

## Beomseok Nam

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**CONTACT INFORMATION** Department of Computer Science and Engineering  
Sungkyunkwan University (SKKU)  
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Sungkyunkwan University  
2066 Seoburo Jangangu,  
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**PERSONAL INFORMATION** Professor, Sungkyunkwan University.  
Department of Computer Science and Engineering.

**RESEARCH AREAS** Data Intensive Computing  
Distributed and Parallel Computing  
Database Systems  
Storage Systems

**EDUCATION** **University of Maryland**, College Park, MD USA  
Ph.D. in Computer Science, May. 2007  
• Advisor: Dr. Alan Sussman  
• Thesis Title: “Distributed Multidimensional Indexing for Scientific Data Analysis Applications”  
**Seoul National University**, Seoul, Korea  
M.S. in Computer Science, Feb. 1999  
B.S. in Computer Science and Statistics, Feb. 1997

**EMPLOYMENT** **Sungkyunkwan University (SKKU)**, Suwon, Korea  
College of Computing  
*Professor* *Mar. 2018 - Present*

**UNIST (Ulsan National Institute of Science and Technology)**, Ulsan, Korea  
School of Electrical and Computer Engineering  
*Associate Professor* *Mar. 2015 - Feb. 2018*  
*Assistant Professor* *Aug. 2010 - Feb. 2015*

**Oracle**, Redwood Shores, CA, USA  
*Senior Member of Technical Staff at Server Technologies Division* *Oct. 2007 - Jul. 2010*

**University of Maryland**, College Park, MD, USA  
*Faculty Research Associate* *Jun. 2007 - Sep. 2007*  
*Graduate Research Assistant* *Feb. 2002 - May. 2007*  
*Graduate Teaching Assistant* *Aug. 2000 - Dec. 2001*

**LG Information and Communications**, Seoul, Korea  
*R&D Management Team* *May 1999 - May 2000*

**Seoul National University**, Seoul, Korea  
*Graduate Research Assistant* *Mar. 1997 - Feb. 1999*

HONORS AND  
AWARDS

**Best Student Paper Award - IEEE CLOUD 2017**  
**Best Paper Award - Grid 2006**

PROFESSIONAL  
LEADERSHIP AND  
SERVICE

**Korea Information Science Society (KIISE)**

Vice President

*Jan 2024 Dec 2024*

**Graduate School of Computer Science and Engineering, Sungkyunkwan University**

Department Chair

*Aug 2025 Present*

**Korea SIGFAST (Special Interest Group on Files and Storage Systems)**

Chair

*Jan 2023 Dec 2024*

**Department of Computer Science and Engineering, UNIST**

Department Chair

*Dec. 2011 Feb. 2014*

TECHNICAL  
SERVICE

**Reviewing Activities**

PC member, 19th European Conference on Computer Systems (EuroSys), 2025

Program co-Chair, 13th IEEE Non-Volatile Memory Systems and Applications Symposium (NVMSA), 2024

PC member, USENIX Conference on File and Storage Technologies (FAST), 2023

General co-Chair, 14th ACM SIGOPS Asia-Pacific Workshop on Systems (APSys), 2023

PC member, USENIX Conference on File and Storage Technologies (FAST), 2022

PC vice-chair, IEEE/ACM International Symposium on Cluster, Cloud, and Internet Computing (CCGrid), 2021

PC member, International Conference on Massive Storage Systems and Technology (MSST), 2019-2020

PC member, Non-Volatile Memory Systems and Applications Symposium (NVMSA), 2017-2018

PC member, USENIX HotStorage, 2016

Publication Chair, Non-Volatile Memory Systems and Applications Symposium (NVMSA), 2016

PC member (poster), ACM/IEEE Intl Conf on High Performance Computing, Networking, Storage and Analysis (SC), 2013-2014

PC member, IEEE Intl Conf on Parallel and Distributed Systems (ICPADS), 2013-2015

PC member, IEEE Workshop on Autonomic Management of Grid and Cloud Computing (AMGCC), 2013-2017

PC member, IEEE Intl Conf on Service-Oriented Computing and Applications (SOCA), 2012-2013

PC member, IEEE Intl Conf on High Performance Computing (HiPC), 2012-2013

PUBLICATIONS

*Underlined: Graduate students under my supervision*

*[c]: Corresponding author*

**Journal Publications**

- [TPDS] Sungho Moon, Daegyoo Han, Hera Koo, Sangeun Chae, Duck-Ho Bae, Euiseong Seo, and **Beomseok Nam**[c], "Near-Data Compaction for LSM Tree on Rack-scale Disaggregated Storage", IEEE Transactions on Parallel and Distributed Systems (TPDS), 2026.
- [TOS] Daegyoo Han, Jaeyoon Nam, Hokeun Cha, Changdae Kim, Kwangwon Koh, Tae-hoon Kim, Sang-Hoon Kim, and **Beomseok Nam**[c], "Disaggregated Memory for File-backed Pages", ACM Transactions on Storage (TOS), 2025.

