

ISMAILCEM BUDAK ARPINAR

ASSOCIATE PROFESSOR, COMPUTER SCIENCE

CURRICULUM VITAE

CONTACT INFORMATION

415 Boyd GSRC, Department of Computer Science, University of Georgia
Athens, GA 30602-7404, USA

Office: Hardman Hall, 225
+1 (706) 583-8249
budak@cs.uga.edu
<http://www.cs.uga.edu/~budak>

RESEARCH INTERESTS

- › Semantic web
- › Crowdsourcing & collective intelligence
- › Information fusion
- › Bio-medical informatics
- › Web services & workflows

EDUCATION

- 1998 **Ph.D. Middle East Technical University, Turkey**, Computer Engineering
Formalization of Workflows and Their Correctness Issues in the Presence of Concurrency
Advisors: Prof. Asuman Dogac & Prof. Ugur Halici
Research Areas:
Workflow Management, Transaction Management & Concurrency Control.
- 1993 **M.S. Middle East Technical University, Turkey**, Computer Engineering
An Advanced Graphical User Interface for Object-Oriented DBMSs: MoodView
Advisor: Prof. Asuman Dogac
- 1991 **B.S. Middle East Technical University, Turkey**, Computer Engineering

POSITIONS

- Aug 2007 – present **Department of Computer Science, University of Georgia (UGA)**, Athens, GA.
Associate Professor
- Aug 2001 – Aug 2007 **Department of Computer Science, UGA**, Athens, GA.
Assistant Professor
- Jul 2001 – Aug 2001 **LSDIS Lab, Department of Computer Science, UGA**, Athens, GA.
Post-Doctoral Research Associate
- Apr 2001 – Jul 2001 **Department of Genetics, UGA**, Athens, GA.

Research Computational Biologist
Dec 1998 – Apr 2001 **LSDIS Lab, Department of Computer Science, UGA**, Athens, GA.
Post-Doctoral Research Associate
Mar 1997 – Dec 1998 **AYDIN Software and Electronics Industry Co.**, Ankara, Turkey (acquired by L-3).
Software Engineer
Feb 1992 – Mar 1997 **Software Research and Development Center (SRDC), Middle East Technical University**, Ankara, Turkey.
Research Scientist
Aug 1991 – Feb 1992 **Scientific and Technical Research Council of Turkey (TUBITAK)**, Ankara, Turkey.
Software Engineer

HONORS & AWARDS

- 2009 **Grant, Charter School Planning & Implementation Grant.**
Georgia Department of Education, (\$5,000)
- 1995 **The Scientific and Technical Research Council of Turkey, H. Tugac Foundation, Science Award.**
MOOD: METU Object-Oriented DBMS, 1995 (with MOOD Project Group)
- 1991 **National Higher Education Entrance Examination, TURKEY.**
Ranked in top 0.1% out of 1.5 million examinees
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GRANTS

Externally Funded Research Grants

- [1] **National Science Foundation (ITR)**, “SemDis: Discovering Complex Relationships in Semantic Web”. PI: I. B. Arpinar, Co-PIs: J. Miller & K. Kochut. \$68,947, January 1, 2007 – December 31, 2007.
- [2] **CTA Subcontract from ARDA**, “An Ontological Approach to Financial Analysis and Monitoring”. PI: A. Sheth, Co-PI: I. B. Arpinar. \$325,000, April 1, 2005 – September 30, 2006.
- [3] **National Science Foundation (ITR)**, “SemDIS: Discovering Complex Relationships in the Semantic Web”. PI: A. Sheth, Co-PIs: I. B. Arpinar, K. Kochut, J. Miller (UGA CS) & A. Joshi, T. Finin, Y. Yesha (UMBC CS). \$1,250,000 (UGA part: \$597,705), October 1, 2003 – December 31, 2006.
- [4] **University Consortium for Geographic Information Science (UCGIS)**, “Homeland Security Workshop”. PIs: A. Sheth & L. User, Co-PIs: I. B. Arpinar & X. Yao, \$15,000, November 2003.
- [5] **National Science Foundation (ITR)**, “PISTA: Semantic Association Identification and Knowledge Discovery for National Security Applications”. PI: A. Sheth, Co-PIs: I. B. Arpinar & K. Kochut. \$200,000, June 1, 2002 – June 30, 2005.
- [6] **Naval Research Lab (Department of Navy)**, “Workflow Management for Advanced DoD Applications”. PI: A. Sheth, Co-PIs: K. Kochut & J. A. Miller, Investigator: I. B. Arpinar. \$200,000, January 1, 1999 – December 31, 2000.
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Internally Funded Research Grants

- [7] **UGA Faculty Research Grant**, “ONTOS: Ontology-driven Web Services Integration Platform”. PI: I. B. Arpinar. \$11,500, January 1, 2002 – December 31, 2002.
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Pending Grants

- [8] **National Science Foundation** (in response to NSF 12-512: Smart Health and Wellbeing), “SHB: Type I (EXP): Collaborative Research: Semantics-Enabled Proactive and Targeted Dissemination of New Medical Knowledge”, PI: I. B. Arpinar, Co-PI: L. Ramaswamy, \$319,795 (UGA Part), in collaboration with Wright-State University, Co-PI: A. Sheth, August 1, 2012 – July 31, 2015.
- [9] **National Science Foundation** (in response to NSF 10-600: IIS – Social Computational Systems “Web-scale Collective Argumentation using Semantic Web and Crowdsourcing”, PI: I. B. Arpinar, \$486,621, June 1, 2012 – May 31, 2015.
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PUBLICATIONS

