Ismail Sengor Altingovde

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RESEARCH INTERESTS

◇ Search engines (efficiency and effectiveness of large scale search systems, focused crawling)

◇ Information retrieval (text retrieval, XML retrieval, cluster-based retrieval, content-based retrieval over textual images)

◇ Social Web / Web 2.0 (opinion mining and analysis, comment analysis, social search)

◇ Web databases and query processing (metadata, score management and ranking in DBs)

◇ Machine learning (information extraction, recommendation systems, clustering)

WORK EXPERIENCE

◇ **Assistant Professor**
Department of Computer Engineering, METU, Ankara, Turkey, December 2012 – present

◇ **Postdoctoral Researcher**
L3S Research Center, Germany, April 2011 – December 2012.

◇ **Postdoctoral Researcher**
Dept. of Computer Engineering, Bilkent Univ., Turkey, July 2009 – April 2011.

EDUCATION

◇ **PhD in Computer Science**
Dept. of Computer Engineering, Bilkent University, Turkey, September 2001 – July 2009
Thesis: Improving The Efficiency of Search Engines: Strategies for Focused Crawling, Searching, and Index Pruning
Supervisor: Prof. Dr. Özgür Ulusoy
CGPA: 4.00 (out of 4.00)

◇ **MSc in Computer Science**
Dept. of Computer Engineering, Bilkent University, Turkey, June 1999 – September 2001
Thesis: Topic-Centric Querying of Web Resources
Supervisor: Prof. Dr. Özgür Ulusoy
CGPA: 3.96 (out of 4.00)

◇ **BSc in Computer Science**
Dept. of Computer Engineering, Bilkent University, Turkey, September 1995 – June 1999
CGPA: 3.74 (out of 4.00)

RESEARCH PROJECTS

◇ 2013 – 2015 "Optimization of Search Technologies for Students at Primary and Secondary Schools", accepted for funding by Scientific and Technological Research Council of Turkey (TÜBİTAK) within 1003 FATIH Project Call, *Position*: Researcher.

◇ October 2011 – Dec 2012 "CUBRIK - Human-Enhanced Time-Aware Multimedia Search", funded by the European Union 7th Framework Program (FP7) as an IP, *Position*: Postdoctoral Researcher (Work Package Leader).

◇ March 2011 – May 2012 "LivingKnowledge - Fact, Opinions and Bias in Time", funded by the European Union 7th Framework Program (FP7) as a FET, *Position*: Postdoctoral Researcher.

⋄ 2010 – 2011 "Refreshment Strategies for Query Result Caching in Web Search Engines", funded by Scientific and Technological Research Council of Turkey (TÜBİTAK), *Position*: Postdoctoral Researcher.

⋄ 2008 – 2010 "Exploiting Semantic Relationships for the Scalability and Efficiency of Web Search Engines", funded by Scientific and Technological Research Council of Turkey (TÜBİTAK), *Position*: Scholar (PhD Student).

⋄ 2005 – 2007 "Automatic Construction and Sophisticated Querying of Domain-Specific Web Search Engines", funded by Scientific and Technological Research Council of Turkey (TÜBİTAK), *Position*: Scholar (PhD Student).

⋄ 2004 – 2005 "MUSCLE: Multimedia Understanding, Through Semantics, Computation, and Learning", funded by the European Union 6th Framework Program (FP6) as a NoE, *Position*: Short-time Researcher.

⋄ 2004 – 2005 "E-government Project" funded by Turkish State Planning Organization, *Position*: Scholar (PhD Student).

⋄ 2000 – 2003 "Storing and Querying Multimedia Presentations from XML Documents", jointly funded by Scientific and Technological Research Council of Turkey (TÜBİTAK) and National Science Foundation (NSF) of USA, *Position*: Scholar (MSc Student).