3. [MICRO] Daegy Han, Sungho Moon, Kyeungpyo Kim, Sung-Soon Park, and **Beomseok Nam[c]**, “Improving Remote File Access in Distributed Object Stores by Decoupling Metadata and Data Paths using NVMe-oF”, IEEE Micro Special Issue on Cache Coherent Interconnects and Resource Disaggregation Techniques, 2025
4. [ACCESS] Jonghyeon Yoo, Hokeun Cha, Wonbae Kim, Wook-Hee Kim, Sung-Soon Park, **Beomseok Nam[c]** “Pivotal B+tree for Byte-Addressable Persistent Memory”, IEEE Access, vol 10, pages 46725–46737, Apr, 2022
5. [TPDS] Soojeong Cho, Wonbae Kim, Sehyeon Oh, Changdae Kim, Kwangwon Koh, **Beomseok Nam[c]** “Failure-Atomic Byte-Addressable R-tree for Persistent Memory”, IEEE Transactions on Parallel and Distributed Systems, (TPDS). vol. 32, no. 3, 601–614, Mar. 2021
6. [TOS] Hokeun Cha, Moohyeon Nam, Kibeom Jin, Jiwon Seo, and **Beomseok Nam[c]** “B<sup>3</sup>-tree: Byte-Addressable Binary B-Tree for Persistent Memory”, ACM Transactions on Storage, Vol. 16, no. 3, 2020.
7. [TOS] Wook-Hee Kim, Jihye Seo, Jinwoong Kim, and **Beomseok Nam[c]** “clfB-tree: Cacheline Friendly Persistent B-tree for NVRAM”, ACM Transactions on Storage, vol. 14, No. 1, Special issue on NVM and Storage, Feb. 2018.
8. [JPDC] Jinwoong Kim[c] and **Beomseok Nam** “Co-Processing Heterogeneous Parallel Index for Multi-Dimensional Datasets”, Journal of Parallel and Distributed Computing, Vol. 113, pp 195-203, Elsevier, Mar. 2018.
9. [JPDC] Youngmoon Eom, Deukyeon Hwang, Junyong Lee, Jonghwan Moon, Minho Shin, and **Beomseok Nam[c]** “EM-KDE: A Locality-Aware Job Scheduling Policy with Distributed Semantic Caches”, Journal of Parallel and Distributed Computing, Vol. 83, pp 119-132, Elsevier, Sep. 2015.
10. [CLUSTER] Youngmoon Eom, Jinwoong Kim, and **Beomseok Nam[c]**, “Multi-dimensional Multiple Query Scheduling with Distributed Semantic Caching Framework”, Cluster Computing, Vol. 18, No. 3, pp 1141-1156, Springer, 2015.
11. [TPDS] Jinwoong Kim, Won-Ki Jeong, and **Beomseok Nam[c]** ”Exploiting Massive Parallelism for Indexing Multi-dimensional Datasets on the GPU”, IEEE Transactions on Parallel and Distributed Systems, vol. 26, No. 8, pp 2258-2271, Aug. 2015.
12. [CLUSTER] Jik-Soo Kim[c], **Beomseok Nam**, and Alan Sussman “Scalable and Effective Peer-to-Peer Desktop Grid System”, Cluster Computing, Vol. 17, No. 4, pp 1185-1201, Springer, 2014.
13. [JPDC] Jinwoong Kim, **Beomseok Nam[c]**, “Parallel Multi-dimensional Range Query Processing with R-Trees on GPU”, Journal of Parallel and Distributed Computing, Volume 73, Issue 8, 1195-1207, Elsevier, Aug, 2013.
14. [DAPD] **Beomseok Nam**, Deukyeon Hwang, Jinwoong Kim, and Minho Shin, “High-Throughput Distributed Query Scheduling with EMA-based Statistical Prediction”, Special Issue on Data Intensive e-Science, Distributed and Parallel Databases, Volume 30, issue 5–6, pp 401-414, Springer, 2012.
15. [JSC] **Beomseok Nam[c]** and Alan Sussman, “Analyzing Design Choices for Distributed Multidimensional Indexing”, The Journal of Supercomputing, Springer, Volume 59, Issue 3, 1552-1576, Jan, 2012.
16. [JPDC] **Beomseok Nam[c]**, Minho Shin, Henrique Andrade, and Alan Sussman, “Multiple Query Scheduling for Distributed Semantic Caches”, Journal of Parallel and Distributed Computing, Volume 70, Issue 5, 598-611, Elsevier, May, 2010.