Ph.D. Dissertation

- [1] I. B. Arpinar, “Formalization of Workflows and Their Correctness Issues in the Presence of Concurrency”, 1998.
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M.S. Thesis

- [2] I. B. Arpinar, “An Advanced Graphical User Interface for Object-Oriented DBMSs: MoodView“, 1993.
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Refereed Journal Articles

- [3] S. Tartir, and I. B. Arpinar, “SemanticQA: Exploiting Semantic Associations for Cross-Document Question Answering”, INFORMATION, International Information Institute, Tokyo, Japan (in preparation).
- [4] B. Aleman-Meza, M. Nagarajan, L. Ding, A. P. Sheth, I. B. Arpinar, A. Joshi, and T. Finin, “Scalable Semantic Analytics on Social Networks for Addressing the Problem of Conflict of Interest Detection”, ACM Transactions on the Web, Vol. 2, No. 1, February 2008, pp. 7:1 – 7:29.
- [5] B. Aleman-Meza, F. Hakimpour, I. B. Arpinar, and A. P. Sheth, “SwetoDblp Ontology of Computer Science Publications”, Journal of Web Semantics, 5(3), September 2007, pp. 151-155.
- [6] J. Kessler, K. Rasheed, and I. B. Arpinar, “Using Genetic Algorithms to Reorganize Superpeer Structure in Peer to Peer Networks”, Applied Intelligence, The International Journal of Artificial Intelligence, Neural Networks, and Computer Problem-Solving Techniques, Springer Science+Business Media B.V., Vol. 26, No. 1, Feb 2007, pp. 35 – 52.
- [7] I. B. Arpinar, A. Sheth, C. Ramakrishnan, L. Utery, M. Azami, and M. Kwan, “Geospatial Ontology Development and Semantic Analytics”, Transactions in GIS, Blackwell Publishing, Vol. 10, No. 4, 2006, pp. 551 – 576.

- [8] B. Aleman-Meza, C. Halaschek, I. B. Arpinar, C. Ramakrishnan, and A. Sheth, "Ranking Complex Relationships on the Semantic Web", *IEEE Internet Computing, Special Issue on Information Discovery: Needles and Haystacks*, 9(3):37-44, May-June 2005.
- [9] I. B. Arpinar, R. Zhang, B. Aleman-Meza, and A. Maduko, "Ontology-Driven Web Services Composition Platform", *Journal of Information Systems and e-Business Management, Special issue on Service oriented enterprise IT applications and Web Services*, Vol. 3, Issue 2, July 2005, pp. 175 – 199.
- [10] A. Sheth, B. Aleman-Meza, I. B. Arpinar, C. Bertram, Y. Warke, C. Ramakrishnan, C. Halaschek, K. Anyanwu, D. Avant, F. S. Arpinar, and K. Kochut, "Semantic Association Identification and Knowledge Discovery for National Security Applications", *Special Issue of Journal of Database Management on Database Technology for Enhancing National Security*, Eds: L. Zhou and W. Kim, 16(1), Jan-Mar 2005, pp. 33 – 53.
- [11] S. Chandrasekaran, J. Miller, G. Silver, I. B. Arpinar and A. Sheth, "Composition, Performance Analysis and Simulation of Web Services," *Electronic Markets: The International Journal of Electronic Commerce and Business Media (EM)*, Taylor and Francis Publishing, Vol 13, No 2 June 2003, pp. 120 – 132.
- [12] Z. Luo, A. Sheth, K. Kochut, and I. B. Arpinar, "Exception Handling for Conflict Resolution in Cross-Organizational Workflows", *International Journal of Distributed and Parallel Databases (DAPD)*, Vol. 11, May 2003, pp. 271 – 306.
- [13] K. Kochut, J. Arnold, A. Sheth, J. Miller, E. Kraemer, I. B. Arpinar, and J. Cardoso, "IntelliGEN: A Distributed Workflow System for Discovering Protein-Protein Interactions", *International Journal of Distributed and Parallel Databases (DAPD)*, Special issue on Bioinformatics, Volume 13, No. 1, January 2003, pp. 43 – 72.
- [14] Z. Xu, B. Lance, C. Vargas, I. B. Arpinar, S. Bhandarkar, E. Kraemer, K. J. Kochut, J. A. Miller, J. R. Wagner, M. J. Weise, J. K. Wunderlich, J. Stringer, G. Smulian, M. T. Cushion, and J. Arnold, "Mapping by Sequencing the Pneumocystis Genome Using the Ordering DNA Sequences V3 Tool", *Genetics*, Vol. 163, April 2003, pp. 1299-1313.
- [15] A. Sheth, J. Miller, K. Kochut, I. B. Arpinar, "Research in Multi-Organizational Processes and Semantic Information Brokering at the LSDIS Lab," *SIGMOD Record*, Vol. 30, No. 4, December 2001, pp. 123 – 128.
- [16] A. P. Sheth, W. M. P. Van der Aalst, and I. B. Arpinar, "Processes Driving the Networked Economy: Process Portals, Process Vortexes, and Dynamically Trading Processes", *IEEE Concurrency Journal*, July-September 1999, pp. 18 – 31.
- [17] I. B. Arpinar, U. Halici, S. Arpinar, and A. Dogac, "Formalization of Workflows and Their Correctness Issues in the Presence of Concurrency", *International Journal of Distributed and Parallel Databases (DAPD)*, Vol. 7, No. 2, April 1999, pp. 199 – 248.
- [18] A. Dogac, G. Ozhan, E. Kilic, F. Ozcan, S. Nural, S. Mancuhan, C. Dengi, P. Koksall, V. Halici, I. B. Arpinar, C. Evrendilek, and V. Sadjadi, "An Interoperability Infrastructure for Developing Multidatabase Systems, ELEKTRIK, *Turkish Journal of Electrical Engineering and Computer Sciences*, Vol. 6, No. 1, 1998, pp. 1 – 10.