ACADEMIC HONORS

⋄ 2009: Best poster award of 31st European Conference on Information Retrieval

⋄ 1995 – 2009: Full Scholarship for Ph.D., M.S. and B.S., including tuition, stipend, and accommodation, Bilkent University, Turkey

⋄ 1999: Ranked 4th in the Computer Science Department B.S. degrees

⋄ 1995 – 1999: Dean's List in all semesters

⋄ 1995: Ranked 20th in the university entrance examination (OSS) (among 1.1 million students)

⋄ 1995: Ranked 1st in the high school graduation degrees

⋄ 1992: Ranked in the top-250 in Science High-School examination

TEACHING EXPERIENCE

⋄ **Assistant Professor**
METU, Turkey, December 2012 – present
Undergraduate Courses: Advanced Programming with C
Graduate Courses: Web Search Engine Design

⋄ **Teaching Assistant**
Bilkent University, Turkey, September 1999 – July 2009
Courses: Introduction to Computing for Social Sciences, Introduction to Programming for Social Sciences, Science Technology and Society, Algorithms and Programming, Fundamental Structures of Computer Science, Computers and Data Organization, Object-oriented Programming, Database Management Systems

PUBLICATIONS **Peer-Reviewed Journal Papers**

1. I. S. Altingovde, O. N. Subakan, and Ö. Ulusoy, "Cluster Searching Strategies for Collaborative Recommendation Systems", Information Processing & Management, vol. 49, no. 3, pp. 688-697, 2013.

2. I. S. Altingovde, R. Ozcan, and Ö. Ulusoy, "Static Index Pruning in Web Search Engines: Combining Term and Document Popularities with Query Views", ACM Transactions on Information Systems (TOIS), vol. 30, no. 1, 2012.

3. B. B. Cambazoglu, I. S. Altingovde, R. Ozcan, and Ö. Ulusoy, "Cache-Based Query Processing for Search Engines", ACM Transactions on the Web, vol. 6, no. 4, 2012.

4. R. Ozcan, I. S. Altingovde, B. B. Cambazoglu, F. P. Junqueira, and Ö. Ulusoy, "A Five-Level Static Cache Architecture for Web Search Engines", Information Processing & Management, vol. 48, no. 5, pp. 828-840, 2012.

5. R. Ozcan, I. S. Altingovde, and Ö. Ulusoy, "Exploiting Navigational Queries for Result Presentation and Caching in Web Search Engines", Journal of the American Society for Information Science and Technology (JASIST), vol. 62, no. 4, pp. 714–726, 2011.

6. R. Ozcan, I. S. Altingovde, and Ö. Ulusoy, "Cost-Aware Strategies for Query Result Caching in Web Search Engines", ACM Transactions on the Web, vol. 5, no. 2, 2011.

7. I. Z. Yalniz, I. S. Altingovde, U. Güdükbay, and Ö. Ulusoy, "Ottoman Archives Explorer: A Retrieval System for Digital Ottoman Archives", ACM Journal on Computing and Cultural Heritage, vol. 2, no. 3, pp. 1–20, 2009.

8. I. Z. Yalniz, I. S. Altingovde, U. Güdükbay, and Ö. Ulusoy, "Integrated Segmentation and Recognition of Connected Ottoman Script", Optical Engineering, vol. 48, no. 11, article no. 117205, 12 pages, 2009.

9. I. S. Altingovde, E. Demir, F. Can, and Ö. Ulusoy, "Incremental Cluster-Based Retrieval Using Compressed Cluster-Skipping Inverted Files", ACM Transactions on Information Systems (TOIS), vol. 26, no. 3, 36 pages, 2008.

10. I. S. Altingovde and Ö. Ulusoy, "Exploiting Interclass Rules for Focused Crawling", IEEE Intelligent Systems, vol. 19, no. 6, pp. 66–73, 2004.

11. G. Ozsoyoglu, I. S. Altingovde, A. Al-Hamdani, S. A. Ozel, Ö. Ulusoy, and Z. M. Ozsoyoglu, "Querying Web Metadata: Native Score Management and Text Support in Databases", ACM Transactions on Database Systems (TODS), vol. 29, no. 4, pp. 581–634, 2004.

12. F. Can, I. S. Altingovde, and E. Demir, "Efficiency and Effectiveness of Query Processing in Cluster-Based Retrieval", Information Systems, vol. 29, no. 8, pp. 697–717, 2004.

