

Beomseok Nam

CONTACT INFORMATION

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RESEARCH INTERESTS

Distributed Multi-dimensional Query Optimization
Distributed Indexing
Peer-to-Peer Resource Matchmaking
Decentralized File Systems

EDUCATIONAL BACKGROUND

University of Maryland, College Park, MD USA

Ph.D. in Computer Science, May.20 2007

- Advisor: Dr. Alan Sussman
- Thesis Title: "Distributed Multidimensional Indexing for Scientific Data Analysis Applications"

M.S. in Computer Science, May.22 2003

Seoul National University, Seoul, Korea

M.S. in Computer Science, Feb. 1999

B.S. in Computer Science and Statistics, Feb. 1997

ACADEMIC EMPLOYMENT EXPERIENCE

University of Maryland, College Park, MD USA

Post-doctoral Research Associate

Jun 2007 - Sep 2007

- Designed and implemented a robust and efficient Grid resource match making system based on one of P2P DHTs (Distributed Hash Tables), CAN (Content Addressable Network)
- Designed and implemented an integrated vehicular ad hoc network simulation framework using Paramics and Qualnet.

Graduate Research Assistant

Feb. 2002 - May. 2007

- Implemented a generic indexing library for multidimensional scientific data formats (HDF4, HDF5, and netCDF)
- Designed SH-trees, disk based space partitioning multidimensional indexing structure for non-point data
- Designed DiST, a fully decentralized multidimensional indexing scheme
- Research on various distributed indexing schemes on top of Grid middleware, SDSC SRB (Storage Resource Broker)
- Integrated multidimensional indexing techniques into a distributed query processing middleware system (MQO)

Graduate Teaching Assistant

Aug. 2000 - Dec. 2001

- Computer Science I (CMSC114, undergraduate C++ language class) in Fall 2000
- Computer Organization (CMSC311, undergraduate computer architecture class) in Summer 2001
- Organization of Programming Language (CMSC330, undergraduate programming languages class) in Spring and Fall 2001

Seoul National University, Seoul, Korea

Graduate Research Assistant

Mar. 1997 - Feb. 1999

- Designed an algorithm to improve the consistency of the WWW proxy caches.

- Developed a SCO Unixware system call that evaluates the performance of user applications and kernel.

Undergraduate Student Staff

Apr. 1995 - Jun. 1995

- Help Desk at Seoul National University Computing Center

PROFESSIONAL
EMPLOYMENT
EXPERIENCE

Oracle Inc., Redwood Shores, CA

Senior Member of Technical Staff

Oct 2007 - Present

- Server Technologies Division - Oracle Enterprise Manager Grid Control

LG Information and Communications, Seoul, Korea

R&D Management Team

May 1999 - May 2000

- Customized PDMS (Project Database Management Systems) using Lotus Notes

HONORS AND
AWARDS

Merit-based Scholarship

University of Maryland, College Park
Seoul National University, Korea

2000-2002
1995-1996

Best Paper Award - Grid 2006

TECHNICAL
SERVICE

Reviewer

Journal of Parallel and Distributed Systems, Elsevier, 2009
Parallel Computing, Elsevier, 2009
IEEE Systems Journal, Special issue on Grid Resource Management 2008
5th International Symposium on Parallel and Distributed Processing and Applications (ISPA 2007)
13th International Conference on Parallel and Distributed Systems (ICPADS 2007)
26th IEEE International Conference on Distributed Computing Systems (ICDCS 2006)
20th ACM International Conference on Supercomputing (ICS 2006)
4th International Symposium on Parallel and Distributed Processing and Applications (ISPA 2006)

PUBLICATIONS

Under Submission

[1] Beomseok Nam, Minho Shin, Henrique Andrade, and Alan Sussman, "Multiple Query Scheduling for Distributed Semantic Caches", Submitted to Journal of Parallel and Distributed Computing, Elsevier.

[2] Beomseok Nam and Alan Sussman, "Analyzing Design Choices for Distributed Multidimensional Indexing", In preparation.

Journal Publications

[1] Jik-Soo Kim, Beomseok Nam, Peter Keleher, Michael Marsh, Bobby Bhattacharjee and Alan Sussman, "Trade-offs in Matching Jobs and Balancing Load for Distributed Desktop Grids", Future Generation Computer Systems The International Journal of Grid Computing: Theory, Methods and Applications (FGCS) Volume 24, Issue 5, pp 415-424, 2008.

Referred Publications

[1] Jik-Soo Kim, Beomseok Nam, Michael Marsh, Peter Keleher, Bobby Bhattacharjee, Derek Richardson, Dennis Wellnitz and Alan Sussman, "Integrating Categorical Resource Types into a P2P Desktop Grid System", 9th IEEE/ACM International Conference on Grid Computing (Grid 2008), September 2008.

