategy based on Internet Hierarchy. Second International Workshop on Grid and Cooperative Computing(GCC'2003) , Dec 2003, Shanghai, China.
- **Sang-Min Park**, Young-Bae Ko, and Jai-Hoon Kim. Disconnected Operation Service in Mobile Grid Computing. First International Conference on Service Oriented Computing(ICSOC'2003), Dec 2003, Trento, Italy. (acceptance rate: 20.9%)
- **Sang-Min Park** and Jai-Hoon Kim. Chameleon: A Resource Scheduler in Data Grid Environment. IEEE/ACM International Symposium on Cluster Computing and the Grid(CCGRID'2003), May 2003, Tokyo, Japan. (acceptance rate: 34.2%)
- **Sang-Min Park** and Jai-Hoon Kim. A Communication Cost Model for Dynamic Selection of Data Replicas in Grid Environment. Korea Information and Communication Society Summer Workshop, July 2002.

RESEARCH PRESENTATIONS

- **CCGRID'2009**: Self-tuning Virtual Machines for Predictable eScience, Shanghai, China.
- **SC'08**: Doctoral Symposium, Nov 2008, Austin, TX.
- **SC'08**: Feedback-Controlled Resource Sharing for Predictable eScience, Austin, TX.
- **IPDPS'08**: Data Throttling for Data Intensive Workflows, Miami, FL.
- **ESCIENCE'06**: Authorizing Remote Job Execution Based on Job Properties, Amsterdam, Netherlands.
- **CCGrid'03**: Chameleon: A Resource Scheduler in Data Grid Environment, Tokyo, Japan.
- **ICSOC'03**: Disconnected Operation Service in Mobile Grid Computing, Trento, Italy.
- **GCC'03**: Dynamic Data Grid Replication Strategy based on Internet Hierarchy, Shanghai, China.

REFERENCES

Available upon request