13. S. A. Ozel, I. S. Altingovde, Ö. Ulusoy, G. Ozsoyoglu, and Z. M. Ozsoyoglu, "Metadata-Based Modeling of Information Resources on the Web", Journal of the American Society for Information Science and Technology (JASIST), vol. 55, no. 2, pp. 97–110, 2004.

Peer-Reviewed Conference Papers

1. S. Chelaru, C. Orellana-Rodriguez, and I. S. Altingovde, "Can Social Features Help Learning to Rank YouTube Videos?", Proceedings of the 13th International Conference on Web Information Systems Engineering (WISE), LNCS 7651, pp. 552–566, Paphos, Cyprus, November 2012.

2. I. S. Altingovde, R. Blanco, B. B. Cambazoglu, R. Ozcan, E. Sarigil, and Ö. Ulusoy, "Characterizing Web Search Queries that Match Very Few or No Results", Proceedings of the 21st ACM Conference on Information and Knowledge Management (CIKM), pp. 2000–2004, Maui, HI, USA, November 2012.

3. B. B. Cambazoglu, and I. S. Altingovde, "Impact of Regionalization on Performance of Web Search Engine Result Caches", Proceedings of the 19th International Symposium on String Processing and Information Retrieval (SPIRE), LNCS 7608, pp. 161–166, Cartagena de Indias, Colombia, October 2012.

4. S. Alici, I. S. Altingovde, R. Ozcan, B. B. Cambazoglu, and Ö. Ulusoy, "Adaptive Time-to-Live Strategies for Query Result Caching in Web Search Engines", Proceedings of the 34th European Conference on Information Retrieval (ECIR), pp. 401–412, Barcelona, Spain, April 2012.

5. S. Chelaru, I. S. Altingovde, and S. Siersdorfer, "Analyzing the Polarity of Opinionated Queries", Proceedings of the 34th European Conference on Information Retrieval (ECIR), pp. 463–467, Barcelona, Spain, April 2012.

6. D. Atilgan, I. S. Altingovde, and Ö. Ulusoy, "On the Size of Full Element-Indexes for XML Keyword Search", Proceedings of the 34th European Conference on Information Retrieval (ECIR), pp. 556–560, Barcelona, Spain, April 2012.

7. R. Ozcan, I. S. Altingovde, and Ö. Ulusoy, "In Praise of Laziness: A Lazy Strategy for Web Information Extraction", Proceedings of the 34th European Conference on Information Retrieval (ECIR), pp. 565–568, Barcelona, Spain, April 2012.

8. P. Fraternali et al., "The CUBRIK Project: Human-Enhanced Time-Aware Multimedia Search", Proceedings of the 21st World Wide Web Conference (WWW), pp. 259–262, Lyon, France, April 2012.

9. S. Alici, I. S. Altingovde, R. Ozcan, B. B. Cambazoglu, and Ö. Ulusoy, "Timestamp-Based Result Cache Invalidation for Web Search Engines", Proceedings of the 34th International ACM SIGIR Conference on Research and Development in Information Retrieval, pp. 973–982, Beijing, China, July 2011.

10. I. S. Altingovde, R. Ozcan, and Ö. Ulusoy, "Evolution of Web Search Results within Years", Proceedings of the 34th International ACM SIGIR Conference on Research and Development in Information Retrieval, pp. 1237–1238, Beijing, China, July 2011.

11. I. S. Altingovde, R. Ozcan, B. B. Cambazoglu, and Ö. Ulusoy, "Second Chance: A Hybrid Approach for Dynamic Result Caching in Search Engines", Proceedings of the 33rd European Conference on Information Retrieval (ECIR), pp. 510–516, Dublin, Ireland, April 2011.

12. S. Alici, I. S. Altingovde, R. Ozcan, B. B. Cambazoglu, and Ö. Ulusoy, "Timestamp-Based Cache Invalidation for Search Engines", Proceedings of the 20th International Conference on World Wide Web (WWW), pp. 3–4, Hyderabad, India, March 2011.

13. I. S. Altingovde, D. Atilgan, and Ö. Ulusoy, "XML Retrieval using Pruned Element-Index Files", Proceedings of the 32nd European Conference on Information Retrieval (ECIR), pp. 306–318, Milton Keynes, UK, March 2010.