17. [FGCS] 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, Elsevier, Volume 24, Issue 5, pp 415-424, 2008.

### Conference Publications

1. [SIGMOD] Hera Koo, Sungho Moon, Sangeun Chae, Wook-Hee Kim, Jongmoo Choi, **Beomseok Nam [c]**, “From Learning to Recycling: A Log-Structured Learned-Less Index”, (To appear) SIGMOD International Conference on Management of Data (SIGMOD 2026), May. 2026.
2. [USENIX FAST] Taeyoung Park, Yunjae Jo, Daegyul Han, **Beomseok Nam**, and Jaehyun Hwang, “Understanding Linux Distributed Lock Management Overheads in Shared Storage”, (To appear) 24th USENIX Conference on File and Storage Technologies (FAST 2026), Feb. 2026.
3. [APSys] Daegyul Han, Sangeun Chae, Jaehyun Hwang, and **Beomseok Nam [c]** “Metadata-Driven Near-Exclusive Caching for NVMe-oF SANs with eBPF”, 16th ACM SIGOPS Asia-Pacific Workshop on Systems (APSys 2025), Oct. 2025
4. [SAC] Sangeun Chae, Wonbae Kim, Daegyul Han, Jeongmin Kim, and **Beomseok Nam [c]**, “Optimizing Read Performance of HBase through Dynamic Control of Data Block Sizes and KVCache”, 39th ACM/SIGAPP Symposium On Applied Computing (ACM SAC 2024), Apr. 2024.
5. [VLDB] Mijin An, Jonghyeok Park, Tianzheng Wang, **Beomseok Nam**, and Sang-Won Lee “NV-SQL: Boosting OLTP Performance with Non-Volatile DIMMs”, the 49th International Conference on Very Large Databases (VLDB 2023), Sep. 2023.
6. [USENIX FAST] Hobin Woo, Daegyul Han, Seungjoon Ha, Sam H. Noh, **Beomseok Nam [c]**, “On Stacking a Persistent Memory File System on Legacy File Systems”, the 21st USENIX Conference on File and Storage Technologies (FAST 2023), Feb. 2023.
7. [VLDB] Lam-Duy Nguyen, Sang-Won Lee, **Beomseok Nam [c]**, “In-Page Shadowing and Two-Version Timestamp Ordering for Mobile DBMSs”, the 48th International Conference on Very Large Databases (VLDB 2022), Sep. 2022.
8. [USENIX OSDI] Wonbae Kim, Chanyeol Park, Dongui Kim, Hyeongjun Park, Youngri Choi, Alan Sussman, **Beomseok Nam [c]**, “ListDB: Union of Write-Ahead Logs and Persistent SkipLists for Incremental Checkpointing on Persistent Memory”, the 16th USENIX Symposium on Operating Systems Design and Implementation (OSDI 2022), July. 2022.
9. [CCGrid] Sunghwan Ahn, Hyeongjun Park, V. A. Boleaz Sanchez, Deukyeon Hwang, Wonbae Kim, Alan Sussman, **Beomseok Nam [c]**, “VeloxDFS: Streaming Access to Distributed Datasets to Reduce Disk Seeks”, 22nd IEEE/ACM International Symposium on Cluster, Cloud and Internet Computing (CCGrid 2022), May. 2022.
10. [MIDDLEWARE] Dongui Kim, Chanyeol Park, Sang-Won Lee, **Beomseok Nam [c]**, “BoLT: Barrier-optimized LSM-Tree”, 20th ACM/IFIP International Middleware Conference (Middleware 2020), Dec. 2020.
11. [ICDE] Sehyeon Oh, Wook-Hee Kim, Jihye Seo, Hyeonho Song, Sam H. Noh, **Beomseok Nam [c]**, “Doubleheader Logging: Eliminating Journal Write Overhead for Mobile DBMS”, the 36th IEEE International Conference on Data Engineering (ICDE 2020), Apr. 2020.