- [19] A. Dogac, C. Dengi, E. Kilic, G. Ozhan, F. Ozcan, S. Nural, C. Evrendilek, U. Halici, I.B. Arpinar, P. Koksai, N. Kesim, and S. Mancuhan, "METU Interoperable Database System", ACM SIGMOD Record, Vol. 24, No. 3, September 1995, pp. 56 – 61.
- [20] I. B. Arpinar, A. Dogac, and C. Evrendilek, "MoodView: An Advanced Graphical User Interface for OODBMSs", ACM SIGMOD Record, Vol. 22, No. 4, December 1993, pp. 11 – 18.

Books & Book Chapters

- [21] I. B. Arpinar, and L. Ramaswamy, "Semantic Dissemination of New Medical Knowledge", Medical Applications of Intelligent Data Analysis: Research Advancements, R. Magdalena, E. Soria, J. Guerrero, J. Gómez-Sanchis, and A.J. Serrano (Editors), IGI Global (in preparation).
- [22] S. Tartir, and I. B. Arpinar, "Ontology-Driven Question Answering and Ontology Quality Evaluation", Intelligent Data Analysis for Real-Life Applications: Theory and Practice, R. Magdalena, M. Martínez, J. M. Martínez, P. Escandell, and J. Vila, IGI Global (in preparation).
- [23] S. Tartir, I. B. Arpinar, and A. Sheth, "Ontological Evaluation and Validation" in R. Poli, M. Hely, and A. Kameas (Editors), Theory and Applications of Ontology, 400 pages, Springer, August 2010.
- [24] M. Perry, A. Sheth, I. B. Arpinar, and F. Hakimpour, "Geospatial and Temporal Semantic Analytics", in Handbook of Research on Geoinformatics, Editor: H. A. Karimi, Idea Group Publications, November 2008.
- [25] B. Aleman-Mesa, S. Decker, D. Cameron, I. B. Arpinar, "Association Analytics for Network Connectivity in a Bibliographic and Expertise Dataset", in Semantic Web Engineering in the Knowledge Society (J. Cardoso, M. D. Lytras, Eds.) Information Science Reference, Chapter VIII, 403 pages, October 2008.
- [26] B. Aleman-Meza, A. Sheth, P. Burns, D. Paliniswami, M. Eavenson, and I. B. Arpinar, "Semantic Analytics in Intelligence: Applying Semantic Association Discovery to determine Relevance of Heterogeneous Documents", in Advanced Topics in Database Research, Editor: Keng Siau, Idea Group Publishing, pp. 401 – 419, 2006.
- [27] B. Aleman-Meza, C. Halaschek, and I. B. Arpinar, "Collective Knowledge Composition in a Peer-to-Peer Network: A survey for Peer-to-Peer applications", in Encyclopedia of Database Technologies and Applications, Eds., L.C. Rivero, J.H. Doorn and V.E. Ferraggine, Idea-Group Inc, August 9, 2005, pp. 74 – 77.
- [28] A. Sheth, I. B. Arpinar, and V. Kashyap, "Relationships at the Heart of Semantic Web: Modeling, Discovering and Exploiting Complex Semantic Relationships", in Enhancing the Power of the Internet: Studies in Fuzziness and Soft Computing, Eds., M. Nikraves, B. Azvin, R. Yager, and L. Zadeh, Eds., 406 pages, Springer-Verlag, 2004, pp. 63-94.
- [29] J. Arnold, H.-B. Schuttler, D. Logan, D. Battogtokh, J. Griffith, I. B. Arpinar, S. Bhandarkar, S. Datta, K. J. Kochut, E. Kraemer, J. A. Miller, A. Sheth, G. Strobel, T. Taha, B. Aleman-Meza, J. Doss, L. Harris, & A. Nyong, "Metabolomics", in Handbook of Industrial Mycology. Marcel Dekker, NY, NY, 2004, Chapter 22, pp. 597 – 633.

- [30] A. Dogac, E. Gokkoca, S. Arpinar, P. Koksall, I. Cingil, I. B. Arpinar, N. Tatbul, P. Karagoz, U. Halici, and M. Altinel, "Design and Implementation of a Distributed Workflow Management System: METUFlow", in NATO ASI, *Advances in Workflow Management Systems and Interoperability*, Edited by A. Dogac, L. Kalinichenko, M. T. Ozsus, and A. Sheth, Springer Verlag, 1998, pp. 61 – 91.
- [31] A. Dogac, I. B. Arpinar, C. Evrendilek, T. Okay, and C. Ozkan, "METU Object-Oriented DBMS", in *Object-Oriented Database Systems*, edited by A. Dogac, M. T. Ozsus, A. Biliris, and T. Sellis, Springer-Verlag, September 1994, pp. 327 – 354.