14. I. S. Altingovde, D. Atilgan, and Ö. Ulusoy, "Exploiting Index Pruning Methods for Clustering XML Collections", Proceedings of the 8th International Workshop of the Initiative for the Evaluation of XML Retrieval (INEX), pp. 379–386, Brisbane, Australia, December 2009.

15. I. S. Altingovde, R. Ozcan, and Ö. Ulusoy, "Exploiting Query Views for Static Index Pruning in Web Search Engines", Proceedings of the 18th ACM Conference on Information and Knowledge Management (CIKM), pp. 1951–1954, HK, China, November 2009

16. I. S. Altingovde, R. Ozcan, and Ö. Ulusoy, "A Practitioner's Guide for Static Index Pruning", Proceedings of the 31st European Conference on Information Retrieval (ECIR), pp.675–679, Toulouse, France, April 2009. (Best Poster Award)

17. I. S. Altingovde, R. Ozcan, and Ö. Ulusoy, "A Cost-Aware Strategy for Query Result Caching in Web Search Engines", Proceedings of the 31st European Conference on Information Retrieval (ECIR), pp. 628–636, Toulouse, France, April 2009.

18. R. Ozcan, I. S. Altingovde, and Ö. Ulusoy, "Utilization of Navigational Queries for Result Presentation and Caching in Search Engines", Proceedings of the 17th ACM Conference on Information and Knowledge Management (CIKM), pp. 1499–1500, California, USA, October 2008.

19. R. Ozcan, I. S. Altingovde, and Ö. Ulusoy, "Space efficient caching of query results in search engines", Proceedings of the 23rd International Symposium on Computer and Information Sciences (ISCIS), pp. 1–6, Istanbul, Turkey, October 2008.

20. I. S. Altingovde, E. Demir, F. Can, and Ö. Ulusoy, "Site-based Dynamic Pruning for Query Processing in Search Engines", Proceedings of the 31st International ACM SIGIR Conference, pp. 861–862, Singapore, July 2008.

21. I. S. Altingovde, F. Can, and Ö. Ulusoy, "Efficient Processing of Category-Restricted Queries for Web Directories", Proceedings of the 30th European Conference on Information Retrieval (ECIR), pp. 695–699, Glasgow, UK, April 2008.

22. R. Ozcan, I. S. Altingovde, and Ö. Ulusoy, "Static Query Result Caching Revisited", Proceedings of the 17th International Conference on World Wide Web (WWW), pp. 1169–1170, Beijing, China, April 2008.

23. I. S. Altingovde, R. Ozcan, S. Cetintas, H. Yilmaz, and Ö. Ulusoy, "An Automatic Approach to Construct Domain-Specific Web Portals", Proceedings of the 16th ACM Conference on Information and Knowledge Management (CIKM), pp. 849–852, Lisbon, Portugal, November 2007.

24. I. S. Altingovde, R. Ozcan, H. C. Ocalan, F. Can, and Ö. Ulusoy, "Large-Scale Cluster-Based Retrieval Experiments on Turkish Texts", Proceedings of the 30th International ACM SIGIR Conference, pp. 891–892, Amsterdam, The Netherlands, July 2007.

25. I. S. Altingovde, F. Can, and Ö. Ulusoy, "Algorithms for Within-Cluster Searches Using Inverted Files", Lecture Notes in Computer Science, vol. 4263, pp. 707–716, October 2006.

26. G. Ozsoyoglu, A. Al-Hamdani, I. S. Altingovde, S. A. Ozel, Ö. Ulusoy, and Z. M. Ozsoyoglu, "Sideway Value Algebra for Object-Relational Databases", Proceedings of the 28th International Conference on Very Large Databases (VLDB), pp. 59–70, Hong Kong, China, August 2002.

27. I. S. Altingovde, S. A. Ozel, Ö. Ulusoy, G. Ozsoyoglu, and Z. M. Ozsoyoglu, "Topic-Centric Querying of Web Information Resources", Proceedings of the 12th International Conference on Database and Expert Systems Applications (DEXA), Lecture Notes in Computer Science, vol.2113, pp. 699–711, Munich, Germany, September 2001.

