

Sang-Min Park

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OBJECTIVE

Research/development position in Cloud computing

PROFESSIONAL EXPERIENCE

- **Eucalyptus Systems** Santa Barbara, CA 06/10 - current

As one of the core engineers of the Eucalyptus IaaS platform, I am responsible for:

- Integration of the Microsoft Hyper-V to the platform
- Tool and QA development for the Windows guest O/S
- Implementation and verification of High Availability
- Research/implementation for Red Hat partnership (Deltacloud/RHEV-M)
- Bug fixes across all platform features (KVM/XEN/VMWare/WebServices)

- **Apache Deltacloud** Committer 10/10 - current

Deltacloud is an effort to access many Clouds (AWS/Eucalyptus/Rackspace) via one REST-based API. I initially joined to integrate the Eucalyptus back-end, and became the committer.

EDUCATION

- **UNIVERSITY OF VIRGINIA** Charlottesville, VA 05/10
Ph.D. Computer Science
- **UNIVERSITY OF VIRGINIA** Charlottesville, VA 05/06
M.S. Computer Science
- **AJOU UNIVERSITY** Suwon, South Korea 02/04
M.E. Digital Communication
- **AJOU UNIVERSITY** Suwon, South Korea 02/02
B.S. Computer Science

RESEARCH EXPERIENCE

Department of Computer Science, University of Virginia

Research Assistant 09/04 – 05/10

- Member of Grid computing/eScience group (Advisor – Prof. Marty Humphrey)
- Conducted significant research in the following areas:
 - i. Virtualized datacenter 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

AWARDS/HONORS

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

SKILLS

Programming Language: Java, C#, C, Perl, Ruby, Bash, and Powershell

Development Platform: Proficient in both Linux and Microsoft Windows (.NET)

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

Tools: VM management (Hyper-V/VSphere/libvirt), System-level open source tools, AWS EC2 tools

Language: English (fluent) and Korean (native)

PUBLICATIONS

- **Sang-Min Park** and Marty Humphrey. Predictable High Performance Computing using Feedback Control and Admission Control. IEEE Transactions on Parallel and Distributed Systems (TPDS'11), Mar 2011.
- **Sang-Min Park** and Marty Humphrey. Predictable Time-Sharing for DryadLINQ Cluster. IEEE International Conference on Autonomic Computing and Communications (ICAC'10), June 7-11, 2010, Washington DC, USA. (acceptance rate: 26%)
- **Sang-Min Park** and Marty Humphrey. Self-Tuning Virtual Machines for Predictable eScience. 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. IEEE International Parallel and Distributed Processing Symposium (IPDPS'08), 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. IEEE/ACM International Conference on Grid Computing (GRID'07), Sept 19-21, 2007, Austin, TX.
- **Sang-Min Park**, Glenn Wasson, and Marty Humphrey. Authorizing Remote Job Execution based on Job Properties. IEEE International Conference on e-Science and Grid Computing (e-Science'06), 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. IEEE/ACM Supercomputing 2005 (SC'05), 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. International Conference on Computational Science (ICCS'05), 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. International Workshop on Grid and Cooperative Computing(GCC'03) , 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'03), 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'03), 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.

REFERENCES

Available upon request