Refereed Conference Publications

- [32] A. Rahman, and I. B. Arpinar, "Semantic Discovery and Retrieval of Relevant Medical Knowledge", The 2012 International Conference on Semantic Web and Web Services (SWWS'12), Las Vegas, NV, July 16-19, 2012 (in preparation).
- [33] S. Tartir, I. B. Arpinar, and B. McKnight, "SemanticQA: Exploiting Semantic Associations for Cross-Document Question Answering", 4th IEEE International Symposium on Innovation in Information & Communication Technology (ISIICT 2011), Amman, Jordan, November 29-December 1, 2011.
- [34] L. Ramaswamy, and I. B. Arpinar, "Semantics-enabled Proactive and Targeted Dissemination of New Medical Knowledge", ISCB Conference on Semantics in Healthcare & Life Sciences (CSHALS 2011), Cambridge/Boston, MA, February 23-25, 2011.
- [35] D. Cameron, B. Aleman-Meza, I. B. Arpinar, S. L. Decker, and A. P. Sheth, "A Taxonomy-based Model for Expertise Extrapolation", 2010 IEEE Fourth International Conference on Semantic Computing, Carnegie Mellon University, Pittsburgh, PA, September 22-24, 2010.
- [36] B. Aleman-Meza, I. B. Arpinar, M. V. Nural, and A. P. Sheth, "Ranking Documents based on Relevance of Semantic Relationships", 2010 IEEE Fourth International Conference on Semantic Computing, Carnegie Mellon University, Pittsburgh, PA, September 22-24, 2010.
- [37] S. Tartir, I. B. Arpinar, and M. Nural, "Question Answering in Linked Data for Scientific Exploration", Web Science Conference (WebSci10), co-located with World Wide Web Conference, Raleigh, NC, April 26-27, 2010.
- [38] S. Yin, and I. B. Arpinar, "An Ontology-driven Rote Extractor for Pattern Disambiguation", The 48th ACM Southeast Conference, Oxford, MS, April 15-17, 2010.
- [39] K. Goenka, I. B. Arpinar, and M. Nural, "Mobile Web Search Personalization Using Ontological User Profile", The 48th ACM Southeast Conference, Oxford, MS, April 15-17, 2010.
- [40] S. Tartir, B. McKnight, and I. B. Arpinar, "SemanticQA: Web-based Ontology-Driven Question Answering", 24th Annual ACM Symposium on Applied Computing (SAC), Waikiki Beach, Honolulu, Hawaii, March 8-12, 2009.
- [41] R. Thomas, R. Sandhu, E. Bertino, I. B. Arpinar and S. Xu, "Privacy-Preserving Accountable Accuracy Management Systems", ISIPS 2008: Interdisciplinary Studies in Information Privacy and Security, New Brunswick, NJ, May 12, 2008.
- [42] S. Tartir and I. B. Arpinar, "Ontology Evaluation and Ranking using OntoQA", The First IEEE International Conference on Semantic Computing, Irvine, CA, September 17-19, 2007, pp. 185-192.

- [43] D. Cameron, B. Aleman-Meza, and I. B. Arpinar, "Collecting Expertise of Researchers for Finding Relevant Experts in a Peer-Review Setting", First International ExpertFinder Workshop, Berlin, Germany, January 16, 2007, pp. 20-22.
- [44] M. Lewis, D. Cameron, S. Xie, and I. B. Arpinar, "ES3N: A Semantic Approach to Data Management in Sensor Networks", Semantic Sensor Network Workshop, Co-located with ISWC'06, Athens, GA, pp. 1-13, November 5-9, 2006.
- [45] J. Hassell, B. Aleman-Meza, and I. B. Arpinar, "Ontology-Driven Automatic Entity Disambiguation in Unstructured Text", 5th International Semantic Web Conference (ISWC'06), Athens, GA, November 5-9, 2006, pp. 44-57. Acceptance Rate 23%.
- [46] L. Lin, and I. B. Arpinar, "Discovery of Semantic Relations between Web Services", 2006 IEEE International Conference on Web Services (ICWS 2006), Chicago, IL, pp. 357-364, September 18-22, 2006. Acceptance Rate 18%.
- [47] I. B. Arpinar, B. Aleman-Meza, and K. Giriloganathan, "Ontology Quality by Detection of conflicts in Meta-Data", 4th International EON Workshop: Evaluation of Ontologies for the Web, co-located with 15th International world Wide Web Conference, Edinburgh, Scotland, May 23-26, 2006, pp. 13 – 19.
- [48] B. Aleman-Meza, M. Nagarajan, C. Ramakrishnan, L. Ding, P. Kolari, A. Sheth, I. B. Arpinar, A. Joshi, and T. Finin, "Semantic Analytics on Social Networks: Experiences in Addressing the Problem of Conflict of Interest Detection", 15th International World Wide Web Conference, Edinburgh, Scotland, May 23 - May 26, 2006, ACM Press, New York, NY, pp. 407 – 416. Acceptance Rate: 11%, nominated for the best paper award.
- [49] S. Tartir, I. B. Arpinar, M. Moore, A. Sheth, and B. Aleman-Meza, "OntoQA: Metric-Based Ontology Quality Analysis", IEEE Workshop on Knowledge Acquisition from Distributed, Autonomous, Semantically Heterogenous Data and Knowledge Sources, Houston TX, Nov. 27, 2005, pp. 45 – 53.
- [50] M. Perry, M. Janik, C. Ramakrishnan, C. Ibanez, I. B. Arpinar, and A. Sheth, "Peer-to-Peer Discovery of Semantic Associations", Second International Workshop on Peer-to-Peer Knowledge Management (P2PKM), co-located with MobiQuitous 2005, July 17, 2005 - San Diego, CA. (Electronic Version: www.p2pkm.org/accepted.htm)
- [51] L. Lin, and I. B. Arpinar, "Discovering Semantic Relations between Web Services Using Their Pre and Post-conditions", 2005 IEEE International Conference on Services Computing (SCC 2005), Orlando, Florida, July 12-15, 2005, pp. 237 – 238.
- [52] B. Aleman-Meza, C. Halaschek-Wiener, S. Sahoo, A. Sheth, and I.B. Arpinar, "TRAKS: Terrorism Related Assessment Using Knowledge Similarity", IEEE International Conference on Intelligence and Security Informatics (ISI-2005), May 2005 Atlanta, GA, pp. 621 – 622.
- [53] C. Halaschek, B. Aleman-Meza, I. B. Arpinar, and A. Sheth, "Discovering and Ranking Semantic Associations over a Large RDF Metabase", (Demonstration Paper) In Proceedings of 30th International Conference on Very Large Data Bases (VLDB2004), August 30 - September 03, 2004, Toronto, Canada, pp. 1317 – 1320.