12. Wook-Hee Kim, Deukyeon Hwang, Jonghyeon Yoo, Yoojip Won, **Beomseok Nam**[c], “FAST and FAIR B+-Tree for Byte-Addressable Persistent Memory”, the 10th Annual Non-Volatile Memories Workshop (NVMW ’19), San Diego, CA. Mar. 2019.
13. [FAST] Moohyeon Nam, Hokeun Cha, Young-ri Choi, Sam H. Noh, **Beomseok Nam**[c], “Write-Optimized Dynamic Hashing for Persistent Memory”, the 17th USENIX Conference on File and Storage Technologies (FAST ’19), Boston, MA. Feb. 2019.
14. [FAST] Olzhas Kaiyrakhmet, Songyi Lee, **Beomseok Nam**, Sam H. Noh, Young-Ri Choi, “SLM-DB: Single-Level Key-Value Store with Persistent Memory”, the 17th USENIX Conference on File and Storage Technologies (FAST ’19), Boston, MA. Feb. 2019.
15. [CCGRID] Eunji Hwang, Hyungoo Kim, **Beomseok Nam**, and Young-Ri Choi[c], “CAVA: Exploring Memory Locality for Big Data Analytics in Virtualized Clusters”, To appear 18th IEEE/ACM International Symposium on Cluster, Cloud, and Grid Computing, Washington DC, May. 2018.
16. [USENIX FAST] Deukyeon Hwang, Wook-Hee Kim, Youjip Won, **Beomseok Nam**[c], “Endurable Transient Inconsistency in Byte-Addressable Persistent B+-Tree”, 16th USENIX Conference on File and Storage Technologies, Oakland, CA, Feb. 2018.
17. [IEEE CLUSTER] Vicente A. B. Sanchez, Wonbae Kim, Youngmoon Eom, Kibeom Jin, Moohyeon Nam, Deukyeon Hwang, Jik-Soo Kim, and **Beomseok Nam**[c], “EclipseMR: Distributed and Parallel Task Processing with Consistent Hashing”, 19th IEEE International Conference on Cluster Computing (IEEE CLUSTER), Honolulu, Hawaii, Sep. 2017.
18. [IEEE CLOUD] Wonbae Kim, Young-ri Choi, **Beomseok Nam**[c] “Coalescing HDFS Blocks to Avoid Recurring YARN Container Overhead”, 10th IEEE International Conference on Cloud Computing (IEEE CLOUD), Honolulu, Hawaii, June. 2017, **Best Student Paper Award**.
19. [CCGRID] Wonbae Kim, Young-ri Choi, **Beomseok Nam**[c], “Mitigating YARN Container Overhead with Input Splits”, (short paper) 17th International Symposium on Cluster, Cloud, and Grid Computing (CCGrid), Madrid, Spain, May. 2017.
20. [ASPLOS] Jihye Seo, Wook-Hee Kim, Woongki Baek, **Beomseok Nam**[c], and Sam H. Noh, “Failure-Atomic Slotted Paging for Persistent Memory”, 22nd International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS ’17), Xi’an, China, Apr. 2017.
21. [USENIX FAST] Se Kwon Lee, K. Hyun Lim, Hyunsub Song, **Beomseok Nam**, and Sam H. Noh[c], “WORT: Write Optimal Radix Tree for Persistent Memory Storage Systems”, 15th USENIX Conference on File and Storage Technologies (USENIX FAST), Santa Clara, CA, Feb. 2017.
22. [ICPP] Moohyeon Nam, Jinwoong Kim, and **Beomseok Nam**[c], “Parallel Tree Traversal for Nearest Neighbor Query on the GPU”, 45th International Conference on Parallel Processing (ICPP), Philadelphia, PA, Aug. 2016.
23. [CCGRID] Jaewon Kwak, Eunji Hwang, Tae-kyung Yoo, **Beomseok Nam**, and Young-ri Choi[c], “In-memory Caching Orchestration for Hadoop”, (short paper) 16th International Symposium on Cluster, Cloud, and Grid Computing (CCGrid), Cartagena, Columbia, May. 2016.
24. [ASPLOS] Wook-Hee Kim, Jinwoong Kim, Woongki Baek, **Beomseok Nam**[c], and Youjip Won, “NVWAL: Exploiting NVRAM in Write-Ahead Logging”, 21st International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS), Atlanta, GA, Apr. 2016.
25. [USENIX ATC] Wongun Lee, Keonwoo Lee, Hankeun Son, Wook-Hee Kim, **Beomseok Nam**, Youjip Won[c], “WALDIO: Eliminating the Filesystem Journaling in Resolving

