

Jongwuk Lee

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Research Interests

Database principles: query processing and optimization

User preferences and personalization modeling

Web data mining and information retrieval

Graph and uncertain data management

Education

Mar 2006 – Feb 2012 **Ph.D.**, *Computer Science and Engineering*
Pohang University of Science and Technology (POSTECH), Republic of Korea
Thesis: Efficient Skyline and Top-*k* Query Computation
Advisor: Prof. Seung-won Hwang

Mar 1999 – Feb 2006 **B.S.**, *School of Information and Communication Engineering*
Sungkyunkwan University (SKKU), Republic of Korea

Work Experiences

Jul 2009 – Sep 2009 **Research Intern**, *Internet Service Research Center (ISRC)*
Microsoft Research, Redmond, WA, United States
Mentor: Dr. Emre Kıcıman

Sep 2008 – Feb 2009 **Research Intern**, *Web Data Management (WDM)*
Microsoft Research Asia, Beijing, China
Mentors: Dr. Ji-Rong Wen and Dr. Zaiqing Nie

Feb 2008 – Jun 2008 **Research Intern**, *Web Data Management (WDM)*
Microsoft Research Asia, Beijing, China
Mentors: Dr. Ji-Rong Wen and Dr. Zaiqing Nie

Nov 2007 **Visiting Researcher**, *L3S Research Center*
Leibniz Universität Hannover, Hannover, Germany
Collaborators: Prof. Wolf-Tilo Balke and Joachim Selke

Publications

International Conferences

1. **Jongwuk Lee**, Hyunsouk Cho, Seung-won Hwang, Efficient Dual-Resolution Layer Indexing for Top- k Queries, *28th IEEE International Conference on Data Engineering (ICDE)*, pp. 358-369, 2012
2. Sanghoon Lee, **Jongwuk Lee**, Seung-won Hwang, Scalable Entity Matching Computation with Materialization, *20th ACM Conference on Information and Knowledge Management (CIKM)*, pp. 2353-2356, 2011 (Poster)
3. **Jongwuk Lee**, Seung-won Hwang, QSkycube: Efficient Skycube Computation Using Point-Based Space Partitioning, *37th International Conference on Very Large Data Bases (VLDB)*, pp. 185-196, 2011 (Published in PVLDB 2010, Acceptance rate: 18%)
4. **Jongwuk Lee**, Seung-won Hwang, BSkycube: Scalable Skyline Computation Using a Balanced Pivot Selection, *13th ACM International Conference on Extending Database Technology (EDBT)*, pp. 195-206, 2010 (Acceptance rate: 18%)
5. **Jongwuk Lee**, Seung-won Hwang, Zaiqing Nie, Ji-Rong Wen, Product EntityCube: A Recommendation and Navigation System for Product Search, *26th IEEE International Conference on Data Engineering (ICDE)*, pp. 1113-1116, 2010 (Demo)
6. Jinhan Kim, **Jongwuk Lee**, Seung-won Hwang, Skyline View: Efficient Distributed Subspace Skyline Computation, *11th International Conference on Data Warehousing and Knowledge Discovery (DaWaK)*, pp. 312-324, 2009
7. **Jongwuk Lee**, Seung-won Hwang, Zaiqing Nie, Ji-Rong Wen, Query Result Clustering for Object-level Search, *15th International Conference on Knowledge Discovery and Data Mining (KDD)*, pp. 1205-1214, 2009
8. **Jongwuk Lee**, Seung-won Hwang, SkyTree: Scalable Skyline Computation for Sensor Data, *3rd International Workshop on Knowledge Discovery from Sensor Data (SensorKDD)*, pp. 114-123, 2009
9. **Jongwuk Lee**, Gae-won You, Seung-won Hwang, Joachim Selke, Wolf-Tilo Balke, Optimal Preference Elicitation for Skyline Queries over Categorical Domains, *19th International Conference on Database and Expert Systems Applications (DEXA)*, pp. 610-624, 2008 (Acceptance rate: 19%)
10. **Jongwuk Lee**, Seung-won Hwang, Ranking with Tagging as Quality Indicators, *23rd Annual ACM Symposium on Applied Computing (SAC)*, pp. 2432-2436, 2008 (Acceptance rate: 29%)
11. **Jongwuk Lee**, Gae-won You, Ikchan Sohn, Seung-won Hwang, Kwangil Ko, Zino Lee, Supporting Personalized Top- k Skyline Queries Using Partial Compressed Skycube, *9th ACM International Workshop on Web Information and Data Management (WIDM)*, pp. 65-72, 2007 (Acceptance rate: 25%)
12. **Jongwuk Lee**, Gae-won You, Seung-won Hwang, Telescope: Zooming to Interesting Skylines, *12th International Conference on Database Systems for Advanced Applications (DASFAA)*, pp. 539-550, 2007 (Acceptance rate: 18%)

