



Large Scale Distributed Information Systems Lab
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The University of Georgia

Amit P. Sheth

Research Areas

Education

Academic Positions:

Entrepreneurship and Industry Employment

Keynote and Plenary Talks

Conference and Workshop Invited Talks

Chief Guest/Speaker at Special Events

Publications

Books Authored or Co-Authored

Books Edited and Co-Edited

Editorship of International Conference and Workshop Proceedings

Editorship of Special Issues of Journals and Technical Society Magazines

Chapters in Books

Journal Papers (Refereed)

Conference Publications (Referred)

Conference Publications (Invited)

Invited or Other Journal Publications

Workshop and Symposium Publications (Refereed)

Other Publications: Conference Proceedings (refereed or invited short papers/abstracts)

Other Publications: Articles in informal proceedings or non-referred papers

Creative contributions other than formal publications (since 1994)

Interviews and Profiles

Technology Licensing, Commercialization and Deployed Systems

Research Funding / Grants and contracts received as the PI (since 1994)

Recognition, outstanding achievements and honorary appointments

Professional or Scholarly Activities

Editorship

Tutorial Presentations at International Conferences

Industry Courses and Workshops

Panel Presentations at Conferences and Workshops

Invited and Colloquia Talks

Technical Meetings (Conferences, Workshop) Organization

Program Committee Member for the International Conferences and Workshops

Other Services (Sessions, Reviews, Funding Panels, Societies)

Curriculum Development (Initiatives and New Courses)

Instruction and Academic Services (since 1994)

Research Areas

Semantic Web and Semantic Applications (knowledge discovery and intermediation, multi-ontology and complex relations, search/directory/personalization, etc.), Management of Rich Media Content and Information Sources, Digital Libraries and Information Interoperability (incl. Federated Information Systems, Multi-agent and information brokering architectures, ontology and metadata management), Work Coordination and Collaboration Systems (including Dynamic Trading Processes in E-Commerce, Multi-organization Business Processes and Workflow Management, Web-based Teleconsulting involving Asynchronous and Synchronous Collaboration); Applications in Financial, Healthcare, Genetics, Intelligence, GIS and National Security.

Education

Ph.D.	1985	Ohio State University	Computer & Information Science
MS	1983	Ohio State University	Computer & Information Science
BE (Hons)	1981	Birla Institute of Tech. & Science Pilani, India	Electrical & Electronics Engineering

Academic Positions:

1994 – ...	Director, Large Scale Distributed Information Systems (LSDIS) Lab, Athens, GA.
1998 – ...	Professor, Department of Computer Science, University of Georgia, Athens, GA (on partial sabbatical during 2000 and 2001). Member-Faculty of Engineering, 2002 - present.
1994 – 1998	Associate Professor, Department of Computer Science, University of Georgia, Athens, GA.
1995 – present	Adjunct Associate Professor, College of Computing, Georgia Institute of Technology, Atlanta, GA.
May 93 – June 93	Visiting Faculty, Institute of Information Systems, ETH (Swiss Federal Institute of Technology), Zurich, Switzerland.
1983 – 1984	Graduate Research Associate, Computer & Information Science Dept., Ohio State University.
1981 – 1983	Graduate Teaching Associate, Computer & Information Science Dept., Ohio State University.

Entrepreneurship and Industry Employment

1999—present	Founder, Chairman and CEO , Taalee Inc., [Taalee was acquired by Voquette Inc. in June 2001. Co-founder/CTO (part time) of Voquette/ Semagix there after.]
1997—1999	Founder and President, Infocosm Inc., S-Corporation, Georgia.
1989 – 1994	Member of Technical Staff, Systems Principles & Research, Morristown, NJ and Computer Systems Integration, Bell Communications Research. Bell Communications Research (Bellcore) Inc., Piscataway, NJ,
1987 - 1989	Staff Research Scientist, UNISYS West Coast Research Center, (formerly SDC), Santa Monica, CA.
1985 - 1987	Principal Research Scientist, Computer Sciences Center, Honeywell, Minneapolis, MN.

Keynote and Plenary/Invited Talks at International Conferences/Workshops and Significant National/International Meetings

1. "[Relationships at the Heart of Semantic Web: Modeling, Discovering, Validating and Exploiting Complex Semantic Relationship](#), Keynote at 29th Annual Conference on Current Trends in Theory and Practice of Informatics ([SOFSEM 2002](#)), Czech Republic, November 25, 2002.
2. "Semantic Content Management for Enterprises and National Security," Keynote Address at the [Content and Semantic-based Information Retrieval](#) –at the 6th World Multi-conference on Systemics, Cybernetics, and Informatics (SCI 2002), Orlando, FL, USA, July 14, 2002.
3. "[Content Management, Metadata, and Semantic Web](#)," Inaugural *Keynote address*, [NetObjectDAYS](#), Erfurt, Germany, September 11, 2001.
4. "[Semantic Web and Information Brokering: Opportunities, Early Commercialization, and Challenges](#)," *Keynote Address* at the [Workshop on Semantic Web: Models, Architectures and Management](#), Lisbon, September 21, 2000
5. "Information Brokering in Digital Media," *Keynote Address* at the 3rd Intl. Workshop on Cooperative Information Agents CIA-99, Uppsala, Sweden, July 31 - August 2, 1999.
6. "Semantic Interoperability and Information Brokering in Global Information Systems," *Keynote Address* at [3rd IEEE Metadata Conference](#), Bethesda, MD, April 6-7, 1999.
7. "Workflow Process management and Enterprise Application Integration in Healthcare," *Keynote Address*, [IEEE Workshop on Enterprise Networking and Computing in Healthcare Industry](#) (Healthcom 99), Sydney Australia, January 11, 1999.
8. "Real-world Relevant Research Challenges in Workflow," *Keynote Address* at the EDBT Workshop on Workflow Management Systems, Valencia, Spain, March 27-28, 1998.
9. "Pragmatics Driven Research Issues in Data and Process Integrity in Enterprises", *Keynote Address* at IFIP WG 11.5 Conference on Integrity and Control in Information Systems, Zurich, Switzerland, December 4 - 5, 1997.
10. "Search, Access, Analysis and Fusion of Heterogeneous Information Sources: The InfoQuilt Approach", *Keynote Address* at the International Conference on Interoperating Geographical Information Systems (Interop '97), Santa Barbara, December 3, 1997.
11. "From Contemporary Workflow Process Automation to Adaptive and Dynamic Work Activity Coordination and Collaboration", *Keynote Address* at the Workshop on Workflows in Scientific and Engineering applications, Toulouse, France, September 1997.
12. "Schemata for Interoperable Database Systems," and "So Far (Schematically) yet So Near (Semantically)," *Keynote Address* at the IFIP DS-5 Conference on Semantics of Interoperable Database Systems, Lorne, Australia, November 1992.

Conference and Workshop Invited Talks

13. "Database and Information Systems Research for Semantic Web and Enterprises: Review of the Amicalola Workshop," and "Snapshot of the Semantic Web Commercial State of the Art," Invited talk at the Science on the Semantic Web, Building a New Generation of Environmental Information Systems, Rutgers University, Newark, NJ, October 24, 2002.
14. "Process Composition: Quality of Service Specification Semantics, and Adaptation," invited talk at EI3-IC workshop on *Interoperability of Business Processes and Enterprise Models*, Gaithersburg, February 6-8, 2002.

15. "Semantic Content Annotation and Applications: Semantic Web Now and Challenges Ahead," *Invited Talk* at 2001 IRC International Conference on Internet Information Retrieval, Seoul, S. Korea, October 29, 2001.
16. "On Supporting Complex Relationships and Knowledge Discovery in the Semantic Web," Plenary *Invited talk* at the [2001 BISC International Workshop on Fuzzy Logic and the Internet: New Directions in Enhancing the Power of the Internet](#), Berkeley CA, August 16, 2001.
17. "Information Scapes: A Paradigm for Knowledge Discovery in Semantic Web," Inaugural Session *Invited Talk* at the [IJCAI-2001 Workshop on Knowledge Discovery from Distributed, Dynamic, Heterogeneous, Autonomous Data and Knowledge Sources](#), Seattle, WA, August 6, 2001.
18. "Realizing Semantic Information Brokering and Semantic Web" *Invited Talk* at Perspectives on Agents: Theories and Technologies Seminar Series, Trento, Italy, February-June 2000. University of Trento, April 27, 2000.
19. "[Workflow and Process Automation in Information Systems: A Proposal for a Multidisciplinary Research agenda and Follow-up](#)," *Invited Talk* at the NSF Invitational Workshop on Distributed Information, Computation, and Process Management for Scientific and Engineering Environments, Virginia, May 15-16, 1998.
20. "From Process Modeling to Workflow Automation," *invited talk*, National Institute of Standards and Technology sponsored Process Information Technology Workshop, March 13, 1998, Gaithersburg, MD.
21. "Workflow Applications to Research Agenda: Scalable and Dynamic Work Coordination and Collaboration Systems," *invited talk* (with K Kochut) at the NATO Workshop on Advances in Workflow Management Systems and Interoperability. Istanbul, Turkey, August 1997.
22. "Overview of Workflow Research and Technology," *invited talk* at the DARPA Collective Actions Tools workshop, March 1996.
23. "From Data Dirt Roads to Infocosm", *inaugural session invited talk*, 7th International Conference on Management of Data, Pune, India, December 1995

Chief Guest/Speaker at Special Events

22. "An Overview of Workflow Management: From Process Modeling to Workflow Automation," CERN-wide Computing Colloquium, CERN, Geneva, France, March 31, 1998.
23. "Workflow Management: Technology, Experiences and Research," special university-industry seminar, Universidade Nove De Lisboa, Portugal, March 25, 1998.
24. "Information (Super) Highway: New Opportunities for Global Competitive Advantage for Developing Countries", city-wide talk organized by Ahmedabad Management Association, India, August 26, 1996.
25. "Multidatabase Systems: Research and Reality," invited guest speaker at the 1st Symposium of the Tsukuba Advanced Research Alliance (TARA), March 4, 1995.
26. "Information By-Ways, Lanes, and Superhighway," city-wide talk organized by the Ahmedabad Management Association, Ahmedabad, India, December 1994.
27. Special Guest and speaker at the UBILAB Workshop on Data Management Scenarios at Union Bank of Switzerland, Zurich, April 28, 1993.

28. Primary speaker for the Workshop on Federated Database Systems (for the members of CRAI consortium), CRAI, Rende, Italy, March 23–24, 1992. Presented and led discussions for 21 hours.

Publications

Books Authored or Co-Authored

1. [V. Kashyap and A. Sheth, Information Brokering Across Heterogeneous Digital Data, Kluwer Academic Publishers, August 2000, 248 pages.](#)

Books Edited and Co-Edited

2. A. Sheth and W. Klas, Eds., [Multimedia Data Management: Using Metadata to Integrated and Apply Digital Data](#), McGraw Hill, 1998, 385 pages.
3. A. Elmagarmid, M. Rusinkiewicz, and A. Sheth, Eds., [Heterogeneous Distributed Database Systems](#), Morgan Kaufmann Publishers, CA. 1998, 400 pages.
4. A. Dogac, L. Kalinechenko, T. Ozsu and A. Sheth, Eds. [Workflow Management Systems and Interoperability](#), NATO ASI Series F, Vol. 164, Springer Verlag, 1998, 524 pages.