- the Journaling of Journal Anomaly”, USENIX Annual Technical Conference (USENIX ATC), Santa Clara, CA, Jun. 2015.
26. [HiPC] Youngmoon Eom, Jinwoong Kim, Deukyeon Hwang, Jaewon Kwak, Minho Shin, **Beomseok Nam**[c], “Improving Multi-dimensional Query Processing with Data Migration in Distributed Cache Infrastructure”, 21st IEEE International Conference on High Performance Computing (HiPC), Goa, India, Dec. 2014.
  27. Youngmoon Eom, Jonghwan Moon, Jinwoong Kim, **Beomseok Nam**[c], “Collaborative Multi-dimensional Dataset Processing with Distributed Cache Infrastructure in the Cloud”, 2nd International Workshop on Autonomic Management of Grid and Cloud Computing (AMGCC) (in conjunction with IEEE CAC 2014), London, UK, Sep. 2014.
  28. [USENIX FAST] Wook-Hee Kim, **Beomseok Nam**[c], Dongil Park, and Youjip Won, “Resolving Journaling of Journal Anomaly in Android I/O: Multi-Version B-tree with Lazy Split”, 12th USENIX Conference on File and Storage Technologies (USENIX FAST), Santa Clara, CA, Feb. 2014.
  29. Jik-Soo Kim, **Beomseok Nam**, and Alan Sussman, “Autonomic Load Balancing Mechanisms in the P2P Desktop Grid”, 1st International Workshop on Autonomic Management of Grid and Cloud Computing (in conjunction with ACM CAC 2013), Aug 2013.
  30. Jinwoong Kim, Sumin Hong, and **Beomseok Nam**[c], “A Performance Study of Traversing Spatial Indexing Structures in Parallel on GPU”, 3rd International Workshop on Frontier of GPU Computing, in conjunction with HPCC 2012, Jun 2012.
  31. [JSSPP] Youngmoon Eom, Junyong Lee, Alan Sussman, and **Beomseok Nam**[c], “DEMB: Cache-Aware Scheduling for Distributed Query Processing”, 16th Workshop on Job Scheduling Strategies for Parallel Processing (JSSPP), in conjunction with IPDPS 2012, May 2012.
  32. [GRID] Jik-Soo Kim[c], **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), September 2008.
  33. 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 (NSF NGS) in conjunction with IPDPS 2008, April 2008.
  34. Hyungsoo Kim, Minho 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 (TRB), January 13-17, Washington D.C.
  35. 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 (NSF NGS) in conjunction with IPDPS 2007, Long Beach, CA, 2007
  36. [SC] **Beomseok Nam**, Henrique Andrade, and Alan Sussman, “Multiple Range Query Optimization with Distributed Cache Indexing”, Supercomputing (SC), Tampa, FL, Nov. 2006.
  37. [GRID] 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), Barcelona, Spain, Sep. 2006, **Best Paper Award**.

38. [IPDPS] **Beomseok Nam** and Alan Sussman, “DiST: Fully Decentralized Indexing for Querying Distributed Multidimensional Datasets”, 20th IEEE International Parallel and Distributed Processing Symposium (IPDPS), Rhodes Island, Greece, Apr. 2006.
39. [CCGRID] **Beomseok Nam** and Alan Sussman, “Spatial Indexing of Distributed Multi-dimensional Datasets”, 5th IEEE/ACM International Symposium on Cluster Computing and the Grid (CCGrid), Cardiff, UK, May. 2005.
40. [SSDBM] **Beomseok Nam** and Alan Sussman, “A Comparative Study of Spatial Indexing Techniques for Multidimensional Scientific Datasets”, 16th International Conference on Scientific and Statistical Database Management (SSDBM), Santorini, Greece, Jun. 2004.
41. [CCGRID] **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), Tokyo, Japan, May. 2003.
42. **Beomseok Nam** and Kern Koh, “Periodic Polling for Web Cache Consistency”, WebNet World Conference of the WWW, Internet, and Intranet (WebNet), Honolulu, HI, Oct. 1999.