- [54] B. Aleman-Meza, A. Sheth, I. B. Arpinar, and C. Halaschek, "Semantic Web Technology Evaluation Ontology (SWETO): A test bed for evaluating tools and benchmarking applications", Intl. WWW Conference, Developers Day, New York, NY, May 2004.
- [55] B. Aleman-Meza, C. Halaschek, A. Sheth, I. B. Arpinar, and G. Sannapareddy, "SWETO: Large-Scale Semantic Web Test-bed", In Proceedings of the 16th International Conference on Software Engineering & Knowledge Engineering (SEKE2004): Workshop on Ontology in Action, Banff, Canada, June 21-24, 2004, pp. 490 – 493.
- [56] I. B. Arpinar, B. Aleman-Meza, R. Zhang, and A. Maduko, "Ontology-Driven Web Services composition", In Proceedings of IEEE Conference on E-Commerce Technology (CEC 2004), San Diego, California, July 6-9, 2004, pp. 146 – 152.
- [57] B. Aleman-Meza, C. Halaschek, B. Arpinar, and A. Sheth, "Context-Aware Semantic Association Ranking", First International Workshop on Semantic Web and Databases, Berlin, Germany, September 2003, pp. 33 – 50.
- [58] I. B. Arpinar, "Demo: Context-Aware Semantic Association Ranking", Presented at the First International Workshop on Semantic Web and Databases, Berlin, Germany, September 7-8, 2003.
- [59] R. Zhang, I. B. Arpinar, and B. Aleman-Meza, "Automatic Composition of Semantic Web Service", Proceedings of the International Conference on Web Services, ICWS'03, Las Vegas, NV, June 23 – 26, 2003, pp. 38 – 41.
- [60] M. Arumugam, A. Sheth, and I.B. Arpinar, "Towards Peer-to-Peer Semantic Web: A Distributed Environment for Sharing Semantic Knowledge on the Web", Intl. Workshop on Real World RDF and Semantic Web Applications, Hawaii, May 2002.
- [61] I. B. Arpinar, J. Miller, and A. P. Sheth, "An Efficient Data Extraction and Storage Utility for XML Documents", 39th ACM Southeast Conference, Athens, GA, March 2001, pp. 293 – 295.
- [62] I. B. Arpinar, S. Arpinar (Nural), U. Halici, and A. Dogac, "Correctness of Workflows in the Presence of Concurrency", NGITS'97, In Proc. of Third International Workshop on Next Generation Information Technologies and Systems, Neve Ilan, Israel, July 1997, pp. 1 – 10.
- [63] U. Halici, I. B. Arpinar, and A. Dogac, "Serializability of Nested Transactions in Multidatabases", ICDT'97, 6th International Conference on Database Theory, Springer Verlag, Delphi, Greece, January 1997, pp. 321 – 335.
- [64] G. Ozhan, A. Dogac, E. Kilic, F. Ozcan, S. Nural, C. Dengi, U. Halici, I. B. Arpinar, P. Koksai, S. Mancuhan, and C. Evrendilek, "Making Oracle7, Sybase and Adabas D Interoperable Through CORBA: MIND Project", In Proc. of European Oracle User Group Conference, Amsterdam, April 1996, pp. 1047 – 1058.
- [65] A. Dogac, C. Dengi, E. Kilic, G. Ozhan, F. Ozcan, S. Nural, C. Evrendilek, U. Halici, I. B. Arpinar, P. Koksai, N. Kesim, and S. Mancuhan, "A Multidatabase System Implementation on CORBA", In Proc. of RIDE'96, 6th Intl. Workshop on Research Issues in Data Engineering, New Orleans, February 1996, pp. 2 – 11.

- [66] A. Dogac, G. Ozhan, E. Kilic, F. Ozcan, S. Nural, S. Mancuhan, C. Dengi, P. Koksai, U. Halici, I. B. Arpinar, C. Evrendilek, and V. Sadjadi, "An Interoperability Infrastructure for Developing Multidatabase Systems", In Proc. of 11th Intl. Symposium on Computer and Information Sciences, Antalya, Turkey, November 1996.
 - [67] A. Dogac, U. Halici, E. Kilic, G. Ozhan, F. Ozcan, S. Nural, C. Dengi, S. Mancuhan, I. B. Arpinar, P. Koksai, and C. Evrendilek, "METU Interoperable Database System", Demo Description, In Proc. of ACM SIGMOD Intl. Conf. on Management of Data, Montreal, June 1996, p. 552.
 - [68] A. Dogac, C. Dengi, E. Kilic, G. Ozhan, F. Ozcan, S. Nural, C. Evrendilek, U. Halici, I. B. Arpinar, P. Koksai, N. Kesim, and S. Mancuhan, "A Multidatabase System Implementation on CORBA", Demo Description, In Proc. of OOPSLA'95, Conf. on Object-Oriented Programming Systems, Languages, and Applications, Austin, Texas, 1995.
 - [69] A. Dogac, M. Altinel, C. Ozkan, I. Durusoy, I. Altintas, and I. B. Arpinar, "Design and Implementation of An Object-Oriented DBMS Kernel", In Proc. of 10th Intl. Symposium on Computer and Information Sciences, Izmir, Turkey, November 1995.
 - [70] A. Dogac, M. Altinel, C. Ozkan, I. Durusoy, I. Altintas, and I. B. Arpinar, "METU Object-Oriented DBMS Kernel", In Proc. of 6th Intl. Conference on Database and Expert Systems Applications, London, September 1995, pp. 14 – 27.
 - [71] A. Dogac, I. B. Arpinar, C. Evrendilek, C. Ozkan, I. Altintas, I. Durusoy, M. Altinel, T. Okay, and Y. Saygin, "METU Object-Oriented Database System", Demo Description, In Proc. of ACM SIGMOD Intl. Conf. on Management of Data, Minneapolis, May 1994. p. 513.
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Technical Reports