Editorship of International Conference and Workshop Proceedings

5. A. Sheth and R. Meersman, Eds., Proceedings of the NSF-EU Workshop on Database and Information Systems Research for Semantic Web and Enterprises, April 3-5, 2002, 111 pages.
6. S. Staab, S. Decker, D. Fensel and A. Sheth, Eds., Proceedings of the Second International Workshop on the Semantic Web – SemWeb’2001, Hongkong, May 1, 2001, 93 pages.
7. J. Hoppenbrouwers, T. Lima, M. Papazoglou, A. Sheth, Proceedings of the IEEE Advances in Digital Libraries 2000 ADL2000), IEEE Computer Society Press, May 22-24, 2000 241 pages.
8. A. Sheth, Ed., Proceedings for the NSF Workshop on Workflow and Process Automation in Information Systems, Athens, GA, May 1996, 164 pages.
9. H. Korth and A. Sheth, Eds., Proceedings of the 3rd Intl. Conference on Parallel and Distributed Information Systems, IEEE Computer Society Press, September 1994, 272 pages.
10. H-J. Schek, A. Sheth, and B. Czjedo, Eds., Proceedings of the 1st RIDE Intl. Workshop on interoperability in Multidatabase Systems, H. Vienna, IEEE Comp. Sc. Press, April 1993, 279 pages.
11. Y. Kambayashi, M. Rusinkiewicz, and A. Sheth, Eds., Proceeding of the 1st Intl. Workshop on Interoperability in Multidatabase Systems Kyoto, Japan, IEEE Computer Society Press, April 1991, 370 pages.
12. A. Sheth, Ed., Proceedings of the Workshop on Management of Interdependent Data in Bellcore and BCCS, Bellcore, September 1990.

Editorship of Special Issues of Journals and Technical Society Magazines

13. R. Meersman and A. Sheth, Eds., Semantic Web, Database Management and Information Systems, Special Issue of SIGMOD Record, 32 (4), December 2002.

14. A. Ouksel, and A. Sheth, Semantic Interoperability in Global Information Systems, Special issue of ACM SIGMOD Record, 29 (1), March 1999.
15. H. Korth and A. Sheth, Eds., Special Issue on Selected Systems papers based on the 3rd Intl. Conf. on Parallel and Distributed Information Systems, Very Large Data Bases, 5 (1), January 1996, pp. 1-63.
16. W. Klas and A. Sheth, Eds., Metadata for Digital Media, Special issue of SIGMOD Record, 24 (4), December 1994, pp. 19-71.
17. A. Sheth, Ed., Semantic Issues in Multidatabase Systems, Special issue of SIGMOD Record, 20 (4), December 1991, pp. 5-80.

Chapters in Books

18. Amit Sheth, I. Budak Arpinar, and Vipul Kashyap, "Relationships at the Heart of Semantic Web: Modeling, Discovering, and Exploiting Complex Semantic Relationships," Enhanceing the Power of the Internet Studies in Fuzziness and Soft Computing, M. Nikraves, B. Azvin, R. Yager and L. Zadeh, Springer-Verlag, 2003 (in print).
19. B. Hammond, A. Sheth, and K. Kochut, Semantic Enhancement Engine: A Modular Document Enhancement Platform for Semantic Applications over Heterogeneous Content, in Real World Semantic Web Applications, V. Kashyap and L. Shklar, Eds., IOS Press, December 2002, pp. 29-49.
20. J. Cardoso, A. Sheth and J. Miller, Workflow Quality of Service, Enterprise Inter- and Intra-Organisational Integration - Building International Consensus, Kluwer Academic Publishers, 2002, pp. 303-312.
21. S. Thacker, A. Sheth and S. Patel, "Complex Relationships for the Semantic Web," Creating the Semantic Web," *Spinning the Semantic Web*, D. Fensel, J. Hendler, H. Liebermann, and W. Wahlster (eds.), MIT Press, 2002.
22. A. Sheth, K. Kochut, "Workflow Applications to Research Agenda: Scalable and Dynamic Work Coordination and Collaboration Systems, in Workflow Management and Interoperability, A. Dogac et al Eds., Springer Verlag, 1999, pp. 35-59.
23. J. Miller, A. Sheth and K. Kochut, "Perspectives in Modeling: Simulation, Database and Workflow," *Conceptual Modeling: Current Issues and Future Directions*, Selected Papers from the Workshop on Conceptual Modeling, Lecture Notes in Computer Science (LNCS), Vol. 1565, P. Chen, J. Akoka, H. Kangassalo, B. Thalheim, Editors, (April 1999) pp. 154-167. Springer Verlag, Berlin-Heidelberg.
24. A. Sheth, "Changing Focus on Interoperability in Information Systems: From System, Syntax, Structure to Semantics", in Interoperating Geographic Information Systems. M. F. Goodchild, M. J. Egenhofer, R. Fegeas, and C. A. Kottman (eds.), Kluwer, Academic Publishers, 1999, pp. 5-30.
25. V. Kashyap and A. Sheth, "Semantic Similarities between Objects in Multiple Databases," in Heterogeneous Distributed Database Systems, A. Elmagarmid et al (eds), Morgan Kaufmann Publishers, CA. 1998, pp. 57-89.
26. G. Karabatis, M. Rusinkiewicz, and A. Sheth, "Interdependent Database Systems", in Heterogeneous Distributed Database Systems, A. Elmagarmid et al (eds), Morgan Kaufmann Publishers, CA. 1998, pp. 217-252.

27. V. Kashyap and A. Sheth, "Semantic Heterogeneity in Global Information Systems: The Role of Metadata, Context and Ontologies", in Cooperative Information Systems: Current Trends and Directions, M. Papazoglou and G. Schlageter (eds.), Academic Press, 1998, pp. 139-178.
28. S. Boll, W. Klas, and A. Sheth, "Overview on Using Metadata to Manage Multimedia Data", in Multimedia Data Management: Using Metadata to Integrated and Apply Digital Data, A. Sheth and W. Klas (Eds.), McGraw Hill, 1998, pp. 1-23.
29. E. Mena, V. Kashyap, A. Illarramendi and A. Sheth, [*"Domain Specific Ontologies for Semantic Information Brokering on the Global Information Infrastructure"*](#), International Conference on Formal Ontologies in Information Systems (FOIS'98), Trento (Italy), June 1998, pp. 269-283.
30. A. Sheth, "Managing with Less than Absolute Integrity", Integrity and Internal control in Information Systems, Vol. 1, S. Jajodia, W. List, G. McGregor, L. Strous [Eds], Chapman & Hall, December 1997, pp. 195-202.
31. D. Worah and A. Sheth, "Transactions in Transactional Workflows," Advanced Transaction models and Architectures, S. Jajodia and L. Kerschberg [Eds.], Kluwer Academic Publishers, 1997, pp. 3-34.
32. A. Sheth and K. Kochut, "Workflow Applications to Research Agenda: Scalable and Dynamic Work Coordination and Collaboration Systems," Workflow Management Systems and Interoperability, A. Dogac et al [Eds], Springer Verlag, 1998, pp. 35-60. [Earlier version appears in the Proceedings of NATO Advanced Study Institute Proceedings, pp. 34-59, August 1997.]
33. A. Sheth, "Data Semantics: What, Where, and How?", in Data Semantics (IFIP Transactions), R. Meersman and L. Mark, Eds., Chapman and Hall, London, 1996, pp. 601-610.
34. V. Kashyap, K. Shah, and A. Sheth, "Metadata for building the MultiMedia Patch Quilt," in Multimedia Database Systems: Issues and Research Directions, S. Jajodia and V.S. Subrahmaniun, Eds., Springer-Verlag, 1995, pp. 297-323.
35. A. Sheth, C. Wood, and V. Kashyap, "Q-Data: Using Deductive Database Technology to Improve Data Quality," in Applications of Deductive Databases R. Ramakrishnan, Ed., Kluwer Academic Press, 1994, pp. 23-56.
36. M. Rusinidewicz and A. Sheth, "Specification and Execution of Transactional Workflows," in the Modern Database Systems: The Object Model, Interoperability, and Beyond, W. Kim, Ed., Addison-Wesley, 1994, pp. 592-620.
37. G. Karabatis, M. Rusinkiewicz, and A. Sheth, "Issues in Managing Interdependent Data: Correctness and Enforcement of Specification," in Advanced Database Systems: Lecture Notes in Computer Science #759, N. Adam, B. Bhargava, Eds, Springer-Verlag, 1993.
38. A. Sheth, M. Rusinkiewicz, and G. Karabatis, "Using Polytransactions to Manage Interdependent Data," in Database Transaction Models for Advanced Applications A. Elmagamiid, Ed., Morgan Kaufmann, Publishers, 1992.

Journal Papers (Refereed)

39. J. Cardoso, R. P. Bostrom and A. Sheth, Workflow Management Systems and ERP Systems: Differences, Commonalities, and Applications, Information Technology and Management Journal, Kluwer Publishers, to appear 2003.

40. S. Chadrsekaran, J. A. 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)*, to appear, 2003.
41. K. Kochut, J. Arnold, A. Sheth, J. Miller, I.B. Arpinar, J. Cardoso, IntelliGEN: A Distributed Workflow System for Discovering Protein-Protein Interactions, Distributed and Parallel Databases, An International Journal, Special Issue on Bioinformatics, 13 (1), January, 2003.
42. A. Sheth, S. Thacker and S. Patel, Complex Relationship and Knowledge Discovery Support in the InfoQuilt System, VLDB Journal, September 25, 2002 (on-line publication; ISSN: 0949-877X), 12 (1) 2003 (print publication; ISSN: 1060-8888).
43. A. Sheth, C. Bertram, D. Avant, B. Hammond, K. Kochut, Y. Warke, Semantic Content Management for Enterprises and the Web, IEEE Internet Computing, July/August 2002, pp. 80-87.
44. S. Wu, A. Sheth, J. Miller, Z. Luo, "Authorization and Access Control of Application Data in Workflow Systems," Journal of Intelligent Information Systems, 18 (1), Kluwer Academic Publishers, January 2002, pp. 71-94.
45. D. Hall, J. Miller, J. Arnold, K. Kochut, A. Sheth and M. Weise, "Using Workflow to Build an Information Management System for a Geographically Distributed Genome Sequencing Initiative," *Genomics of Plants and Fungi*, R.A. Prade and H.J. Bohner, Editors. pp. -. Marcel Dekker, Inc. New York, NY, 2001.
46. E. Mena, V. Kashyap, A. Illarramendi, A. Sheth, "Imprecise Answers in Distributed Environments: Estimation of Information Loss for Multi--Ontology based Query Processing" the International Journal of Cooperative Information Systems (IJCIS), 9 (4), 2000, 403-425.
47. E. Mena, A. Illarramendi, V. Kashyap and A. Sheth, "OBSERVER: An Approach for Query Processing in Global Information Systems based on Interoperation across Pre-existing Ontologies", Distributed and Parallel Databases (DAPD), Vol. 8, No. 2, April 2000, pp. 223-271.
48. Z. Luo, A. Sheth, K. Kochut, and J. Miller, "Exception Handling in Workflow Systems", Applied Intelligence: the International Journal of AI, Neural Networks, and Complex Problem-Solving Technologies, Vol. 13, No. 2, September/October, 2000, pp.125-147.
49. K. Shah and A. Sheth, "InfoHarness: An Information Integration Platform for Managing Distributed, Heterogeneous Information," IEEE Internet Computing, November-December 1999, p. 18-28.
50. A. Sheth, W. Aalst, and I. Arpinar, "Processes Driving the Networked Economy," IEEE Concurrency, 7 (3), July-September 1999, pp. 18-31.
51. J. Miller, D. Palaniswami, A. Sheth, K. Kochut, H. Singh "WebWork: METEOR's Web-based Workflow Management System", Journal of Intelligent Information Systems, (JIIS) Vol. 10 (2), March 1998, pp. 186-215.
52. M. Singh, P. Cannata, M. Huhns, N. Jacobs, T. Ksiezyk, K. Ong, A. Sheth, C. Tomlinson, D. Woelk, "The Carnot Heterogeneous Database Project: Implemented Applications", Distributed and Parallel Databases Journal, Vol. 5 (2), April 1997, pp. 207-225.
53. P. Attie, M. Singh, E. Emerson, A. Sheth, and M. Rusinkiewicz, "Scheduling Workflows by Enforcing Intertask Dependencies", Distributed Systems Engineering Journal, Vol. 3 (4), December 1996, pp. 222-238.
54. P. Krychniak, M. Rusinkiewicz, A. Cichocki, A. Sheth, and G. Thomas, "Bounding the Effects of Compensation under Relaxed Multi-Level Serializability," Distributed and Parallel Database Journal, 4 (4), 1996, pp. 355-374.