28. H. A. Güvenir, I. S. Altingovde, I. Uysal, and E. Erel, "Bankruptcy Prediction Using Feature Projection Based Classification", Proceedings of the SCI/ISAS, pp. 108–113, Orlando, Florida, August 1999.

National Conference Papers

1. Y. Bastanlar, I. S. Altingovde, A. Aksay, O. Alav, Ö. Cavus, A. Alatan, Y. Yardimci, Ö. Ulusoy, U. Güdükbay, E. Çetin, G. Bozdagi Akar, and S. Aksoy, "E-Museum: Web-based Tour and Information System for Museums", Proceedings of the 14th IEEE Signal Processing and Communications Applications Conference, Antalya, Turkey, April 2006.

2. I. S. Altingovde, E. Saykol, Ö. Ulusoy, U. Güdükbay, E. Çetin, and M. Göçmen, "Content-Based Retrieval (CBR) System for Ottoman Archives", Proceedings of the 14th IEEE Signal Processing and Communications Applications Conference, Antalya, Turkey, April 2006.

PROFESSIONAL ACTIVITIES AND SERVICE

◇ Program Committee Member, 22nd ACM Conference on Information and Knowledge Management (CIKM), CA, USA, 2013.

◇ Program Committee Member, 35th European Conference on Information Retrieval (ECIR), Moscow, Russia, 2013.

◇ Co-chair, 10th Workshop on Large-Scale Distributed Systems for Information Retrieval (LSDS-IR), Rome, Italy, 2013.

⋄ Program Committee Member, 6th ACM International Conference on Web Search and Data Mining (WSDM), Rome, Italy, 2013.

⋄ Program Committee Member, 34th European Conference on Information Retrieval (ECIR), Barcelona, Spain, 2012.

⋄ Demo Program Committee Member, 38th International Conference on Very Large Databases (VLDB), İstanbul, Turkey, 2012.

⋄ Program Committee Member, 7th Asia Information Retrieval Societies Conference (AIRS), Dubai, United Arab Emirates, 2011.

⋄ Demo Program Committee Member, International Conference on Theory and Practice of Digital Libraries (TPDL), Berlin, Germany, 2011.

⋄ Program Committee Member, 34th Annual ACM SIGIR Conference, Beijing, China, 2011.

⋄ Program Committee Member, 8th Workshop on Large-Scale Distributed Systems for Information Retrieval, Geneva, Switzerland, 2010.

⋄ Publicity Committee Member, 33rd Annual ACM SIGIR Conference, Geneva, Switzerland, 2010.

⋄ Session Chair, 23rd International Symposium on Computer and Information Sciences (IS-CIS), Istanbul, Turkey, 2008.

⋄ Reviewer (Journals) - IEEE Transactions on Knowledge and Data Engineering, Information Processing & Management, Information Sciences, International Journal on Document Analysis and Recognition, IEEE Systems, Man and Cybernetics - Part B, IEEE Computer Magazine, Semantic Web Journal, ACM Transactions on the Web.

⋄ External Reviewer (Conferences) - ACM CIKM *2006, 2007, 2010*, ACM SIGIR *2007, 2010*, VLDB *2009*, ICDE *2007, 2011*, WISE *2010*, DASFAA *2006, 2007, 2008*, IEEE IRI *2008*.

Talks, and Lectures

⋄ I. S. Altingovde, "Social Features for Ranking", invited talk at Big Data Systems, Applications and Privacy, Abu Dhabi, UAE, 2013.

⋄ I. S. Altingovde, and N. Kanhabua, "Dynamics of Web: Analysis and Implications from Search Perspective", 8-hour lecture at the 6th Russian Summer School in Information Retrieval (RuSSIR), Yaroslavl, Russia, 2012.

⋄ I. S. Altingovde, "Efficiency Issues for Web Search Engines: How to Make a Search Engine Return Results in a Hundred Milliseconds or Less?", talk at Yandex, Moscow, Russia, 2013.

⋄ I. S. Altingovde, "Techniques for Improving Search Efficiency and Scalability", talk at Yahoo! Research Lab, Barcelona, Spain, 2009.