

İsmail Sengör Altingövde

Personal Information

Nationality: Turkish

Date of birth: 1977

Place of birth: Turkey

Address: Bilkent University, Computer Engineering Dept., Ankara

E-mail: ismaila@cs.bilkent.edu.tr

Homepage: <http://www.cs.bilkent.edu.tr/~ismaila/>

Research Interests

- Search engines (efficiency and effectiveness of large scale search systems)
- Information retrieval (text retrieval, XML retrieval, cluster based retrieval, information extraction, etc.)
- Web databases and query processing (metadata, score management in Web DBs, etc.)

Education

2001 – 2009 Bilkent University Ankara

PhD. in Computer Engineering

Advisor: Prof. Dr. Özgür Ulusoy

Thesis: Improving The Efficiency of Search Engines: Strategies for Focused Crawling, Searching, and Index Pruning

CGPA: **4.0** (out of 4.00)

Courses: Distributed Database Systems, Information Retrieval Systems, Neural Networks, Implications of the Internet, Mobile and Wireless Networking, Cryptography and Network Security, Capacity Planning for Web Services, Machine Learning

1999 - 2001 Bilkent University Ankara

M. S. in Computer Engineering

Advisor: Assoc. Prof. Dr. Özgür Ulusoy

Thesis: Topic-Centric Querying of Web Resources

CGPA: **3.96** (out of 4.00)

Courses: Database Systems, Data Mining, Theory of Computing, Topics in Graph Theory, Parallel Programming Languages, Algorithm Design for Parallel Computers, Algorithms, Application of Computer Graphics

1995 - 1999 Bilkent University Ankara

B S. in Computer Engineering and Information Science

CGPA: **3.74** (out of 4.00)

Courses: Database Management Systems, File Organization and Processing, Compiler Design, Artificial Intelligence, Automata Theory and Formal Languages, Programming Languages, Symbolic Programming, Object-Oriented Programming, Operating systems, Distributed Systems and Algorithms, Computer Networks, Principles of User Interface Design

1988 - 1995 Tokat Anatolian High School Tokat

CGPA: **5.00** (out of 5.00)

Research
Projects

2010-2011 **Refreshment Strategies for Query Result Caching in Web Search Engines** (supported by Scientific and Technological Research Council of Turkey). Position: Postdoc Researcher.

2008-2010 **Exploiting Semantic Relationships for the Scalability and Efficiency of Web Search Engines** (supported by Scientific and Technological Research Council of Turkey). Position: Researcher.

2005-2007 **Automatic Construction and Sophisticated Querying of Domain-Specific Web Search Engines** (supported by Scientific and Technological Research Council of Turkey). Position: Researcher.

2004-2008 **MUSCLE: Multimedia Understanding, Through Semantics, Computation, and Learning** (supported by EU FP6 as a NoE). Position: Short-time researcher.

2004-2005 **E-government Project** (in Turkish, supported by Turkish State Planning Organization). Position: Researcher.

2000-2003 **Storing and Querying Multimedia Presentations from XML Documents** (jointly supported by Scientific and Technological Research Council of Turkey and NSF of USA). Position: Researcher.

Teaching
Experience

1999 - 2009 Bilkent University Ankara

Teaching Assistant

Courses Taught:

Algorithms and Programming I and II
Fundamental Structures of Computer Science
Computers and Data Organization
Object-oriented Programming
Database Management Systems

Awards
received

2009: Best poster award of 31st European Conference on Information Retrieval
2001-2009: Full Scholarship for PhD (around 25,000\$ annually), including tuition, stipend, and accommodation, Bilkent University, Turkey
1999-2001: Full Scholarship for MS (around 20,000\$ annually), including tuition, stipend, and accommodation, Bilkent University, Turkey
1995-1999: Full Scholarship for BS (around 15,000\$ annually), including tuition, stipend, and accommodation, Bilkent University, Turkey
1999: Ranked 4th in the CS Department graduation degrees
1995-99: Dean's List in all semesters, Bilkent University, Turkey
1995: Ranked 20th in the university entrance examination (ÖSS) (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