55. V. Kashyap and A. Sheth, "Schematic and Semantic Similarities between Database Objects: A Context-based Approach," *Very Large Data Bases (VLDB) Journal*, 5(4), October 1996, pp. 276-304.
56. J. Miller, A. Sheth, K. Kochut, and X. Wang, "CORBA-Based Run Time Architectures for Workflow Management Systems", *Journal of Database Management, Special Issue on Multidatabases*, Vol. 7, No. 1 (Winter 1996) pp.16-27.
57. D. Georgakopoulos, M. Hornick and A. Sheth, "An Overview of WorkfLow Management: From Process Modeling to Infrastructure for Automation," *Distributed and Parallel Databases Journal*, 3 (2), April 1995, pp. 119-153.
58. N. Krishnakumar and A. Sheth, "Managing Heterogeneous Multi-system Tasks to Support Enterprise-wide Operations," *Distributed and Parallel Databases Journal*, 3 (2), April 1995, pp. 155-186.
59. D. Georgakopoulos, M. Rusinkiewicz, and A. Sheth, "Using Tickets to Enforce the Serializability of Multidatabase Transactions," *IEEE Transactions on Data and Knowledge Engineering* 6 (1), Feb. 1994, pp. 166-180.
60. K. Lee, W. Mansfield, and A. Sheth, "A Framework for Controlling Cooperative Agents," *Computer*, 26 (7), July 1993, pp. 8-16.
61. J. Geller, Y. Perl, P. Cannata, A. Sheth, and E. Neuhold, "Structural Integration: Concepts and Case Study," *Journal of Systems Integration*, 3 (2), June 1993, pp.131-161.
62. A. Sheth, S. Gala, and S. Navathe, "On Automatic Reasoning for Schema Integration," in *Intl. Journal of Intelligent & Cooperative Information Systems*, 2 (1), March 1993, pp. 23-50.
63. J. Geller, Y. Perl, E. Neuhold, and A. Sheth, "Structural Schema Integration with Full and Partial Correspondence using Dual Model," *Information Systems-an International Journal*, 17 (6), 1992, pp. 443-469.
64. M. Rusinkiewicz, A. Sheth, and G. Karabatis, "Specifying Interdatabase Dependencies in a Multidatabase Environment," *IEEE Computer*, 24 (12), December 1991, pp. 46-53.
65. J. Larson and A. P. Sheth, "Updating Relational Views Using Knowledge at View Definition and View Update Time," *Information Systems-An International Journal*, 16 (2), 1991.
66. A. Sheth and J. Larson, "Federated Databases: Architectures and Issues," *ACM Computing Surveys*, 22 (3), September 1990, pp. 183-236. Japanese translation appears in special issue of BIT "Computer Science, '90", Japan.
67. A. Sheth, A. Singhal and M. Liu, "An Analysis of the Effect of Network Parameters on the Performance of Distributed Database Systems," *the IEEE Transactions on Software Engineering*, Vol. SE-11 (10), 1985.
68. A. Elmagarmid, A. Sheth and M. Liu, "A Partially Distributed Deadlock Algorithm," *the International Journal of Computer and Information Sciences*, 14 (5), 1985.

Conference Publications (Referred)

66. S. Chandrasekaran, G. Silver, J. Miller, J. Cardoso and A. Sheth, Web Service Technologies and their Synergy with Simulation, *Proceedings of the 2002 Winter Simulation Conference (WSC'02)*, San Diego, California, December 2002.
67. S. Patel and A. Sheth, "Planning and Optimizing Semantic Information Requests using Domain Modeling and Resource Characteristics," *Proceedings of the 6th Intl Conf on Cooperative Information Systems (CoopIS)*, Trento, Italy, September 5-7, 2001, pp. 135-149.
68. J. Cardoso, Z. Luo, J. Miller, A. Sheth and K. Kochut, "Survivability Architecture for Workflow Management Systems," *Proceedings of the 39th Annual ACM Southeast Conference*, March 2001, pp. 207-216.

69. I.B. Arpinar, J. Miller and A. Sheth, "[An Efficient Data Extraction and Storage Utility For XML Documents.](#)" *Proceedings of the 39th Annual ACM Southeast Conference (ACMSE'01)*, Athens, Georgia, March 2001, pp. 293-295.
70. J. Miller, A. Sheth, K. Kochut and Z. Luo, "Recovery Issues in Web-Based Workflow," *Proceedings of the 12th International Conference on Computer Applications in Industry and Engineering (CAINE-99)*, Atlanta, Georgia, November 1999, pp.101-105.
71. M. Kang, J. Froscher, A. Sheth, K. Kochut and J. Miller, "A Multilevel Secure Workflow Management System," *Proceedings of the 11th Conference on Advanced Information Systems Engineering (CAiSE'99)*, Heidelberg, Germany, June 1999, pp. 271-285.
72. A. Sheth, K. Shah, K. Parsuraman and S. Mudumbai, "Searching Distributed and Heterogeneous Digital Media," *8th IFIP 2.6 Working Conference on Database Semantics (DS-8)*, Rotorua, New Zealand, January 4-8, 1999.
73. E. Mena, V. Kashyap, A. Illarramendi and A. Sheth, "Estimating Information Loss for Multi-ontology Based Query Processing", *13th Biannual European Conference on Artificial Intelligence (ECAI) Workshop on Intelligent Information Integration (III'98)*, Brighton (UK), August 1998, pp. 93-108.
74. Y. Han, and A. Sheth, "On Adaptive Workflow Modeling", *Proceedings of the 4th International Conference on Information Systems Analysis and Synthesis*, Orlando FL, July 1998, pp. 108-116.
75. K. Shah, A. Sheth, and S. Mudumbai, "Black Box approach to Visual Image Manipulation used by Visual Information Retrieval Engines", *Proceedings of 2nd IEEE Metadata Conference*, September 1997. (Primarily proceedings is on the Web, no page numbers)
76. A. Sheth, K. Kochut, J. Miller, D. Worah, S. Das, D. Lin, D. Palaniswami, J. Lynch, I. Shevchenko, "Supporting State-Wide Immunization Tracking Using Multi-Paradigm Workflow Technology," *Proceedings of the 22nd International Conference on Very Large Data Bases*, Bombay, India, September 1996, pp. 263-273.
77. E. Mena, V. Kashyap, A. Illarramendi and A. Sheth, "Managing Multiple Information Sources through Ontologies: Relationship between Vocabulary Heterogeneity and Loss of Information", in *proceedings of Knowledge Representation Meets Databases (KRDB'96)*, ECAI'96 conference, Budapest, Hungary, August 1996, pp. 50-52.
78. E. Mena, V. Kashyap, A. Sheth, A. Illarramendi, "OBSERVER: An Approach for Query Processing in Global Information Systems Based on Interoperation Across Pre-existing Ontologies", *Proceedings of the 1st IFCIS Intl. Conference on Cooperative Information Systems (CoopIS'96)*, Brussels, Belgium, June 1996, pp. 14-25.
79. A. Sheth and V. Kashyap, "Media-independent Correlation of Information. What ? How", *Proceedings of the 1st IEEE Metadata Conference*, April 1996
80. L. Shklar, V. Kashyap, and K. Shah, "InfoHarness: Use of Automatically Generated Metadata for Search and Retrieval of Heterogeneous Information," *Proceedings of the CAiSE'95*, June 1995, pp. 217-230.
81. J. Miller, A. Sheth, K. Kochut, X. Wang, and A. Murugan, "Simulation Modeling with Workflow Technology", *Proceedings of the 1995 Winter Simulation Conference*, December 1995, pp. 612-619.
82. V. Kashyap and A. Sheth, "Semantic based Information Brokering," *Proceedings of the 3rd Intl. Conference on Information and Knowledge Management*, November 1994, pp. 363-370.
83. L. Shklar, S. Thatte, H. Marcus, and A. Sheth, "The InfoHamess Information Integration Platform," *Proceedings of the Second International Conference on the World Wide Web*, Chicago, IL, October 19-21, 1994.

84. P. Attie, M. Singh, A. Sheth, and M. Rusinkiewicz, "Specifying and Executing Intertask Dependencies," in Proceedings of the 19th Intl. Conference on Very Large Data Bases, August 1993, pp.134-145.
85. J. Geller, Y. Perl, P. Cannata, A. Sheth, and E. Neuhold, "A Case Study of Structural Integration," Proceedings of the 1st Intl. Conference on Information and Knowledge Systems, November 1992.
86. M. Ansari, L. Ness, M. Rusinkiewicz, and A. Sheth, "Using Flexible Transactions to Support Multisystem Telecommunication Applications," Proceedings of the 18th Intl. Conference on Very Large Data-bases, August 1992, pp. 65-76.
87. J. Geller, A. Mehra, Y. Perl, A. Sheth, E. Neuhold, "Algorithms for Structural Schema Integration," Proceedings of the 2nd Intl. Conference on Systems Integration, June 1992.
88. M. Ansari, L. Ness, M. Rusinkiewicz, and A. Sheth, "Executing Multidatabase Transactions," FUCSS-25, Kauai, January 1992. (Best paper of the mini-track on Multi Data/Knowledge Bases)
89. A. Sheth and A. O'Hare, "The Architecture of BRAID: A System for Bridging AI/DB Systems," Proceedings of the 7th IEEE, Intl. Conference on Data Engineering, April, 1991, pp. 570-581.
90. D. Georgakopoulos, M. Rusinkiewicz, and A. P. Sheth, "On Serializability of Multidatabase Transactions through Forced Local Conflict," Proceedings of the 7th IEEE Intl. Conference on Data Engineering, April 1991. (**Outstanding Paper Award**), pp. 314-323.
91. A. Sheth, "Fault Tolerance in a Very Large Database System: A Strawman Analysis," Proceedings of the 9th IEEE, Intl. Conference on Distributed Computing Systems, Newport Beach, CA, June, 1989.
92. A. Sheth, J. Larson, E. Watkins, "Tailor, A Tool for Updating Views," Proceedings of the Extending Data Base Technology Conference, Venice, Italy, March, 1988. Published in Lecture Notes in Computer Science. No. 303, Springer-Verlag.
93. A. Sheth, J. Larson, A. Comelio, and S. Navathe, "A Tool for Integrating Conceptual Schemas and User Views," Proceedings of the 4th IEEE, Intl. Conference on Data Engineering, Los Angeles, CA, February, 1988.
94. A. Sheth, A. Singhal, M. Liu, "Performance Analysis of Resilience Mechanisms in Distributed Database Systems," Proceedings of the 3rd IEEE Intl. Conference on Data Engineering, Los Angeles, CA, February, 1987.
95. A. Sheth and M. Liu, "Integrating Locking and Optimistic Concurrency Control in Distributed Database Systems," Proceedings of the 6th IEEE Intl. Conference on Distributed Database Systems, Cambridge, MA, May 1986.
96. A. Elmagarmid, A. Sheth and M. Liu, "Deadlock Detection Algorithms in Distributed Database Systems," Proceedings of the 2nd Intl. Conference on Data Engineering, Los Angeles, CA, February, 1986.
97. A. Singhal, A. Sheth and M. Liu, "An Analysis of the Effect of Network Load and Topology on the Performance of Concurrency Control Algorithms in Distributed Database Systems," Proceedings of Computer Networking Symposium, Gaithersburg, MD, December, 1984. (**Distinguished Paper Award**).
98. A. Sheth, A. Singhal and M. Liu, "An Adaptive Concurrency Control Strategy for Distributed Database Systems," Proceedings of the 1st IEEE Intl. Conference on Data Engineering, Los Angeles, CA, April, 1984.
99. A. Sheth, "Memory Subsystems for Microcomputers," Proceedings of the 5th All India Seminar on Microprocessors and their Applications, Hyderabad, India, October, 1980.