[2] Michael Marsh, Jik-Soo Kim, [Beomseok Nam](#), Jaehwan Lee, San Ratanasanya, Bobby Bhattacharjee, Peter Keleher, Derek Richardson, Dennis Wellnitz and Alan Sussman, "Matchmaking and Implementation Issues for a P2P Desktop Grid", 2008 National Science Foundation Next Generation Software Workshop (NSFNGS 2008) in conjunction with IPDPS 2008, April 2008.

[3] Hyoungsoo Kim, Minhoo Shin, [Beomseok Nam](#), and David J. Lovell. "An Integrated Transportation and Communication Simulation Framework for Vehicular Ad Hoc Network Applications". The 87th Annual Meeting of the Transportation Research Board, January 13-17, Washington D.C.

[4] Jik-Soo Kim, [Beomseok Nam](#), Michael Marsh, Peter Keleher, Bobby Bhattacharjee, Derek Richardson, Dennis Wellnitz and Alan Sussman, "Creating a Robust Desktop Grid using Peer-to-Peer Services", The National Science Foundation Next Generation Software Workshop (NSFNGS) in conjunction with (IPDPS 2007), Long Beach, CA, 2007

[5] [Beomseok Nam](#), Henrique Andrade, and Alan Sussman, "Multiple Range Query Optimization with Distributed Cache Indexing", Supercomputing (SC 2006), Tampa, FL, Nov. 2006. Also available as University of Maryland Technical Report CS-TR-4796 and UMIACS-TR-2006-17.

[6] Jik-Soo Kim, [Beomseok Nam](#), Peter Keleher, Michael Marsh, Bobby Bhattacharjee, and Alan Sussman, "Resource Discovery Techniques in Distributed Desktop Grid Environments", 7th IEEE/ACM International Conference on Grid Computing (Grid 2006), Barcelona, Spain, Sep. 2006, **Best Paper Award**.

[7] [Beomseok Nam](#) and Alan Sussman, "DiST: Fully Decentralized Indexing for Querying Distributed Multidimensional Datasets", 20th IEEE International Parallel and Distributed Processing Symposium (IPDPS 2006), Rhodes Island, Greece, Apr. 2006. Also available as University of Maryland Technical Report CS-TR-4720 and UMIACS-TR-2005-28

[8] [Beomseok Nam](#) and Alan Sussman, "Spatial Indexing of Distributed Multidimensional Datasets", 5th IEEE/ACM International Symposium on Cluster Computing and the Grid (CCGrid 2005), Cardiff, UK, May. 2005. An extended version available as University of Maryland Technical Report CS-TR-4631 and UMIACS-CS-TR-2004-73

[9] [Beomseok Nam](#) and Alan Sussman, "A Comparative Study of Spatial Indexing Techniques for Multi-dimensional Scientific Datasets", 16th International Conference on Scientific and Statistical Database Management (SSDBM 2004), Santorini, Greece, Jun. 2004. Also available as University of Maryland Technical Report CS-TR-4556 and UMIACS-TR-2004-03

[10] [Beomseok Nam](#) and Alan Sussman, "Improving Access to Multi-dimensional Self-describing Scientific Dataset", 3rd IEEE/ACM International Symposium on Cluster Computing and the Grid (CCGrid 2003), Tokyo, Japan, May. 2003. An extended version available as University of Maryland Technical Report CS-TR-4419 and UMIACS-CS-TR-2002-99

[11] [Beomseok Nam](#) and Kern Koh, "Periodic Polling for Web Cache Consistency", WebNet World Conference of the WWW, Internet, and Intranet, Honolulu, HI, Oct. 1999.

Technical Report and Presentations

[1] [Beomseok Nam](#) and Alan Sussman, "Scalable Indexing Schemes for Distributed Data Intensive Applications", University of Maryland Technical Report CS-TR-4832 and UMIACS-TR-2006-48

[2] [Beomseok Nam](#) and Alan Sussman, "Indexing Cached Multidimensional Objects in Large Main Memory Systems", University of Maryland Technical Report CS-TR-4795 and UMIACS-TR-2006-16.

[3] [Beomseok Nam](#) and Alan Sussman, "GMIT: A Tool for Indexing Self-describing Scientific Datasets",

Supercomputing (SC 2003) Poster, Phoenix, AZ, Nov. 2003.

COMPUTER SKILLS • Programming Languages and Libraries:
 C/C++, Java
 PL/SQL, Oracle, MPI, Perl

REFERENCES Available Up On Request.

PERSONAL
INFORMATION Korean (R.O.K) citizen.
 H1B visa holder.

I certify this CV is accurate and complete – October 17, 2009