Travel awards

2009: European Conference on Information Retrieval (ECIR), Student grant (300 Euro)
2009: European Summer School on Information Retrieval (ESSIR), Student grant (400 Euro)

2008: Russian Summer School on Information Retrieval (RUSSIR), Accomodation grant

2007: ACM SIGIR Conference, Travel award (450\$)

Refereed

Publications

Journal Publications

1. R. Ozcan, I. S. Altingovde, Ö. Ulusoy, **Cost-Aware Strategies for Query Result Caching in Web Search Engines**, *ACM Transactions on Web* (accepted).
2. İ. Z. Yalınız, I. S. Altingovde, U. Güdükbay, Ö. Ulusoy, **Ottoman Archives Explorer: A Retrieval System for Digital Ottoman Archives**, *ACM Journal on Computing and Cultural Heritage*, vol.2, no.3, 2009.
3. İ. Z. Yalınız, I. S. Altingovde, U. Güdükbay, Ö. Ulusoy, **Integrated Segmentation and Recognition of Connected Ottoman Script**, *Optical Engineering*, vol.48, no.11, 2009.
4. I. S. Altingovde, E. Demir, F. Can, Ö. Ulusoy, **Incremental Cluster-Based Retrieval Using Compressed Cluster-Skipping Inverted Files**, *ACM Transactions on Information Systems (TOIS)*, vol.26, no.3, 2008.
5. I. S. Altingovde, Ö. Ulusoy. **Exploiting Interclass Rules for Focused Crawling**. *IEEE Intelligent Systems*, 19, 6 (November-December 2004), 66-73.
6. G. Ozsoyoglu, I. S. Altingovde, A. Al-Hamdani, S. A. Ozel, Ö. Ulusoy, Z. M. Ozsoyoglu. **Querying Web Metadata: Native Score Management and Text Support in Databases**. *ACM Transactions on Database Systems (TODS)*, 29, 4 (December 2004), 581-634.
7. F. Can, I. S. Altingovde, E. Demir. **Efficiency and effectiveness of query processing in cluster-based retrieval**. *Information Systems*, vol. 29, No. 8, 2004, pp. 697-717
8. S. A. Ozel, I. S. Altingovde, Ö. Ulusoy, G. Ozsoyoglu, 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 (January 2004), 97-110.

International Conference Publications

1. I. S. Altingovde, D. Atilgan, Ö. Ulusoy, **XML Retrieval using Pruned Element-Index Files**, *32nd European Conference on Information Retrieval (ECIR'10)*, Milton Keynes, UK, March 2010.
2. I. S. Altingovde, D. Atilgan, Ö. Ulusoy, **Exploiting Index Pruning Methods for Clustering XML Collections**, *INEX 2009 Workshop (Initiative for the Evaluation of XML Retrieval)*, Brisbane, Australia, December 2009.
3. I. S. Altingovde, R. Ozcan, Ö. Ulusoy, **Exploiting Query Views for Static Index Pruning in Web Search Engines**, *ACM 18th Conference on Information and Knowledge Management (CIKM'09)*, HK, China, 1951-1954, 2009
4. I. S. Altingovde, R. Ozcan, Ö. Ulusoy, **A Practitioner's Guide for Static Index Pruning**, *31st European Conference on Information Retrieval (ECIR'09)*, 2009 **Best Poster Award**
5. I. S. Altingovde, R. Ozcan, Ö. Ulusoy, **A Cost-Aware Strategy for Query Result Caching in Web Search Engines**, *31st European Conf. on Information Retrieval (ECIR'09)*, 2009.
6. R. Ozcan, I. S. Altingovde, Ö. Ulusoy, **Utilization of Navigational Queries for Result Presentation and Caching in Search Engines**, *ACM 17th Conference on Information and Knowledge Management (CIKM'08)*, 1499-1500, October 2008.
7. R. Ozcan, I. S. Altingovde, Ö. Ulusoy, **Space efficient caching of query results in search**