Conference Publications (Invited)

100. D. Avant, M. Baum, C. Bertram, M. Fisher, A. Sheth, Y. Warke, "Semantic Technology Applications for Homeland Security," Proc. Of the 11th Intl Conf on Information and Knowledge Management (CIKM 2002), McLean VA, November 4-9, 2002, pp. 611-613.
101. A. Sheth, J. Cardoso, J. Miller, K. Kochut, M. Kang, "QoS for Service-oriented Middleware," The 6th World Multiconference on Systemics, Cybernetics and Informatics, Proceedings Vol. 8, Orlando, FL (*Invited Session on Web Services & Grid Computing*), July 14-18, pp. 528-534.
102. K. Shah and A. Sheth, "Logical Information Modeling of Web-accessible Heterogeneous Digital Assets", Proc. of the Forum on Research and Technology Advances in Digital Libraries," (ADL'98), invited paper, Santa Barbara, CA, May 28-30, 1998, pp. 266-275.
103. A. Sheth, "From Contemporary Workflow Process Automation to Adaptive and Dynamic Work Activity Coordination and Collaboration," (keynote talk paper) Proceedings of the Workshop on Workflow Management in Scientific and Engineering Applications, Toulouse, France, September 1997.
104. M. Rusinkiewicz and A. Sheth, "Transactional Workflow Management in Distributed Systems," Proceedings of the Intl. Workshop on Advances in Databases and Information Systems (ADBIS'94), Moscow, May 1994.
105. A. Sheth and V. Kashyap, "So Far (Schematically) yet So Close (Semantically)," Proceedings of the MT DS-5 Conference on Semantics of Interoperable Database Systems, Lorne, Australia, Elsevier Publishers, November 1992; Elsevier North Holland, Amsterdam 1993.
106. A. Sheth and L. Kalinichenko, "Information Modeling in Multidatabase Systems: Beyond Data Modeling," Proceedings of the 1st Intl. Conference on Information and Knowledge Systems, Baltimore, November 1992.
107. G. Karabatis and A. Sheth, "Specifying Interdependent Data: A Case Study at Bellcore," Annual Review of Communications, National Engineering Consortium, Vol. XXXXVI, 1992-93. [A version also appeared in the Proceedings of the ACM SIGMOD Conference on Management of Data, May 1993.]

Invited or Other Journal Publications (Partial list)

108. A. Sheth and J. A. Miller, "Web Services: Incremental Technical Advance with Huge Practical Impact," IEEE Intelligent Systems, Trends & Controversies, (*IEEEIS*), January/February, 2003.
109. A. Sheth and R. Meersman, "[Amicalola Report: Database and Information Systems Research Challenges and Opportunities in Semantic Web and Enterprises](#)," ACM SIGMOD Record, Vol. 31, No. 4, December 2002.
110. K. Anyanwu and A. Sheth, "[The \$\rho\$ Operator: Discovering and Ranking Associations on the Semantic Web](#)," SIGMOD Record, Vol. 31, No. 4, December 2002.
111. J. Corley, W. Karp and A. Sheth, "[IT at the heart of Healthcare](#)," Cover Story for the special issue on Healthcare, Silicon India, October 1999,
112. K. Kochut, A. Sheth, J. A. Miller, "[Optimizing Workflow](#)," *Component Strategies*, Vol. 1, No. 9 (March 1999) pp. 45-57.
113. Regular column on various issues on Workflow in ACM SIGGROUP bulletin, quarterly starting April 1997 (four so far).
114. A. Sheth, D. Georgakopoulos, S. Joosten, M. Rusinkiewicz, W. Scacchi, J. C. Wileden, and A. L. Wolf. [Report from the NSF workshop on workflow and process automation in](#)

- [information systems](#). SIGMOD Record, 25(4), December 1996, pp. 55-67. Additional versions of the report also appeared in SIGGROUP and SIGACT bulletins.
115. Y. Breitbart, A. Deacon, H.-J. Schek, A. Sheth and G. Weikum, "Merging Application-centric and Data-centric Approaches to Support Transaction-oriented Multi-system Workflows," in SIGMOD Record, 22 (3), September 1993.
 116. A. Sheth and M. Rusinkiewicz, "On Transactional Workflows," in Data Engineering Bulletin, 16 (2), June 1993.
 117. C. Tomlinson, P. Attie, P. Cannata, G. Meredith, A. Sheth, M. Singh and D. Woelk, "Workflow Support in Carnot," in Data Engineering, 16 (2), June 1993.
 118. A. Sheth, "Building Federated Databases," (Invited Paper) in Quarterly Journal of IEEE TC on Distributed Processing, November 1988.
 119. M. Rusinkiewicz and A. Sheth, "Polytransactions for Managing Interdependent Data," in Data Engineering, 14 (1), March 1991.
 120. B. Lee, W. Mansfield, and A. Sheth, "An Interactive Transaction Model for Distributed Cooperative Tasks," in Data Engineering, 14 (1), March 1991.
 121. A. Sheth and A. O'Hare, "An Interpreted Compiled Range for AI/DBMS Integration," in SIGMOD Record, 18 (1), March 1989.

Workshop and Symposium Publications (Refereed)

122. M. Arumugam, A. Sheth, and I. B. Arpinar, Towards P2P Semantic Web: A Distributed Environment for Sharing Semantic Knowledge on the Web, WWW2002 Workshop on Real World RDF and Semantic Web Applications, Honolulu, Hawaii, May 7, 2002.
123. T. Lima, A. Sheth, N. Ashish, M. Guntamadugu, S. Laxminarayanan, N. Palsena, D. Singh, "Digital Library Services Supporting Information Integration over the Web," Proc. Intl Workshop on Information Integration on the Web Technologies and Applications, Rio de Janeiro. 2001. pp.19-26.
124. Y. Han, A. Sheth, K. Bussler, "A Taxonomy of Adaptive Workflow Management," CSCW-98 Workshop Towards Adaptive Workflow Systems, November 14, 1998 [proceedings on the Web at <http://ccs.mit.edu/klein/CSCW98/#anchor1609273>].
125. Z. Luo, A. Sheth, J. Miller, K. Kochut, "Defeasible Workflow, its Computation and Exception Handling," CSCW-98 Workshop Towards Adaptive Workflow Systems, November 14, 1998, [proceedings on the Web at <http://ccs.mit.edu/klein/CSCW98/#anchor1609273>].
126. D. Worah and A. Sheth. "What do Advanced Transaction Models Have to Offer for Workflows?" Proceedings of the Intl. Workshop on Advanced Transaction Models and Architectures (ATMA), Goa, India, August 1996, pp. 1-17.
127. A. Sheth and V. Kashyap, "Steps towards media-independent search of Web-accessible Heterogeneous Digital Data," Proceedings of the 2nd International Workshop on Multimedia Information Systems, West Point, New York, Sept. 26-28, 1996, pp.92-97.
128. E. Mena, V. Kashyap, A. Illarramendi and A. Sheth, "Managing Multiple Information Sources through Ontologies: Relationship between Vocabulary Heterogeneity and Loss of Information," Proceedings of the Workshop on Knowledge Representation meets Databases in conjunction with European Conference on Artificial Intelligence, Budapest, Hungary, August 1996, pp. 1-3.
129. A. Sheth, V. Kashap and William LeBlanc, "Attribute-based Access of Heterogeneous Digital Data", Proceedings of the Workshop on Providing Web Access to Legacy Data, 4th Intl. World Wide Web Conference, December 1995.

130. A. Savasere, A. Sheth, S. Gala, S. Navathe and H. Marcus, "On Applying Classification to Schema Integration," Proceedings of the 1st Intl. Workshop on Interoperability in Multidatabase Systems, Kyoto, Japan, 1991, pp. 258-261.
131. L. Ness, J. Cameron, A. Sheth, "An Executor for Flexible Transactions which Achieves Maximal Parallelism," Proceedings of the 1st Intl. Workshop on Interoperability in Multidatabase Systems, Kyoto, Japan, 1991, pp. 288-291.
132. A. Sheth and M. Rusinkiewicz, "Management of Interdependent Data: Specifying Dependency and Consistency Requirements," Proceedings of the Workshop on the Management of Replicated Data, Houston TX, November 1990.
133. A. Sheth and S. Gala, "Attribute Relationships: An Impediment in Automating Schema Integration," Proceedings of the Workshop on Heterogeneous Database System, December 1989.
134. A. Sheth, "Developing an Interface Unit for Expanding MCS 6800," Proceedings of the 3rd Indian Congress of College Going Scientists, Kanpur, India, December 1979.
135. A. Sheth, "Solar Energy - Perspective and Applications," Proceedings of the AU India Symposium on Energy Management Pilani, India, April 1979.

Other Publications: Conference Proceedings (refereed or invited short papers/abstracts)

136. A. Sheth, "Semantic Content Annotation and Applications: Semantic web now and Challenges Ahead," Proceedings of 2001 IRC International Conference on Internet Information Retrieval, Seoul, S. Korea, October 29, 2001, pp. 99-102. (vision paper)
137. K. Anyanwu, A. Sheth, "[*Supporting Knowledge Discovery on the Semantic Web by Exploiting the Semantics of Complex Relationships*](#)," Proceedings of the International Semantic Web Working Symposium (SWWS), 2001.
<http://www.semanticweb.org/SWWS/program/position/>
138. Z. Luo, A. Sheth, "Supporting Cross-organizational Business Processes: Challenges and Solutions," Workshop on [*Beyond Workflow Management: Dynamic Organizational Process Workshop*](#), CSCW 2000, Philadelphia PA, Dec. 2000. (position/vision paper)
139. Z. Luo, A. Sheth, K. Kochut, "Checkpointing for Workflow Recovery," [*ACM Southeast Conference 2000*](#), Clemson, SC, April 2000, pp. 79-80. (Short paper)
140. A. Sheth, "The InfoQuilt System for Intelligent Analysis, Mining, Fusion, and Dissemination of Heterogeneous Media Data", Symposium on Advanced Information Processing and Analysis, March 1997, Tysons Corner, VA, pp. 46. (invited talk abstract)
141. S. Thatte, A. Sheth, and K. Shah, "Intelligence Information Management and the InfoHarness System", Symposium on Advanced Information Processing and Analysis, March 1997, Tysons Corner, VA, pp.78. (invited talk abstract)
142. A. Sheth, "Bellcore's ADAPT/X Harness System for Managing Information on Internet and Intranets," Proceedings of the 22nd Intl. Conference on Very Large Data Bases, Bombay, India, September 1996, p. 585. (invited talk abstract)
143. L. Shklar, A. Sheth, V. Kashyap, and S. Thatte, "InfoHarness: A System for Search and Retrieval of Heterogeneous Data," Proceedings of the 1995 ACM SIGMOD Intl. Conference on Management of Data, San Jose, CA., May 24, 1995, p 478. (demonstration abstract)
144. N. Krishnakumar and A. Sheth, "Specification of Workflows with Heterogeneous Tasks in METEOR," 20th Intl. Conf. on Very Large Databases, Santiago, Chile, September 1994. (refereed short paper)

145. W. Jin, L. Ness, M. Rusinkiewicz, and A. Sheth, "Concurrency Control and Recovery of Multidatabase Work Flows in Telecommunication Applications," Proceedings of the ACM SIGMOD Conference on Management of Data, May 1993. (refereed short paper)
146. D. Woelk, P. Attie, G. Meredith, A. Sheth, M. Singh, and C. Tomlinson, "Task Scheduling using Intertask Dependencies in Carnot," Proceedings of the ACM SIGMOD Conference on Management of Data, May 1993. (refereed short paper)
147. A. Sheth, "Does Loose AI-DBMS Coupling Stand a Chance?," Proceedings of the 5th Intl. Conference on Data Engineering, Los Angeles, CA, February 1988. (position paper)
148. A. Sheth, "Managing and Integrating Unstructured and Unstructured Data: Problems of Representation, Features, and Abstraction," Proceedings of the 4th Intl. Conference On Data Engineering, Los Angeles, CA, February 1988. (position paper)
149. A. Sheth, "When will we have true heterogeneous databases?" position statement in the Proceedings of the 3rd Intl. Conference on Data Engineering, Los Angeles, CA, February 1987.