- [72] M. Song, J. Miller, and I. B. Arpinar, "RepoX: An XML Repository for Workflow Designs and Specifications", Technical Report #UGA-CS-LSDIS-TR-01-012, University of Georgia, 43 pages, August 2001.
 - [73] J. A. Miller, M. Fan, S. Wu, I. B. Arpinar, A. P. Sheth, and K. J. Kochut, "Security for the METEOR Workflow Management System", UGA-CS-LSDIS Technical Report, University of Georgia, 33 pages, June 1999.
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INVITED PRESENTATIONS

- [1] An Ontology-driven Rote Extractor for Pattern Disambiguation, 48th ACM Southeast Conference Oxford, MS, 2010.
 - [2] Ontology-Driven Automatic Entity Disambiguation in Unstructured Text, 5th International Semantic Web Conference (ISWC'06), Athens, GA, 2006.
 - [3] Discovery of Semantic Relations between Web Services, 2006 IEEE International Conference on Web Services (ICWS'06), Chicago, IL, 2006.
 - [4] Semantic Web and Database Conference (panel presentation), 3rd International Workshop on Semantic Web and Databases (SWDB'06), Atlanta, GA, 2006.
 - [5] An Efficient Data Extraction and Storage Utility for XML Documents, 39th ACM Southeast Conference, Athens, GA, 2001.
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CREATIVE CONTRIBUTIONS

Major projects and software systems developed or contributed

- [1] Web-scale Collective Argumentation using Semantic Web and Crowdsourcing
 - [2] Semantic-enabled Proactive and Targeted Dissemination of New Medical Knowledge
 - [3] SemanticQA: Web-based Ontology-Driven Question Answering
 - [4] OntoQA: Ontology Quality Analysis and Ranking
 - [5] SemGrid: Semantic Discovery on Adaptive Services Grid: lstdis.cs.uga.edu/projects/semgrid/
 - [6] An Ontological Approach to Financial Analysis and Monitoring
 - [7] Ontological Approach to Assessing Intelligence Analyst Need-to-Know
 - [8] Discovering Complex Relationships in Semantic Web (SemDIS): lstdis.cs.uga.edu/projects/semdis/
 - [9] Semantic Association Identification & Knowledge Discovery for National Security Applications (PISTA): lstdis.cs.uga.edu/projects/sai/
 - [10] Semantic Web Services and Processes (METEOR-S): lstdis.cs.uga.edu/projects/meteor-s/
 - [11] Collective Knowledge Composition in a P2P Network
 - [12] XML Process Repository (REPOX)
 - [13] Protein-Protein Interaction Mapping Workflow
 - [14] METEOR Workflow Management System
 - [15] Field Artillery Tactical Data System (TAIKS)
 - [16] Turkish Mobile Radar Complexes (TMRC)
 - [17] METU Workflow Management System (METUFlow)
 - [18] METU Interoperable DBMS (MIND)
 - [19] METU Object-Oriented DBMS (MOOD)
 - [20] A Reference Query Language to Utilize Network Information Services
-

MAJOR PROFESSOR OF

PhD Students

- [1] Xin Wang, in progress.
 - [2] Samir Tartir, "Ontology-Driven Question Answering and Ontology Quality Evaluation", August 2009.
 - [3] Boanerges Aleman-Meza, "Ranking Documents based on Relevance of Semantic Relationships", August 2007.
-

MS Students

- [4] Kitae Myong (Co-adviser: J. Miller), in progress.

- [5] Jianan Chu, in progress.
 - [6] Priya Wadhwa, "Semantic Matchmaking and Ranking of Medical Literature", February 2012.
 - [7] Asmita Rahman, "Semantic Retrieval and Distribution of Relevant Medical Knowledge", December 2011.
 - [8] Kapil Goenka, "Mobile Web Search Personalization Using Ontological Profile", December 2009.
 - [9] Sheng Yin, "A Pattern-Based Annotation Approach: An Ontology-Driven Rote Extractor for Pattern Disambiguation", December 2009.
 - [10] Bobby McKnight, "From a Genome Database to a Semantic Knowledge Base", August 2008.
 - [11] Delroy Cameron, "SEMEF: A Taxonomy-based Discovery of Experts, Expertise and Collaboration Networks", November 2007.
 - [12] David Hooge, "Extracting and Indexing of Triplet-Based Knowledge Using Natural Language Processing", August 2007.
 - [13] Sheron Decker, "Detection of Bursts and Emerging Trends Towards Identification of Researchers at the Early Stages of Trends", August 2007.
 - [14] Joseph E. Hassell, IV, "Ontology-Driven Automatic Entity Disambiguation in Unstructured Text", June 2006.
 - [15] Lin Lin, "Discovering Semantic Relations between Web Services using Their Pre and Post-Conditions", May 2005.
 - [16] Jaymin Kessler (Co-adviser: K. Rasheed), "Using Genetic Algorithms to Optimize Superpeer Structure in Peer to Peer Networks", December 2004.
 - [17] Karthikeyan Giriloganathan, "Semantic Conflict Detection in Meta-Data – A Rule Based Approach", May 2004.
 - [18] Christian Halaschek (Co-adviser: A. Sheth), "A Flexible Approach for Ranking Complex Relationships on the Semantic Web", May 2004.
 - [19] Ruoyan Zhang, "Ontology-Driven Web Services Composition Techniques", May 2004.
 - [20] Mullai Shanmuhan, "Semanta: An Ontology Driven Semantic Link Analysis Framework", May 2003.
-