### Technical Reports and Posters

1. Sangeun Chae, Daegyung Han, Wonbae Kim, Jeongmin Kim, **Beomseok Nam** “Mitigating Read Amplification with Dynamic Block Size Control in HBase”, USENIX Conference on File and Storage Systems (FAST), Poster, Santa Clara, CA, Feb. 2023.
2. Dongui Kim, Chanyeol Park, Sang-Won Lee, and **Beomseok Nam** “Optimizing Barrier Overhead on LSM-Tree with Logical SSTables”, USENIX Conference on File and Storage Systems (FAST), Poster, Santa Clara, CA, Feb. 2020.
3. Wook-Hee Kim, Jihye Seo, Youjip Won, and **Beomseok Nam** “clfB-tree: Cacheline Friendly Persistent B-tree”, USENIX Annual Technical Conference (USENIX ATC), Poster, Denver, CO, Jun. 2016.
4. Jinwoong Kim, Sehoon Lee, Joong-Youn Lee, **Beomseok Nam**, and Min Ah Kim, “GLOVE: An Interactive Visualization Service Framework with Multi-Dimensional Indexing on the GPU”, 27th International Conference for High Performance Computing, Networking, Storage and Analysis (SC), Poster, Austin, TX, Nov. 2015.
5. Wook-Hee Kim (Supervisor: **Beomseok Nam**), “DEMA: Dynamic Clustering of Spatio-Temporal Dataset to Improve Indexing Performance”, SIGMOD 2011 Undergraduate Poster Competition, Athens, Greece, May. 2011.
6. **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
7. **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.
8. **Beomseok Nam** and Alan Sussman, “GMIT: A Tool for Indexing Self-describing Scientific Datasets”, 15th International Conference for High Performance Computing, Networking, Storage and Analysis (SC), Poster, Phoenix, AZ, Nov. 2003.

### Other Professional Presentations

1. “ListDB: Union of Write-Ahead Logs and Persistent SkipLists for Incremental Checkpointing on Persistent Memory”, Invited Talk in Workshop on Operating System Support for Next Generation Large Scale NVRAM (NVRAMOS), Sokcho, Korea, Oct. 2022.

2. “Byte-addressable Indexing for Persistent Memory”, 1st International Workshop on File and Storage Systems (FISS), Daejeon, Korea, May. 2019.
3. “Endurable Transient Inconsistency in Byte-Addressable Persistent B+-Tree”, Invited Talk in Workshop on Operating System Support for Next Generation Large Scale NVRAM (NVRAMOS), Jeju, Korea, Oct. 2018.
4. “NVRAM Programming”, KCC 2017 Tutorial, Jeju, Korea, Jun. 2017.
5. “Failure-Atomic Slotted Paging for Persistent Memory”, Invited Talk in Workshop on Operating System Support for Next Generation Large Scale NVRAM (NVRAMOS), Jeju, Korea, Oct. 2017.
6. “Exploiting NVRAM for Database Buffer Caching and Logging”, CSS (Computer Systems Society) Winter Workshop, Yongpyung, Korea, Jan. 2017.
7. “Cache-centric Task Scheduling for Big Data Processing”, KCC 2016, Jeju, Korea, Aug. 2016.
8. “NVWAL: Exploiting NVRAM in Write-Ahead Logging”, Invited Talk in Workshop on Operating System Support for Next Generation Large Scale NVRAM (NVRAMOS), Jeju, Korea, Oct. 2016.
9. “Supercomputing and Data Analytics”, Naver DEVIEW 2015, Seoul, Korea, Sep. 2015.
10. “Resolving Journaling of Journal Anomaly via Weaving Recovery Information into DB Page”, Invited Talk in Workshop on Operating System Support for Next Generation Large Scale NVRAM (NVRAMOS), Jeju, Korea, Oct. 2014.
11. “Multi-dimensional Range Query Processing on the GPU”, Invited Talk in The 2013 International Workshop on Computational Science and Engineering (IWCSE 2013), Taipei, Taiwan, Oct. 2013.
12. KIISE (Korean Institute of Information Scientists and Engineers), SIG on High Performance Computing, Winter Workshop, Yongpyung, Korea, Jan 2013.
13. KIISE(Korean Institute of Information Scientists and Engineers), SIG on Computer Systems, New comer session in Winter Workshop, Yongpyung, Korea, Jan 2011.