Other Publications: Articles in informal proceedings or non-referred papers

150. A. Sheth and SWIS workgroup, "Semantic Web Information Systems: NSF IDM workgroup report on challenges and opportunities in Semantic Web," June 2002.
151. A. Sheth, J. Miller, K. Kochut, and B. Arpinar, Research in Multi-Organizational Processes and Semantic Information Brokering at the LSDIS Lab, ACM SIGMOD Record, 30 (4), December 2001, pp. 123-128.
152. A. Sheth, D. Worah, K. Kochut, J. Miller, K. Zheng, D. Palaniswami, S. Das, "The METEOR Workflow Management System and its use in Prototyping Healthcare Applications", Proceedings of the Towards An Electronic Patient Record (TEPR'97) Conference, April 1997, Nashville, TN.
153. A. Sheth, "Eliminating Paper Work in the Healthcare System," *SiliconIndia*, August 15, 1997, pp. 28-31.
154. A. Sheth, M. Ansari, L. Ness, and M. Rusinkiewicz, "Using Flexible Transactions to Support Multi-database Applications," the U S West-NSF-DARPA workshop on Heterogeneous Databases and Semantic Interoperability, Boulder, CO, February 1992.
155. A. Sheth, "Issues in Database Design and Integration: A Researchers in Search of Pragmatic Solutions," position statement distributed at 17th VLDB, September 1991. A related position statement "Issues in Schema Integration: Perspective of an Industrial Researchers," presented and distributed at the ARO-Workshop on Semantics of Heterogeneous Databases, Philadelphia, September 1991.
156. A. Sheth, "Fault Tolerances in Systems for Very Large Databases," the Minnowbrook Workshop on Database Machines, July 1987.
157. R. Ramnarayan and A. Sheth, "A D/KBMS Architecture Evaluation Testbed," the Minnowbrook Workshop on Database Machines, July 1987.

Bulletins or Reports: Over 35 written, some proprietary. Example: V. Kashyap and A. Sheth, "Building Successful Human-Center Systems," Media/Book Review, IEEE Multimedia, 8 (2), 102-103, 2001.

Edited Reports: Edited over 25 Database Research Center Reports for *ACM SIGMOD Record* as Associate Editor since 1988. Edited several reports on workflow and process management for [SIGGROUP Bulletin](#).

Creative contributions other than formal publications (since 1994)

Interviews and Profiles

- Interviews published
 - “Interview: Amit Sheth on workflow technology”, by Sushil Jajodia, IEEE Concurrency, April-June 1998, pp. 21-23.
 - discussing future in Internet related technologies and relevant research at UGA following broad-based talks, published in the *Economic Times*, January 1995 (several editions), and the *Times of India* (several editions), January 1996 (national news papers in India with largest circulation in Business and General categories, respectively).
 - applications of the METEOR system in Healthcare in Research Reporter, UGA, Winter 1997, and in Healthcare Informatics (http://www.healthcare-informatics.com/issues/2001/02_01/cover.htm#workflow).
- Biographical profiles published in SandPaper (BITS Alumni Magazine (2003), a Gujarati book (1996) and an English (1997) book.

Technology Licensing, Commercialization and Deployed Systems

- Recent software systems developed under supervision as PI of projects (with co-PIs where applicable) that are commercialized, used for R&D by other institutions, or used for operational/regular work:
 - **SCORE**, a technology for automatic metadata extraction and semantic applications, and for A/V search based on an Industry funded research project **VideoAnywhere** at the LSDIS lab. It has been [licensed to Semagix, Inc.](#), (formerly Taalee and Voquette, Inc.) by the University of Georgia research foundation to the first Venture Capital funded Internet-startup in the Athens, GA area.
 - **AdaptX Harness**, a [commercial product](#) from Bellcore (Telcordia Technologies) in 1995 (lead project at Bellcore, subsequent technology transfer in joint project with UGA– see funded projects below)
 - **METEOR** system (several components) was deployed at Boeing, Microelectronics and Computer Technology Corp., Connecticut Healthcare Research & Education Foundation and its Information Technology subsidiary CHIME, South Carolina Research Authority, National Institute of Standards and Technology's Manufacturing Program, etc. It has also been distributed to many higher education institutions for teaching and research and to industrial labs for non-commercial used. It was licensed to Infocsm, Inc., a startup company that has made METEOR available as a commercial product.
 - **CAPA** system was completed and deployed for use throughout the UGA campus by any faculty and staff involved in proposing new courses or changes to the courses, and processing/approval of the proposals. In its first quarter of use, approx. 6000 courses were processed. LSDIS lab developed it and maintained the system for the first year, and is now transferred to the VPAA's office. CAPA system has been operational since 1997.
 - **GradWeb** system overhauls the Graduate Schools information systems to provide a completely Web based environment for use by Staff and Administrators within the Graduate School and all interacting departments, as well as by graduate applicants and

students. Application material is available electronically and applications be submitted electronically.

- **CareWeb**, a Web resource developed in collaboration with Medical College of Georgia under State of Georgia's Family and Children Services department to support health information and education needs of under-served populations.

Research Funding / Grants and contracts received as the PI (since 1994¹)

Federal Funds (with additional matching funds in some cases)

- ***Semantic Association Identification and Knowledge Discovery for National Security Applications***, Principal Investigator, National Science Foundation, CISE-ITR- 0219649 (Co-PIs: I.B. Arpinar, K. Kochut), August 15, 2002-July 31, 2005, **\$200,000**.
- ***Database and Information Systems Research for Semantic Web and Enterprises***, National Science Foundation (CISE-IIS-0211606), April 1, 2002 – March 31, 2003, \$15,000. EU Thematic Network OntoWeb, \$5,000. University of Georgia Foundation and CS Department, \$6,250.
- ***Extending METEOR with workflow reuse, adaptation, and collaboration***, Principal Investigator, awarded by Naval Research Laboratory and ITT, January 1, 2000—September 30, 2000, **\$200,000**.
- ***The Alexandria Digital Earth Modeling System*** [Semantic Interoperability and Collaboration], Principal Investigator of the UGA subcontract to UCSB, National Science Foundation – IIS-9817432 (Co-PI: K. Kochut), **\$600,000+** in Federal, plus \$25,000 in UGARF equipment matching, September 1999—August 2004.
- ***Workflow Management for Advanced DoD Applications***, Principal Investigator, awarded by Naval Research Lab/Department of Navy - N00173-98-2-L005 (Co-PI: K. Kochut, J. Miller), July 1, 1998 – December 31, 1999. **\$315,542** in Federal, plus **\$15,000** in UGARF equipment matching funds.
- ***METEOR: Healthcare Information Infrastructure Program—Enterprise Workflow Automation***, Principal Investigator for University of Georgia, awarded by National Institute of Standards and Technology (NIST)—ATP initiative on Information Infrastructure for Healthcare - 70ANB5H1011 (Co-PI: K. Kochut, J. Miller). Total project: **\$1,674,729+**. \$725,000 in Federal over 4.5 years (3/95-2/96: \$116,364; 3/96-2/97: \$173,365; 3/97-2/98: \$188,348; 3/98-3/99: \$166,221; 3/99-8/99: \$80,701); additional more than \$949,727 as matching funds (from University of Georgia and University of Georgia Research Foundation, Industry Donations --includes some of the funds listed under Industry Donations below).
- ***Collaborative Tele-Consulting for Healthcare (CaTCH)***, Principal investigator to South Carolina Research Authority awarded as a subcontract in HITECC funded by the NIST-ATP initiative (Co-PIs for first year: K. Kochut, J. Miller, Co-PIs for the second year: K. Kochut and K. Shah). Total Federal: **\$166,129**. \$112,480 for the first year, \$47,149 for second year (partial) (additional second year and third year funds TBD). University of Georgia Research Foundation Matching in first year **\$12,500**. June 1996 – May 1999.
- ***InfoHarness: A Scaleable System for Searching Heterogeneous Information***, Principal Investigator (of the overall project, joint project with Bellcore), awarded under the Massive Digital Data Systems initiative of the Community Management Staff, Contract #

¹ PI of grants/contracts of over three million dollars from DARPA and other sources prior to joining UGA.

95-FI38400-000; over \$600,000; University of Georgia component **\$197,030** (year 1: \$87,327; year 2: \$109,703) plus University of Georgia Research Foundation equipment matching grant of **\$14,500**. April 15, 1995–August 30, 1997.

- ***NSF Workshop on Workflow and Process Automation***, Principal Investigator, awarded by the National Science Foundation (Award # IRI-9528870, Division of Information, Robotics, and Intelligent Systems, and the Division of Computer and Computational Research), **\$24,795**, plus **\$6000** donation by the University of Georgia Research Foundation, September 1995-September 1996.
- ***NATO Award for Advanced Study Institute on Workflow Systems and Interoperability***, Co-Director (jointly with A. Dogac, L. Kalinichenko, T. Ozsu), 2,400,000 BFr (US\$76,000), Istanbul, Turkey, December 1996 – August 1997.

Industry Funds

- **Video Data Management System**, Principal Investigator, awarded by L G Electronics Research Center of America, \$50,004, January 1, 1998 – December 31, 1998. University of Georgia Research Foundation Matching in first year \$2,500.

State and UGA Funds

- **Faculty Research Commercialization Program**, Principal Investigator, awarded by the Advanced Technology Development Center in conjunction with Georgia Research Alliance, \$50,000, July 1, 1998 –June 30, 1998.
- ***UGA Office of Instructional Development (OID)***, A. Sheth, D. Everett, J. Miller, K. Kochut, J. Smith, R. Robinson and H. Arabnia, "Mobile Multimedia Instruction Environment", \$8,500, April 1, 1996 – March 30, 1997.
- ***Course Approval Process Automation (CAPA)***, Principal Investigator, funded by the Vice President for Academic Affairs, University of Georgia, \$150,065 (budget) July 1, 1996 – June 30, 1997.
- ***CareWeb*** for the Family Connection Program, Principal Investigator, cooperative agreement funded by Medical College of Georgia, \$30,000, May 1997 – April 1998.
- ***GradWeb*** for the reengineering of the entire information system of the UGA's Graduate School with Web based graduate applications and processing of graduate student related information within the Grad School and with all department, LSDIS lab award of approx. \$32,430, July 1997 – present.

Industry Cash Gifts Received

- **Gift** from the Boeing Company as a LSDIS industry sponsor, \$55,000 (annual gifts), December 1996, January 1998, January 2001.
- **Gift** from Microelectronic and Computer Technology Corporation (MCC) as a LSDIS industry sponsor, \$20,000, June 1997.
- **Gift** from Hewlett-Packard Labs as a LSDIS industry affiliate, \$12,500 (annual gifts for 1995,'96,'97, '98).
- **Gift** from L G Electronics Research Center of America as a LSDIS industry sponsor, \$25,000, February 1998.

Industry Donations Received (total value over \$400,000)

- Persistence, donated by Persistence Software Inc. \$61,275, July 1995. Also, May 1997.
- Illustra Server licenses (5) and several databases, awarded through a competitive grant program, Illustra Information Technology, Inc., \$17,373.50, August 22, 1995.
- ORBeline 2.0 and BlackWidow licenses (6), donated by PostModern Computing (first grant recipient of CORBA2.0 product), \$83,700, March 1996.
- PictureTel live 200P and Developer's Tool kit, donated by PictureTel Corp., \$6,775, June 1996.
- ORBIX and related products, donated by IONA Technologies, \$45,295, October 1996. Again in 1998 (value undertermined).
- Informix Universal Server and other software (first receipt of grant program), Informix, \$120,000, since April 1997. Renewed in 1998 and 1999 (value undetermined).
- Virage's Visual Information Retrieval System, (value not assigned) March 1997.
- MARGI's MPEG-to-GO, (value not assigned) June 1997.
- I-Kinetics DataBroker and Open JDBC, \$19,396, September 1997.
- POET, \$500, December 1998.
- Object Design Inc., \$500, December 1998.
- Microsoft Research, donation of all requested software and training for Computer Science department (to support teaching) and LSDIS lab (for use in research), 1999.