International Journals

1. **Jongwuk Lee**, Gae-won You, Seung-won Hwang, Joachim Selke, Wolf-Tilo Balke, Interactive Skyline Queries, *Information Sciences (SCI)*, To appear
2. **Jongwuk Lee**, Jinhan Kim, Seung-won Hwang, Supporting Efficient Distributed Skyline Computation Using Skyline Views, *Information Sciences (SCI)*, Volume 194, pp 24-37, 2012

3. Sung-Ryoung Cho, **Jongwuk Lee**, Seung-Won Hwang, Hwansoo Han, Sang-Won Lee, VSkyline: Vectorization for Efficient Skyline Computation, *SIGMOD Record (SCIE)*, Volume 39, Issue 2, pp. 19-26, 2010
4. **Jongwuk Lee**, Gae-won You, Seung-won Hwang, Personalized Top-k Skyline Queries in High-Dimensional Space, *Information Systems (SCI)*, Volume 34, Issue 1, pp. 45-61, 2009

Patents

1. **Jongwuk Lee**, Gae-won You, Seung-won Hwang, Method of searching prioritized K skylines for user using his/her preference information, computer readable medium thereof, *Korean patent*, 2010 (Submission No. P2007214-01)
2. **Jongwuk Lee**, Hyunsouk Cho, Seung-won Hwang, Method for indexing for top-k queries, Korean patent pending, 2011 (10-2011-0119247)

Honors and Awards

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| 2012 | Best Ph.D. Thesis Award , Dept of Computer Science and Engineering, POSTECH |
| 2011 | Silver Medal , 18th Humantech Thesis Awards, Samsung Electronics |
| 2010 | Silver Medal , 17th Humantech Thesis Awards, Samsung Electronics |
| 2010 | Best Teaching Assistant Award , CSED421 Database Systems, POSTECH |
| 2009 | Research Fellowship Winner , Microsoft Research Asia |
| 2009 | Student Travel Award , ACM KDD |
| 2006 – 2011 | Research Fellowship , Korea Foundation for Advanced Studies (KFAS) |

Teaching Experiences

Teaching Assistant: CSED421 Database Systems (Spring 2010, Best TA Award), CSED312 Operating Systems (Fall 2006)

Undergraduate Student Advisor: CSED499 Senior Projects (Spring/Fall 2007, Fall 2010, Spring/Fall 2011)

Professional Services

External Reviewer (Conference): ICDE 2012, APWeb 2011, DASFAA 2011, DASFAA 2010, UbiComp 2010, DASFAA 2008

External Reviewer (Journal): TKDE 2011, TKDE 2010

Project Experiences

Dec 2009 – Nov 2010 Developing Sentimental Dictionary for Affect Experience Lexicon, DCS Logic

Feb 2009 – Feb 2010 Enhancing Product Search Using Collective Wisdom of Crowds,
Microsoft Research Asia

Jun 2008 – May 2009 Supporting Bidirectional Personalized Object Search, Microsoft Research Asia

References

Available upon request