CONTRACTS AND GRANTS

1. Development of a NoSQL System for High-Performance JSON Data Processing Based on CXL SSD, Ministry of SMEs and Startups, KRW 360,000,000 (USD 240,000), Sep. 2025 - Aug. 2028
2. Nested Data Processing in SAP HANA, SAP Labs Korea, EUR 99,600, Sep. 2024 - Aug. 2026
3. Energy-Aware Operating System for Disaggregated System, IITP, KRW 700,000,000 (USD 466,000) , Jul. 2024 - Dec. 2027
4. Development of High-Efficiency Parallel Storage SW Technology Optimized for AI Computational Accelerators, IITP, KRW 350,000,000 (USD 230,000), Jul. 2024 - Dec. 2027
5. Learned Indexing for Petabyte SSD with Small DRAM, Samsung Electronics, KRW 270,000,000 (USD 180,000), May. 2024 - Apr. 2026
6. Developing High Performance Data Store for Heterogeneous Storage, NRF, KRW 1,000,000,000 (USD 660,000), Sep. 2022 - Feb. 2026
7. LSM Tree Compaction Offloading with NVMe-oF, Samsung Electronics, KRW 270,000,000 (USD 180,000), May. 2022 - Apr. 2024
8. Scalable Data Management with Persistent Memory, ETRI, KRW 180,000,000 (USD 120,000), Jan. 2022 - Dec. 2023

9. Development of Next-Generation Computing Techniques for Hyper-Composable Data-centers, ITRC, KRW 600,000,000 (USD 400,000), Jul. 2021 - Dec. 2028
10. Development of a High-Performance HDFS Distributed File System Based on NVMe-oF, Samsung Electronics, KRW 270,000,000 (USD 180,000), May. 2019 - Apr. 2022
11. Extremely Scalable Order-preserving Operating System for Manycore and Non-Volatile Memory, IITP, KRW 2,000,000,000, Apr. 2018 - Dec. 2022
12. Improving Data Processing Performance with Byte-Addressable Non-Volatile Memory, NRF, KRW 800,000,000, Mar. 2018 - Feb. 2022
13. Development of Machine Learning Framework for Peta Flops Scale, NRF, KRW 2,550,000,000, Nov. 2016 - Jul. 2021.
14. NewSQL Platform on DHT-based MapReduce Framework, Samsung Research Funding and Incubation Center for Future Technology, KRW 400,000,000, Jun. 2015 - May. 2018.
15. High Performance Big Data Analytics Platform Performance Acceleration Technologies Development, IITP, KRW 12,000,000,000, Jun. 2015 - May. 2019.
16. Distributed and Parallel Data Processing Framework with Distributed Semantic Caches, NRF, KRW 97,500,000, Nov. 2014 - Apr. 2017.
17. Embedded System Software for New-memory Based Smart Device, Korean Ministry of Knowledge Economy, KRW 350,000,000, Jun. 2012 - May 2017
18. CloudMarket: A resource scheduler for Cloud market place, Korean Ministry of Education, Science, and Technology, KRW 150,000,000, May 2011 - Apr. 2014

## TEACHING

### 2025

SWE3021: Multicore Systems (Fall)

SWE3003: Database Systems (3 sections in Spring and Fall)

### 2024

SWE3003: Database Systems (2 sections in Spring and Fall)

SWE3021: Multicore Computing (Fall)

ESW4004: Principles of Distributed Computing (Spring)

### 2023

SWE3003: Database Systems (3 sections in Spring and Fall)

ECE5654: Distributed Systems (Spring) ESW4004: Principles of Distributed Computing (Spring)

### 2022

SWE3003: Database Systems (Fall)

SWE3021: Multicore Computing (Fall)

### 2021

SWE3006: Programming Language (Spring)

ESW4004: Principles of Distributed Computing (Spring)

SWE2024: System Programming Lab (Spring, Fall)

SWE3021: Multicore Computing (Fall)

### 2020

SWE3003: Database Systems (Spring, Fall)

SWE3021: Multicore Computing (Fall)

SWE5654: Distributed Systems (Spring)

**2019**

SWE3006: Programming Language (Spring, Fall)  
SWE3021: Multicore Computing (Fall)  
SWE5654: Distributed Systems (Spring)

**2018**

SWE3004: Operating Systems (Spring)  
SWE3004: Operating Systems (Fall)  
SWE3021: Multicore Computing (Fall)

**2017**

ITP107: Engineering Programming I (Spring)  
CSE421: Introduction to Database Systems (Spring)  
CSE412/ECE525: Parallel Computing (Fall)

**2016**

ITP117: Engineering Programming II (Fall)  
ITP107: Engineering Programming I (Spring)  
CSE421: Introduction to Database Systems (Spring)

**2015**

ECE517: Distributed Systems (Spring)  
CSE421: Introduction to Database Systems (Spring)  
CSE241: Object Oriented Programming (Spring)