Recognition, outstanding achievements and honorary appointments

- UGA Career Center Recognition/Award for "**greatly contributing to the career development of UGA students,**" (based on post-graduation student surveys), September 2002.
- **Patent** co-inventor (Sheth, Avant and Bertram), "System and Method for Creating Semantic Web and Its Applications in Browsing, Searching, Profiling, Personalization and Advertisement" (# 6,311,194), October 30, 2001.
- Advisory Board, Coco-Cola Center for Marketing Studies, Terry college of Business, 2002-present.
- **International Advisory Board**, Internet Information Retrieval Research Center (IRC), Hankuk Aviation University, Korea, 2001 – '02.
- **Board of Directors**, Healthcare Open Systems & Trials (HOST) consortium, 1995—1999.
- Member of the two-person International Advisory Board, TARA Project, University of Tsukuba, Japan. 1994–'96.
- Selected and served as an **ACM Lecturer**, 1991–'92. Again for 1992–'93.
- **Patent** co-inventor (Georgeakopoulos, Rusinkiewicz, Sheth) (# 5,241,675), August 31, 1993.
- **Outstanding Paper Award**, (co-author) the 7th International Conference on Data Engineering, Kobe, Japan, April 1991.
- Citation for contributions to Bellcore for conceiving, developing, and prototyping the flexible transactional workflow technology, and business opportunity development, 1993. Also a recipient of Bellcore's Vice President team award for outstanding contribution, November 1993. Bellcore Achievement Award, 1989.

- Five Recognition of Service Awards/Certificates of Appreciation from the IEEE TC on Data Engineering and the IEEE Computer Society, 1989, '90, '91, '92, from the ACM, 1993.
- Board of Advisors, Indiana Center for Database Systems, 1991–'93.
- Award from the Federal Computer Conference in recognition of contributions, April, 1989.
- **Best Paper Award**, (co-author) Computer Networking Symposium, 1984.
- National Merit Scholar, Government of India, 1975.

Professional or Scholarly Activities

Editorship

- Member of the Editorial Board, Journal on Web Semantics: Science, Services and Agents on the World Wide Web, 2003 - .
- Member of the Editor Board, IEEE Multimedia, 1998-present. Also edited Media Reviews.
- Member of the Editorial Board (acting Editor-in-Chief from 9/94 to 3/95), the Journal on Distributed and Parallel Databases, 1992–present.
- Member of the Editorial Board, the International Journal of Intelligent and Cooperative Information Systems, 1995–present.
- Member of the Editorial Board, Information Systems– an International Journal, 1993–present.
- Member of the Editorial Advisory Board, International Journal of Engineering Intelligent Systems, 1993–2000.
- Member of the Editorial Board, the Distributed Systems Engineering Journal, 1993-1999.
- Associate Editor for SIGMOD Record, 1988–present. Also edited research center reports.
- Advisor on Workflow for SIGGROUP (ACM's SIG for GroupWare and GroupWork), 1996–1999. Also edited a section of the Bulletin.

Tutorial Presentations at International Conferences

29. [Semantic Web Services and Processes: Semantic Composition and Quality of Service](#) (with Jorge Cardoso and Christoph Bussler), International Federated Conferences: DOA/ODBASE/CooPIS 2002, Irvine, CA, October 28-29, 2002.
30. “Workflow Management: Technology, Experiences and Research”, 1998 IEEE International Conference on Data Engineering,” (with J. Miller), Orlando, FL, February 1998.
31. “Workflow Automation: Applications, Technology, and Research”, 1995 ACM SIGMOD Intl. Conference on Management of Data, San Jose, CA, May 24, 1995, *and* the Intl. Conference On Information Systems Engineering (CAiSE '95), Finland, June 14, 1995.
32. “Multidatabase Interoperation: Perspective of Researchers & Practitioners,” the 11th Intl. Conference on Data Engineering, Taiwan, March 1995.
33. “Database and Application Interoperability in Industry: Requirements, Technology, Research Issues and Case Studies,” the 6th Intl. Conference on Management of Data, Bangalore, India, December 1994.

34. "Interoperability in Multidatabase Systems," (with Dennis McLeod) the 20th Intl. Conference on Very Large Data Bases, Chile, September 1994.
35. "Interoperability in Multidatabase Systems," course offered by ETH (Swiss Federal Institute of Technology), Zurich, April 1993.
36. "Multidatabase Systems: Technology and Applications," (with M. Rusinkiewicz) the 3rd Intl. Conference on Data Engineering, Vienna, Austria, April 1993.
37. "Issues and Applications Support in Interoperable Database Systems." IFIP DS-5 Conference on Semantics of Interoperable Database Systems, Melbourne, Australia, November 1992.
38. "Multidatabase Applications: Semantics and Systems Issues," (with M. Rusinkiewicz) the 18th Intl. Conference on Very Large Data Bases (VLDB), Vancouver, Canada, 1992.
39. "Federated Databases for Managing Distributed, Heterogeneous, and Autonomous Databases," the 17th VLDB, Barcelona, Spain, September 1991, *and* at the Workshop on Federated Databases, Rende, Italy, March 1992.
40. "Heterogeneous Distributed Databases: Issues in Integration," at the ACM SIGMOD Conference, 1989, *and* the 3rd Intl. Conference on Data Engineering, 1987, *and* 1990.
41. "Integrating Heterogeneous Distributed Databases: Requirements, Concepts, and Solutions." at the Fall Joint Computer Conference, October 1987, Dallas, TX, also at the Intl. Conference on Databases in Parallel and Distributed System (with Prof. A. Elmagarmid), 1988, *and* at the 6th Intl. Conference on Data Engineering, 1990.
42. "Issues in Managing Interdependent Data," at the Workshop on Management of Interdependent Data (with Profs. A. Elmagarmid and M. Rusinkiewicz), 1990.

Industry Courses and Workshops

43. "Mysteries of Metadata," [Content World 2001](#), Burlingame, CA, May 15, 2001. [3 hours]
44. "Workflow Management: Research, Technology, Products, Applications and Experiences". Course Leaders: A. Sheth and S. Joosten. Course offered by WARIA, Atlanta, GA, August 12–14, 1996. [3 days]

Panel Presentations at Conferences and Workshops

45. "Semantics" in the Semantic Web: Is the Domain/Discipline Important?, ODBASE'02, Irvine October 29, 2002.
46. "Summary of NSF Databases and the Semantic Web Workshop," Science on the Semantic Web: Building a New Generation of Environmental Information Systems, Oct. 24, 2002, Newark, NJ.
47. "Research Directions for the Semantic Web," 3rd OntoWeb Meeting, Sardinia, Italy, June 13, 2002.
48. "User Experience of Enterprise Semantic Content Management," Symposium on the User Experience of Business Intelligence & Knowledge Management, IBM Almaden Research Center, San Jose, CA, March 18, 2002.
49. "Semantic Web – Rehash or Research Goldmine," 6th Intl Conference on Cooperative Information Systems (CoopIS 2001), Trento, Italy, September 6, 2001. [Panel Chair]
50. "Semantic Web – The Road Ahead," The Second International Workshop on the Semantic Web – SemWeb'2001 at WWW10, Hongkong, May 1, 2001.

51. "Creating Searchable Audio Video Web Sites," Streaming Media West 2000, San Jose, December 14, 2000.
43. "Impact of Broadband", The Internet Entrepreneur Conference, Sponsored by *SiliconIndia*, Atlanta, GA, May 8, 2000. [Panel Chair]
44. "Future Research in Semantics of Multimedia Systems," 8th IFIP 2.6 Working Conference on Database Semantics (DS-8), Rotorua, New Zealand, January 4-8, 1999.
45. "Virtual Teams and Infocosm: challenges for research in cooperative information systems, " Third Conference on Cooperative Information Systems, New York, August 1998. [Panelist and Co-Chair]
46. "Is Healthcare Ready for Internet? Technology is!" Annual Meeting of the Healthcare Open Systems and Trials Consortium, Washington D.C., November 1997.
47. "Cooperative Multiagent Systems for the Web," Second IFCIS International Conference on Cooperative Information Systems, Kiawah Island, SC, June 1997. [Panel Chair]
48. "Active Databases and Agents in Cooperative Information Systems," Second IFCIS International Conference on Cooperative Information Systems, Kiawah Island, SC, June 1997. [panelist]
49. "World Wide What?," 4th Intl. Conference on Parallel and Distributed Information Systems, Miami, FL, December 20, 1996. [Panelist]
50. "What Can Database Contribute to Multidisciplinary Research in Work Activities Coordination", Intl. Workshop on Advanced Models and Architectures, Goa, India, September 1, 1996. [Panel Chair]
51. "Database Research in Workflow Management Systems, Do We Have Anything to Contribute?" Intl. Conference on Cooperative Information Systems (CoopIS'96), June 20, 1996. [Panelist]
52. "How Do We Meet the Challenges of the Global Computing Revolution" Intl. Conference on Cooperative Information Systems (CoopIS'96), June 21, 1996. [Panelist] [Plenary Session Panel]
53. "Data Semantics: What, Where and How," the 6th IFIP TC-2 Working Conference on Data Semantics (DS-6), Stone Mountain, Georgia, June 1995. [Panel Chair] [cf. Section 3a, #7]
54. "Information Resource Discovery: A Torch in the Deep Darkness of the Information Superhighway?", the 11th Intl. Conference on Data Engineering, Taiwan, March 1995. [Panel Chair]
55. "Where are Distributed Databases headed," at the 6th Intl. Conference on Management of Data, Bangalore, India, December 1994. [Panelist]
56. "Challenges in Global Information Systems," at the 20th Intl. Conference on Very Large Data Bases, Chile, September 1994. [Panelist]
57. "Why do we need Extended Transaction Models?" at the 16th IEEE-CS Computer Software & Applications Conference (COMPSAC92), September 1992. [Panelist]
58. "Dealing with Heterogeneous Databases: Is the Research on Right Track?" at the 2nd Intl. Conference On Systems Integration, Morristown, PA, June 1992. [Panel Chair]
59. "Key Information Management Issues in the Real World," (final plenary session panel) the US West-NSF-DARPA Workshop on Heterogeneous Databases and Semantic interoperability, Boulder, CO, February 1992. [Panelist]
60. "Cooperative Database Design," at the 17th IVLDB, Barcelona, September 1991. [Panelist]

61. "Resolving Semantic Heterogeneity," at the 6th Intl. Conference on Data Engineering, Los Angeles, CA, February 1990. [Panelist]
62. "Does loose AI-DBMS coupling stand a chance?," at the 5th Intl. Conference on Data Engineering, Los Angeles, CA, February 1989. [Panel Chair]
63. "Can we meaningfully integrate drawing, text, image, and voice with structured data?" at the 4th Intl. Conference on Data Engineering, Los Angeles, CA, February 1988. [Panel Chair]
64. "When will we have true Heterogeneous Databases," at the Fall Joint Computer Conference, October 1987. [Panelist]
65. "Improving Concurrency in Distributed Systems," at the 3rd Intl. Conference on Data Engineering, February 1987. [Session Discussant]

Invited and Colloquia Talks (partial list)

66. "Semantic Web Applications and Next Generation Content Management," Hongik University, Seoul, Korea, October 30, 2001.
67. "Web, Semantics, OIL and FUEL: Semantic Interoperability and learning on the Web," Stanford University Database Seminar, October 20, 2000.
68. "Mapping your job search process while balancing Career Growth, Pay and Security," ACM Student Chapter First Annual ACM Dinner, Athens, GA, April 5, 2001.
69. "Changing Focus on Interoperability in Global Information Systems," Technical Speaker Series, MITRE, December 3, 1998.
70. "Enabling Virtual Teams and Infocasm," Bell Communications Research, December 2, 1998.
71. "METEOR System for Distributed, Multi-paradigm Workflow Management," invited technical presentation, CERN, Geneva, Switzerland, March 31, 1998.
72. InfoHarness and InfoQuilt: Steps towards enabling Infocasm through Semantic Interoperability," colloquium talk, University of California, Santa Barbara, March 5, 1998.
73. "InfoHarness and InfoQuilt Projects", CNN Interactive, Atlanta, GA, April 21, 1997.
74. "Information (Super) Highway: New Opportunities for Global Competitive Advantage for Developing Countries", H. M. College, Ahmedabad, India, September 12, 1996.
75. "Information (Super) Highway: New Opportunities for Global Competitive Advantage for Developing Countries", IEEE Computer Society, Gujarat, India, September 11, 1996.
76. "Media-independent Correlation and Access of Heterogeneous Digital Information", Indian Space Research Organization, Ahmedabad, India, September 9, 1996.
77. "Adapt/X Harness System for Managing Heterogeneous Information in Internet and Intranets", Conference on Very Large Databases, Bombay, India, September 4, 1996.
78. "Transactional Workflow Management: Research, Technology and Applications", Indian Institute of Management, Ahmedabad, India, December 1994.
79. "Issues in Interoperable Information Systems", Indian Institute of Technology, Bombay, India, December 29, 1994.
80. "Multi-Database Systems: Research and Reality", ACM Lecture Series Talk, Univ. of Michigan, November 1994.
81. "Transactional Workflow Systems", ACM Lecture Series Talk, Wayne State University, Detroit, Michigan, November 17, 1994.
82. "Multi-Database Systems: Research and Reality", ACM Lecture Series Talk, ACM Professional Chapter, Ann Arbor, Michigan, November 17, 1994.
83. "Multi-system Applications and Transactional Workflows", George Mason University, Fairfax, VA, May 1994.