- engines**, *International Symposium on Computer and Information Sciences (ISCIS'08)*, Istanbul, Turkey, October 2008.
8. I. S. Altıngövdde, E. Demir, F. Can, Ö. Ulusoy, **Site-based Dynamic Pruning for Query Processing in Search Engines**, *31st Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR'08)*, 861-862, 2008.
 9. I. S. Altıngövdde, F. Can, Ö. Ulusoy, **Efficient Processing of Category-Restricted Queries for Web Directories**, *30th European Conference on Information Retrieval (ECIR'08), Lecture Notes in Computer Science (Springer Verlag)*, vol.4956, 695-699, 2008.
 10. R. Özcan, I. S. Altıngövdde, Ö. Ulusoy, **Static Query Result Caching Revisited**, *17th International Conference on World Wide Web (WWW'08)*, 1169-1170, 2008.
 11. I. S. Altıngövdde, R. Ozcan, S. Cetintas, H.Yilmaz, Ö. Ulusoy, **An Automatic Approach to Construct Domain-Specific Web Portals**, *ACM 16th Conference on Information and Knowledge Management (CIKM'07)*, 849-852, 2007.
 12. I. S. Altıngövdde, R. Ozcan, H.C. Ocalan, F. Can, Ö. Ulusoy, **Large-Scale Cluster-Based Retrieval Experiments on Turkish Texts**, *30th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR'07)*, 891-891, July 2007.
 13. I. S. Altıngövdde, F. Can, Ö. Ulusoy, **Algorithms for Within-Cluster Searches Using Inverted Files**, *International Symposium on Computer and Information Sciences (ISCIS'06), Lecture Notes in Computer Science (Springer Verlag)*, vol.4263, 707-716, 2006.
 14. G. Ozsoyoglu, Abdullah Al-Hamdani, I. S. Altıngövdde, S. A. Ozel, Ö. Ulusoy, Z. M. Ozsoyoglu, **Sideway Value Algebra for Object-Relational Databases**, *International Conference on Very Large Databases (VLDB'02)*, 59-70, August 2002.
 15. I. S. Altıngövdde, S. A. Ozel, Ö. Ulusoy, G. Ozsoyoglu, Z. M. Ozsoyoglu, **Topic-Centric Querying of Web Information Resources**, *Database and Expert Systems Applications (DEXA'01), Lecture Notes in Computer Science (Springer Verlag)*, vol.2113, 699-711, September 2001.
 16. H. A. Güvenir, I. S. Altıngövdde, I. Uysal, E. Erel, **Bankruptcy Prediction Using Feature Projection Based Classification**, *In Proceedings of SCI/ISAS'99*, Orlando, Florida, (July 31 - August 4, 1999), 108-113.

National Conference Publications

1. Y. Bastanlar, S. Altıngövdde, A. Aksay, O. Alav, Ö. Çavus, A. Alatan, Y. Yardimci, Ö. Ulusoy, U. Güdükbay, E. Çetin, G. Bozdagi Akar, S. Aksoy, **E-Müze: Müzeler için Web-Tabanlı Gezi ve Bilgi Sistemi (E-Museum: Web-based Tour and Information System for Museums) (in Turkish)**, *IEEE Sinyal İşleme ve Uygulamaları Kurultayı (SIU'06)*, Antalya, Turkey, April 2006.
2. I. S. Altıngövdde, E. Saykol, Ö. Ulusoy, U. Güdükbay, E. Çetin, M. Göçmen, **Osmanlı Arşivleri İçerik-Bazlı Sorgulama (IBS) Sistemi (Content-Based Retrieval (CBR) System for Ottoman Archives) (in Turkish)**, *IEEE Sinyal İşleme ve Uygulamaları Kurultayı (SIU'06)*, Antalya, Turkey, April 2006.