**2014**

CSE517: Distributed Systems (Fall)  
CSE421: Introduction to Database Systems (Spring)  
CSE202: Object Oriented Programming (Spring)

**2013**

CSE321: Introduction to Database Systems (Winter 2013~'14)  
ECE525: Parallel Computing (with prof. Woongki Baek) (Winter)  
CSE202: Advanced Programming (Fall)  
ECE720: Computational Geometry (Fall)

**2012**

CSE321: Introduction to Database Systems (Winter 2012~'13)  
CSE716: Advanced Database Management Systems (Fall)  
CSE202: Advanced Programming (Spring)

**2011**

CSE211: Introduction to Programming Language (Fall)  
CSE321: Introduction to Database Systems (Fall)  
ITP117: Engineering Programming Lab (Spring)  
ECE716: Distributed Systems (Spring)

**2010**

ITP108: Business Programming (Fall)

## ADVISING

**Ph.D. Thesis**

Jinwoong Kim (Mar. 2011 - Aug. 2017) - First landing: NAVER  
Moohyeon Nam (Mar. 2013 - Feb. 2019) - First landing: SK Telecom

Wook-Hee Kim (Mar. 2013 - Feb. 2019) - Konkuk University  
Wonbae Kim (Mar. 2017 - Feb. 2023) - Kakao Corp.  
Daegyul Han (Mar. 2019 - Aug. 2025) - Samsung Electronics  
Sungho Moon (Sep. 2022 - Present)  
Hera Koo (Sep. 2022 - Present)  
Sangeun Chae (Sep. 2023 - Present)  
Tuan Anh Nguyen (Sep. 2021 - Present)

### **M.S. Thesis**

Yura Lee (Mar. 2025 - Present)  
Chihyun Lee (Mar. 2024 - Feb. 2026)  
Seunghyuk Jung (Mar. 2024 - Feb. 2026), Ph.D study at SKKU  
Sangeun Chae (Mar. 2022 - Aug. 2023), Ph.D study at SKKU  
Hyeongjun Jeon (Mar. 2021 - Feb. 2023), First landing: Openedge Technology  
Sungho Moon (Mar. 2021 - Aug. 2022), Ph.D study at SKKU  
Lam-Duy Nguyen Moon (Mar. 2021 - Aug. 2022), Ph.D. student at Technical University of Munich  
Hera Koo (Mar. 2021 - Aug. 2022), Ph.D study at SKKU  
Seungjun Ha (Mar. 2020 - Aug. 2021), First landing: Samsung Electronics  
Jaeyoon Nam (Mar. 2020 - Aug. 2021), First landing: Symbiote-AI  
Jonghyeon Yoo (Mar. 2020 - Aug. 2021), First landing: Kakao Corp.  
Sunghwan Ahn (Sep. 2019 - Feb. 2021), First landing: SK Hynix  
Chanyeol Park (Mar. 2019 - Aug. 2020), First landing: Naver Corp.  
Dongui Kim (Mar. 2019 - Aug. 2020), First landing: LINE Corp.  
Hokeun Cha (Sep. 2018 - Aug. 2020), Ph.D. study at Univ. Wisconsin, Madison  
Soojeong Cho (Mar. 2018 - Feb. 2020), First landing: KaKao Corp.  
Sehyeon Oh (Mar. 2018 - Feb. 2020), First landing: TMaxSoft Corp.  
Deukyeon Hwang (Mar. 2017 - Aug. 2019), Ph.D study at Univ. Texas, Austin  
Vicente A. B. Sanchez (Mar. 2017 - Feb. 2019), First landing: BeeGFS  
Jihye Seo (Mar. 2016 - Feb. 2018), First landing: Naver Corp.  
Wonbae Kim (Mar. 2014 - Feb. 2017), Ph.D study at UNIST  
Kibeom Jin (Mar. 2015 - Aug. 2017), First landing: Korea Telecom  
Byungeun Park (Mar. 2015 - Feb. 2017),  
Youngmoon Eom (Mar. 2013 - Feb. 2015), First landing: SIGTERM Inc.

### **International Student Competition Coach**

2019: Asia Supercomputing Challenge, China, (1st Prize)  
2014: Asia Supercomputing Challenge, China, (Finalist Award)  
2014: ISC Student Cluster Challenge, Germany, (Finalist Award)  
2013: Asia Supercomputing Challenge, China, (Finalist Award)

*I certify this CV is accurate and complete – June 4, 2026*