84. "Multisystem Applications and Transactional Workflows", University of California, Riverside, April 1994.
85. "Transactional Workflow Management: Research, Technology and Applications", State University of New York, Albany, March 1994.
86. "Transactional Workflow Management: Research and Applications", Bell Labs, Murray Hill, NJ, July 1993.
87. "Transactional Workflow Management: Research and Applications", Matsushita Information Technology Laboratory, Princeton, NJ, June 1993.
88. "Management of Interdependent Data: Specification, Enforcement and Applications", University of Zurich, Zurich, Switzerland, May 1993.
89. "Schematic and Semantic Heterogeneity", ETH (Swiss Federal Insu. of Technology), Zurich, Switzerland, May 1993.
90. "Multisystem Workflow Applications", University of Munich, April 1993.
91. "Management of Interdependent Data: Specification, Enforcement and Applications", George Mason University, Fairfax, VA, March 1993.
92. "BERDI: A Schema Design, Analysis and Integration Toolkit", Hewlett Packard Labs, February 1993.
93. "The CHIME Project", Microelectronics and Computer Corporation, Austin, Texas, January 1993.
94. "Multidatabase Systems: Research and Reality", Queensland University of Technology, Brisbane, Australia, November 1992.
95. "Federated Databases for Managing Distributed, Heterogeneous, and Autonomous Databases", La Trobe University, Bundoora, Australia, November 1992.
96. "Management of Interdependent Data: Specification, Enforcement and Applications", ETH (Swiss Federal Inst. of Technology), Zurich, Switzerland, October 1992.
97. "Management of Interdependent Data", IBM-European Networking Center and Scientific Research Heidelberg, Heidelberg, Germany, October 1992.
98. "Transactional Workflow Management: Specification and Enforcement", IPSI-GMD, Darmstadt, Germany, October 1992.
99. "Federated Databases for Managing Distributed, Heterogeneous, and Autonomous Databases", Univ. Ulm, October 1992.
100. "The BrAID System for Integrating AI and DBMS Systems", Fern Universitat, Hagen, Germany, October 1992.
101. "Multidatabase Systems: Research and Reality", Simon Fraser University, Vancouver, Canada, August 1992.
102. "Management of Interdependent Data in Multidatabase Systems", U of Maryland-BC, May 1992.
103. "Management of Interdependent Data", IPSI-GMD, Darmstadt, Germany, March 1992.
104. "Semantics Issues in Schema Integration", IPSI-GMD, Darmstadt, Germany, March 1992.
105. "Federated Databases for Managing Distributed, Heterogeneous, and Autonomous Databases", CRAI, Italy, March 1992.
106. "Data Consistency and Work Flow Management in Multidatabase Systems", VTT (National Research Center of Finland), Helsinki, Finland, March 1992.
107. "Management of Interdependent Data in Multidatabase Systems", Matsushita Information Technology Laboratory, Princeton, NJ, February 1992.
108. "Management of Interdependent Data: A Case Study at Bellcore", Microelectronics and Computer Corporation, Austin, Texas, January 1992.

109. "Research Issues in Schema Integration and View Update", University of Houston, October 1991.
110. "Federated Database Systems", Boeing, Seattle, WA, October 1991.
111. "Federated Database Systems", ACM professional chapters at Piscataway, NJ, April 1991.
112. "Schematic and Semantic Issues in Schema Integration", New Jersey Institute of Technology, Newark, March 1991.
113. "Federated Database Systems: Architecture and Alternatives", New Jersey Institute of Technology, Newark, January 1991.
114. "Integrating Heterogeneous Distributed Databases: Requirements, Concepts and Solutions", New Jersey Institute of Technology, Newark, October 1990.
115. "Research Issues in Schema Integration and View Update", Purdue University, West Lafayette, Indiana, October 1990.
116. "Federated Databases for Managing Distributed, Heterogeneous, and Autonomous Databases", IBM-European Networking Center and Scientific Research Heidelberg, Germany, August 1990.
117. "View Update Using Knowledge at View Definition and View Update Time", IPSI-GMD, Darmstadt, Germany, August 1990.
118. "Federated Databases for Managing Distributed, Heterogeneous, and Autonomous Databases", Fern Universitat, Hagen, Germany, August 1990.
119. "Federated Database Systems", Bell Communications Research, Red Bank, New Jersey, February 1990.
120. "Integrating Heterogeneous Distributed Databases: Requirements, Concepts and Solutions", University of California, Los Angeles, October 1988.
121. "View Update Using Knowledge at View Definition and View Update Time", Fern Universitat, Hagen, Germany, March 1988.
122. "View Update Using Knowledge at View Definition and View Update Time", INRIA, France, March 1988.
123. "View Update Using Knowledge at View Definition and View Update Time", Unisys West Coast Research Center, April 1987.
124. "Integrating Heterogeneous Distributed Databases", University of Minnesota, September 1986.

Technical Meetings (Conferences, Workshop) Organization

- **Panel Chair**, Federated Conferences ODBASE/CooPIS 2002, Irvine CA, October 2002.
- **Steering Committee**, Science on the Semantic Web: Building the Next Generation of Environmental Information Systems, Rutgers University, NJ, October 24, 25.
- **Co-Chair**, Workgroup on Semantic Web, NSF 2002 Workshop on Information and Data Management, Arlington, VA, May 5-7, 2002.
- **Organizer/Chair**, NSF-EU Invitational Workshop on Database and Information Systems Research for Semantic Web and Enterprises, (Robert Meersman, Co-Organizer), Amicalola State Park, GA, April 3-5, 2002.
- **Co-Organizer**, The Second International Workshop on the Semantic Web – SemWeb'2001 at WWW10, Hongkong, May 1, 2001.
- **Program co-chair**, IEEE conference on Advances in Digital Library, May 2000, Washington DC.

- **Steering Committee Chair and founder**, 1st ACM International Conference on Work Activity Coordination and Collaboration, February 1999, San Francisco, CA.
- **Co-Director**, NATO Advanced Study Institute on Workflow Systems and Interoperability, August 12-22, 1997, Istanbul, Turkey.
- **Panel Chair**, 5th International Conference on Information and Knowledge Management (CIKM'96), Rockville, MD, November 12–16, 1996.
- **Panel Co-Chair**, The 22nd International Conference on Very Large Data Bases, Bombay, India, September 1996.
- **General (Co-)Chair**, the 1st International Conference on Interoperable and Cooperative Information Systems (CoopIS '96), June 1996.
- **Program Chair** and Organizing Committee Chair, NSF workshop on Workflow and Process Automation: State-of-the-art and Future Directions, May 1996.
- Founding Member and **Executive Committee Member**/Treasurer, International Foundation on Cooperative Information Systems, 1995–present.
- **Steering Committee Member**, International Conference on Parallel and Distributed Information Systems, 1995–present.
- Panel Chair and Member of Organization Committee, the 6th IFIP TC-2 Working Conference on Data Semantics (DS-6), Stone Mountain, GA, June 1995.
- **Program (Co-)Chair**, the 3rd International Conference on Parallel and Distributed Information Systems, 1994.
- **Program Vice Chair**, Technology and Applications Track, the 10th International Conference on Data Engineering, 1994.
- **Program (Co-)Chair** for the 3rd RIDE–International Workshop on Interoperability in Multidatabase Systems, April 1993.
- **General Chair**, the 1st International Conference on Parallel and Distributed Information Systems, 1991.
- **Tutorial Chair** for the ACM SIGMOD Conference, 1993.
- **Tutorial Chair** for the 7th IEEE International Conference on Data Engineering, 1988 and 1991.
- **Secretary and Treasurer** of the executive committee of the IEEE CS TC on Data Engineering, 1992–present.
- **Publication Chair** for the 1st International Workshop on Interoperability in Multidatabase Systems (IMS '91) April 1991.
- **Program Vice-Chair** for the 6th IEEE International Conference on Data Engineering, 1990.
- **Chair** for the Workshop on Management of Interdependent Data in Bellcore and BCCS, 1990.
- **Program Vice-Chair** for the 5th IEEE International Conference on Data Engineering, 1989.
- **Associate Editor** for SIGMOD Record, 1988–present.
- **Tutorial Chair** for the 4th IEEE International Conference on Data Engineering, 1988.

Program Committee Member for the International Conferences and Workshops

1. 4th International Conference on Web Information Systems Engineering (WISE'03), Roma, December 10-12, 2003.
2. 2nd International Conference on Ontologies, DataBases, and Applications of Semantics for Large Scale Information Systems (ODBASE'03), Sicily. November 3-7 2003.

3. 12th International Conference on Information and Knowledge Management (CIKM 2003), New Orleans, LA, November 2-8 2003.
4. 2nd International Semantic Web Conference, Sanibel, Florida, October 20-24, 2003. (Senior PC Member)
5. The 2003 IEEE/WIC International Conference on Intelligent Agent Technology (IAT 2003), Beijing, China, October 13-17, 2003.
6. IEEE Conference on E-Commerce (CEC03), Newport Beach, CA, June 24-27 2003.
7. 7th International Workshop CIA-2003 on Cooperative Information Agents, Helsinki, Finland, August 27 - 29, 2003.
8. 4th Annual International Conference on Object-Oriented and Internet-based Technologies, Concepts, and Applications for a Networked World, Thuringia, Germany, September 22-25, 2002.
9. Workshop on Semantic Web and Databases, Berlin, Germany, September 13-14, 2004.
10. 7th International Workshop on Cooperative Information Agents (CIA 2003), Helsinki, Finland, August 27 – 29, 2003.
11. IEEE International Conference on Electronic Commerce (CEC'03), Newport Beach, CA, June, 2003.
12. 13th International World Wide Web Conference (WWW2003), Budapest, Hungary, May 20-24, 2003.
13. 3rd Annual International Conference on Object-Oriented and Internet-based Technologies, Concepts, and Applications for a Networked World, Thuringia, Germany, October 7-10, 2002.
14. 2nd International Workshop on Databases, Documents, and Information Fusion (DBFusion 2002), University of Karlsruhe, Germany, July 4-5, 2002.
15. 1st International Conference on Ontologies, DataBases, and Applications of Semantics for Large Scale Information Systems (ODBASE'02), Oct. 29-31, 2002.
16. 6th Intl Workshop CIA-2002 on Cooperative Information Agents, Madrid, Spain,, September 18-22, 2002.
17. 1st WWW 2002 Workshop on Real World RDF and Semantic Web Applications, Honolulu, Hawaii, USA, May 7, 2002.
18. 2nd International Workshop on Databases, Documents, and Information Fusion, Information Integration and Mining in Databases and on the Web, July 4-5, 2002
19. 1st International Semantic Web Conference (ISWC-2002), Sardinia, Italy, June 10-12, 2002.
20. 11th International World Wide Web Conference (WWW2002)- Semantic Web Track, Hawaii, May 6-11, 2002.
21. 6th Intl Conference on Cooperative Information Systems (CoopIS 2001), Trento, Italy, September 5-7, 2001.
22. 5th Intl Workshop CIA-2001 on Cooperative Information Agents, Modena, Italy, September 6 - 8, 2001.
23. International Semantic Web Workshop: Infrastructure and Applications for the Semantic Web, Stanford, July 30-31, 2001.
24. Autonomous Agents 2001, Montreal, Canada, 28 May - 1 June 2001
25. 2nd International Workshop on the Semantic Web – SemWeb'2001 at WWW10, Hongkong, May 1, 2001.
26. International Workshop on Information Integration on the Web - Technologies and Applications, Rio de Janeiro, Brazil, April 9-11, 2001
27. 5th Intl Workshop on Groupware (CRIWG'99) September 21-24, 1999, Cancun, Mexico.