THESIS COMMITTEE MEMBERSHIPS

- [1] PhD (CS): 5
 - [2] PhD (AI): 1
 - [3] PhD (Geology): 1
 - [4] PhD (Forestry): 1
 - [5] MS (CS): 19
-

TEACHING

S'12, S'11, S'10, F'08, S'07, S'06, S'05, S'04	CSCI8380 Advanced Topics in Information Systems *
F'99	CSCI8350 Enterprise Integration ⁺
S'02	CSCI6900 Networked Information Systems *
F'03	CSCI6370 Database Management
S'03	CSCI6345 Internet Information Systems [^]
S'04	CSCI4900/6900 Transaction & Query Processing Techniques *
F'09, S'08, F'07, S'06, F'05, S'02	CSCI4370/6370 Database Management
F'11, F'10, F'08, F'06, F'02, S'00	CSCI4370 Database Management
F'07, F'04, S'10	CSCI2720 Data Structures
S'11, S'09, F'10	CSCI1730 Systems Programming

* Introduced by Dr. Arpinar.

[^] Master of Internet Technology course.

⁺ Taught during post-doctoral study (team-teaching with Dr. Sheth).

PROFESSIONAL ACTIVITIES

Professional Society Memberships

2002 – present Member of IEEE Computer Society

1999 – present Member of Association for Computing Machinery (ACM)

1999 – present Member of SIGMOD

Conference Organizations

2009 2nd Annual Workshop for Young Scholars, Southern Polytechnic State Univ., Atlanta, GA.

2008 1st Annual Workshop for Young Scholars, University of Georgia, Athens, GA.

2006 5th International Semantic Web Conference (ISWC), Athens, GA – the largest semantic web event (over 500 attendees).

2003 Homeland Security Workshop, funded by UCGIS, Amicalola Falls State Park, GA (Co-organizer w. A. Sheth).

1993 International Summer School: NATO/ASI Summer School on Object Oriented DBMSs, Kusadasi, Izmir, Turkey (Primary organizer: A. Dogac).

Program Committee Chair & Session Organizations

2007 Session Organizer: Semantic Web, 1st Intl. Conference on Semantic Computing, Irvine, CA.

2006 Session Chair: Business Process Modeling, International Conference on Web Services, Chicago, IL.

2006 Program Committee Co-Chair, Panel Organizer & Session Chair: 3rd International Workshop on Semantic Web and Databases (SWDB) co-located with ICDE, Atlanta, GA (General Chair: A. Sheth;

PC Co-Chair: T. Ozsu).

2003 Web Chair: IEEE International Conference On Electronic Commerce (CEC), Newport Beach, CA.

Program Committee Memberships

2012 9th Intl. Conference on Mobile Web Information Systems (MobiWIS), Niagara Falls, Canada.
4th Intl. Conferences on Advanced Service Computing (SERVICE COMPUTATION), Nice, France.
8th Intl. Conference on Web Information Systems and Technologies (WEBIST), Porto, Portugal.
8th Intl. Conference on Autonomic and Autonomous Systems (ICAS), St. Maarten, Netherlands Antilles.
4th Intl. Conference on Resource Intensive Applications and Services (INTENSIVE), St. Maarten, Netherlands Antilles.

2011 4th IEEE Intl. Symposium on Innovation in Information and Communication Technology (ISIICT), Amman, Jordan.
3rd Intl. Conferences on Advanced Service Computing (SERVICE COMPUTATION), Rome, Italy.
8th Intl. Conference on Mobile Web Information Systems (MobiWIS), Niagara Falls, Canada.
3rd Intl. Conference on Resource Intensive Applications and Services (INTENSIVE), Venice.
7th Intl. Conference on Web Information Systems and Technologies (WEBIST), Noorrdwijkerhout, The Netherlands.

2010 2nd Intl. Conferences on Advanced Service Computing (SERVICE COMPUTATION), Lisbon, Portugal.
8th ACIS Intl. Conference on Software Engineering Research, Management and Applications (SERA), Montreal, Canada.
6th Intl. Conference on Web Information Systems and Technologies (WEBIST), Valencia, Spain.
2nd Intl. Conference on Resource Intensive Applications and Services (INTENSIVE), Cancun, Mexico.

2009 1st Intl. Conference on Intensive Applications and Services (INTENSIVE), Valencia, Spain.

2008 3rd Asian Semantic Web Conference (ASWC), Thailand.
3rd Asian Semantic Web Conference (ASWC), Demo Track, Thailand.
2nd IEEE Conference on Semantic Computing (ICSC), Santa Clara, CA.
2nd Workshop on Web Service Composition and Adaptation (WSCA), Honolulu, Hawaii.

2007 6th Intl. Semantic Web Conference (ISWC), Busan, Korea.
IEEE/WIC/ACM Intl. Conference on Web Intelligence (WI), Silicon Valley, CA.

2006 Web Information Systems Engineering Conference (WISE), Wuhan, China.
AAAI Fall Symp. on Semantic Web for Collaborative Knowledge Acquisition, Washington, DC.
22nd Intl. Conference on Data Engineering (ICDE), Atlanta, GA.
21st Intl. Symposium on Computer and Information Sciences (ISCIS), Istanbul, Turkey.

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- 2005 2nd Indian Intl. Conference on Artificial Intelligence (IICAI), Pune, India.
IEEE/WIC/ACM Intl. Conference on Intelligent Agent Technology (IAT), Compiègne University of Technology, France.
IEEE/WIC/ACM Intl. Conference on Web Intelligence (WI), Compiègne University of Technology, France.
20th Intl. Symposium on Computer and Information Sciences (ISCIS), Istanbul, Turkey.
-
- 2004 IASTED Intl. Conference on Knowledge Sharing and Collaborative Engineering (KSCE), St. Thomas, US Virgin Islands.
5th Annual Intl. Conference on Object-Oriented and Internet-based Technologies, Concepts, and Applications for a Networked World, Erfurt, Germany.
IEEE/WIC/ACM Intl. Conference on Intelligent Agent Technology (IAT), Beijing, China.
IEEE/WIC/ACM Intl. Conference on Web Intelligence (WI), Beijing, China.
2nd Workshop on Semantic in Peer-to-Peer and Grid Computing at the 13th Intl. World Wide Web Conference, New York, NY.
11th Intl. Conference on Artificial Intelligence: Methodology, Systems, and Applications (AIMSA), Varna, Bulgaria.
-
- 2003 IASTED Intl. Conference on Information and Knowledge Sharing (IKS), Scottsdale, AZ.
2nd Intl. Semantic Web Conference (ISWC), Sanibel-Captiva Islands, FL.
-
- 1999 14th Intl. Symposium on Computer and Information Sciences (ISCIS), Izmir, Turkey.
-

Reviewer

- [1] NSF Expert Reviewer (2010)
- [2] NSF Panel Reviewer: National Science Foundation grant proposal review panels on Data Management & Cyber Trust
- [3] International Journal On Semantic Web and Information Systems (2012)
- [4] 8th IEEE International Conference on Web Services, Work-in-Progress Track (2010).
- [5] International Journal on Semantic Web and Information Systems (2009)
- [6] IEEE Transactions on Data and Knowledge Engineering (TKDE) (2009, 2010)
- [7] Journal of Web Semantics (2009, 2010)
- [8] AAAI AI and the Web Track
- [9] ACM TOIT (ACM Transactions on Internet Technology), Special Issue on Semantic Web Services: Issues, Solutions, and Applications
- [10] Transactions in GIS, Special Issue on the Geospatial Semantic Web
- [11] IEEE Transactions on Parallel and Distributed Systems
- [12] Journal of Intelligent Systems
- [13] Data and Knowledge Engineering Journal

- [14] Encyclopedia of Database Technologies and Applications
- [15] IEEE Internet Computing
- [16] IEEE Transactions on Systems, Man, and Cybernetics
- [17] IEICE Transactions on Information and Systems
- [18] 2nd Intl. Semantic Web Conference (ISWC2003), Semantic Integration Workshop
- [19] ETRI Journal
- [20] Workflow Management, Models, Methods and Systems (Book), The MIT Press (2002)
- [21] ACM Computing Surveys
- [22] IEEE Computer (2005)
- [23] Journal on Data Semantics, Special Issue on Emergent Semantics
- [24] World Wide Web Journal
- [25] International Conference on Web Services (2005)

External referee of several major database conferences and workshops, including SIGMOD, VLDB, ICDE, EDBT, COOPIS, and NGITS. Since 1993, reviewer of some major database journals, including Journal of DAPD, ACM Transactions on Database Systems etc.

UNIVERSITY & DEPARTMENTAL SERVICE

- 2011 – present Member, Research Events Committee
 - 2011 – present Member, Equipment Committee
 - 2011 – present Member, Awards Committee
 - 2011 – present, Library Liaison
 - 2002 – 2008
 - 2009 – present Member, Graduate Student Admission Committee
 - 2007 – present Member, Tenured Faculty Committee
 - 2004 – present Regular Graduate Faculty (provisional member: 2001 – 2004)
 - 2002 – present Member, Master of Internet Technology Faculty
 - 2011 Young Dawgs Supervisor
 - 2011 – 2010 Member, Research Day Organizing Committee
 - 2010 – 2011 Member, External Affairs & Advisory Board Committee
 - 2010 Member, Post-tenure Review Committee
 - 2008 – 2010 Chair, Web Site Development Committee
 - 2002 – 2008 Member, Web Site Development Committee
 - 2002 – 2008 Member, Policy Committee
 - 2002 Member, Faculty Recruiting Committee
-

COMMUNITY SERVICE

2012 – present Member, Athens Academy Science, Technology, and Mathematics Task Force,
www.athensacademy.org

2008 – present Board Member, The Association for Academic Advancement (ASACAD), www.asacad.org

2006 – present Advisory Board Member, Interfaith Cultural Organization (IFCO)
www.interfaithathens.org

2008 – present Advisory Board Member, Intellectual Dialogue & Educational Advancement (IDEA)
Society, www.theideasociety.org

2009 – 2011 President, Board of Trustees, Oconee School of Math and Science (OSMS)