28. 3rd International Workshop on Cooperative Information Agents CIA-99 to be held in Stockholm (Sweden), July 31 - August 2, 1999.
29. 9th RIDE Intl. Workshop on Information Technology for Virtual Enterprises, Sydney, Australia, March 23-24 1999.
30. Interop'99 2nd International Conference on Interoperating Geographic Information Systems, Zurich, Switzerland, March 10-12 1999.
31. 5th International Conference of Foundations of Data Organization (FODO'98), Kobe Japan, November 12-14, 1998.
32. CSCW Workshop on Adaptive Workflow Systems, Seattle, WA, November 14, 1998.
33. 11th International Conference on Parallel and Distributed Computing Systems, September 2-4, 1998, Chicago, IL.
34. International Workshop on Workflow Management, WFM'98, Vienna, Austria, August 28, 1998.
35. 3rd IFCIS International Conference on Cooperative Information Systems (CoopIS'98), August 1998, New York, NY.
36. 18th Intl. Conf. on Distributed Computing Systems, Amsterdam, The Netherlands, May 1998.
37. 6th Intl. Conf. on Extending Data Base Technology (EDBT'98), Valencia, Spain, March 23-27, 1998.
38. ACM SIGMOD Conference, Seattle, Washington, June 2-4, 1998.
39. Visual '97, the Second Intl. Conf. on Visual Information Systems, San Diego, December, 15-17, 1997.
40. Intl. Conf. on Management of Data (COMAD'97), Madras, India, December 1997.
41. 8th Intl. Conf. on Database and Expert Systems Applications (DEXA'97), Toulouse, France, September 1-5, 1997.
42. 7th IFIP 2.6 Working Conference on Database Semantics (DS-7), Leysin, Switzerland, October, 7-10, 1997.
43. 2nd IEEE Metadata Conference, Silver Spring, Maryland, September 16-17.
44. 1st IFCIS Conf. on Cooperative Information Systems (COOPIS'96), Belgium, June 1996.
45. 5th Intl. Conf. on Extending Database Technology (EDBT'95), Avignon, France, March 1996
46. 4th Intl. Conf. on Information and Knowledge Management, Baltimore, MD, November 1995
47. 7th Intl. Conf. on Management of Data (COMAD'95), Pune, India, December 1995
48. 5th IEEE RIDE Workshop on Interoperability of Nontraditional Databases (RIDE-IND'96)
49. 12th IEEE Intl. Conference on Data Engineering, New Orleans, February. 1996
50. 14th Object-Oriented and Entity Relationship Modeling'95 (OO-ER95, 12/95, Gold Coast, Australia
51. IFIP DS-6 Database Application Semantics (5/95, Georgia)
52. 2nd Next Generation Information Technologies and Systems (NGITS-95, 6/95, Israel)
53. 4th Extending Database Technology '95 (EDBT'95)
54. 11th IEEE Intl. Conference on Data Engineering (Taipei, Taiwan, 04/95)

55. 20th Intl. Conf. on Very Large Data Bases (VLDB-94, 9/94, Chile)
56. 1st Application of Database Systems '94 (6/94, Sweden)
57. Cooperative Information Systems (CoopIS-94, 5/94, Canada)
58. 10th IEEE Intl. Conference on Data Engineering (04/94).
59. 2nd Intl. Conference on Information and Knowledge Management (1993).
60. 9th IEEE Intl. Conference on Data Engineering (Vienna, 04/93).
61. 2nd Parallel & Distributed Information Systems (San Diego PDIS-93, 01/93).
62. IFIP DS-5 Semantics of Interoperable Data Base Systems-92 (Australia 11/92).
63. RIDE IEEE Intl. Workshop on Transaction and Query Processing (Phoenix 02/92).
64. 8th IEEE Intl. Conference on Data Engineering (Phoenix, 02/92).
65. 1st Intl. Conference on Information and Knowledge Management (1991).
66. Distributed Computing System (1991).
67. RIDE IEEE Intl. Workshop on Interoperability in Multidatabase Systems (Japan 04/91).
68. 7th IEEE Intl. Conference on Data Engineering (Japan, 04/91).
69. COMAD/Management of Data (Bombay 12/91).
70. PARBASE-90 (Florida, 1990).
71. 2nd Intl. Symposium on Database in Parallel and Distributed Systems (1990)
72. 1st Intl. Symposium on Database in Parallel and Distributed Systems (1988)
73. 4th IEEE Intl. Conference on Data Engineering (Los Angeles, 02/88)

Other Services (Sessions, Reviews, Funding Panels)

Services to National and international funding Agencies as Proposal Reviewer

- **USA** (National Science Foundation), since 1987 (reviewed numerous research proposals for funding). Served on panels.
- **Canada** (National Science and Engineering Research Council) NSF equivalent–national research sponsorship organization (reviewer for several years).
- **Austria** (Fonds zur Forderung der: FWF) 1999.
- **Norway** (Research Council of Norway) 1996, 1997 and 1998.
- **Israel** (The Israel Science Foundation), 1996.
- **Hong Kong** (National Research Grants Council), 1996.

Chaired technical sessions

- 2nd International Workshop on the Semantic Web – SemWeb'2001 at WWW10, Hongkong, May 1, 2001.
- 8th IFIP 2.6 Working Conference on Database Semantics (DS-8), Rotorua, New Zealand, January 4-8, 1999
- IFIPWG 11.5 Conference on Integrity and Control in Information Systems, Zurich, Switzerland, December 5, 1997.
- 12th IEEE Intl. Conference on Data Engineering, (New Orleans, 02/96).
- 11th IEEE Intl. Conference on Data Engineering, (Taiwan, 04/95).
- 4th IEEE RIDE Intl. Workshop on Distributed Object Management (RIDE DOM'95), 3/95, Taiwan

- 10th IEEE Intl. Conference on Data Engineering (04/94).
- 9th IEEE Intl. Conference on Data Engineering (Vienna, 04/93).
- 7th IEEE Intl. Conference on Data Engineering (Japan, 04/91).
- 6th IEEE Intl. Conference on Data Engineering (Los Angeles, 02/90).

Services to Journals as Referee

- IEEE Trans. on Knowledge and Data Engineering
- VLDB Journal
- Information Systems
- Intelligent Information Systems
- Distributed Systems Engineering
- Distributed and Parallel Databases
- Intelligent and Cooperative Information Systems
- ACM Transactions on Database systems
- ACM Transactions on Information Systems
- IEEE Transaction on Computers
- Computer
- ACM Computing Surveys
- IEEE Transaction on Software Engineering
- IEEE Transaction on Knowledge and Data Engineering,
- Journal of Selected Areas in Communication
- Information Sciences
- Software–Practice and Experiences,
- Information and Software Technology, and many more.

Society Memberships

- Member, Association for Computing Machinery, including SIGMOD, 81–present, SIGGROUP, 97 – present.
- Member, IEEE and IEEE Computer Society, including Technical Committee on Database Engineering, 81–present.

Curriculum Development (Initiatives and Courses)

Initiatives

- On the steering committee of New Media Institute, approved starting Fall 2000. A campus-wide initiative covering many disciplines.
- On the steering committee of Masters in Internet Technology program, expected to be approved starting Fall 2000. An inter-disciplinary professional degree program proposed by Management Sciences (Business School), Computer Science, and School of Journalism.

New Courses Defined/Offered

- Semantic Enterprise (defined and offered Fall 2002). For advanced graduate students, the earliest offering of a course on this topic in the world.

- Semantic Web (defined and offered Spring 2002). For advanced graduate students, one of the earliest offering of a course on this topic in the world.
- Global Information Systems: Promises and Challenges (defined and offered since 1995). For Computer Science seniors and graduate students, also taken often by students in other disciplines. One of the earliest Internet-related courses, with innovative mix of internet technologies and information systems.
- Enterprise Integration (defined and offered from 1995 - 2000). A one-of-a-kind course for Computer Science graduate students, sometimes taken by students in management. Covers issues in complex enterprise-wide solutions in real-world. Main emphasis is on distributed computing and information systems and e-commerce technologies, but also shares real-world experiences.
- Internet Programming, 2000. For the new Masters in Internet Technology program.
- Internet Information Systems, 2000. For the new Masters in Internet Technology program.

External Curriculum Advising/Accreditation:

Program Evaluator/Accreditation Visitor for the Computer Sciences Accreditation Board (sponsored by IEEE and ACM), 1993–1998.

Instruction and Academic Services (since 1994)

Courses taught

CS 837	Advanced Database Systems	W '95
CS 490	Special Topics in Computer Science	Sp '95
CS 690	Special Topics in Computer Science	Sp '95
CS 203	Programming Project Design	F '95
CS 490	Global Information Systems	W '96
CS 690	Global Information Systems	W '96
CS 835	Enterprise Integration	W '96
CS 203	Programming Project Designs	F '96
CS 490	Global Information Systems	W '97
CS 690	Global Information Systems	W '97
CS 835	Enterprise Integration	W '97
CS 203	Programming Project Designs	F '97
CS 490	Global Information Systems	W '96
CS 690	Global Information Systems	W '98
CS 835	Enterprise Integration	W '98
CS 690	Advanced Global Information Systems	Sp '98
CSCI6350	Global Information Systems	F '99
CSCI8350	Enterprise Integration	Sp '99
CSCI8350	Enterprise Integration (w/ Arpinar)	Sp '00
CSCI8350	Enterprise Integration (w/ Cardoso)	Sp '01
CSCI8350	Semantic Web	Sp '02
CSCI8350	Semantic Enterprise	F '02
CSCI4350/6350	Global Information Systems	S '03

Supervision of Student Research

Major Professor for the students

- Vipul Kashyap (Ph.D.), "Information Brokering over Heterogeneous Digital Data,"

October 1997. (Note: Student's degree is from Rutgers University, NJ, but Dr. Sheth is his main and only research advisor.)

- Devashish Worah (M.S.), "Error Handling and Recovery for the ORBWork Workflow Enactment Service in METEOR," June 1997.
- Srilekha Mudumbai (M.S.), "ZEBRA Image Access System," June 1997.
- Selvam Velmurugan (M.S.), "Collaborative Tele-Consulting for Healthcare," September 1997.
- Krishnan Parsuraman (M.S.), "Agent Support in the InfoQuilt System," December 1998.
- Clemens Bertram (M.S.), "Metadata and Ontology Based Query Processing in the InfoQuilt System, December 1998.
- Vineet Mahajan, M.S., "A Multi-Agent System for Metadata Management and Information Brokering ", December 1999.
- Subrajit Ray, M.S., "Ontology-based Media Independent Correlation of Information Across Heterogeneous Distributed Sources", December 1999.
- Mukesh Guntamadugu, M.S., "[MÉTIS: Automating Metabase Creation from Multiple Heterogeneous Sources](#)," July 2000.
- Dilpreet Singh "[An Agent Based Architecture For Query Planning And Cost Modeling Of Web Sources](#)," July 2000.
- Sriram Lakshminarayan, "Semantic Interoperability in Digital Libraries using Inter-Ontological Relationships," July 2000.
- Narayan Palsena. "A Collaborative Approach to Learning using Information Landscapes". *Masters Thesis. University of Georgia*, 2000.
- Zhongqiao Li, M.S., "Using Collaboration Task in OrbWork Enactment System for METEOR Workflow Management System, August 2000.
- Zongwei Luo, Ph.D., Knowledge Sharing, Coordinated Exception Handling, and Intelligent Problem Solving for Cross-Organizational Business Processes, February 2001.
- Sanjeev Thacker, M.S., "Knowledge Modeling for Study of Domains and Inter-domain Relationships - A Learning Paradigm," July 2001.
- Shuchi Patel, M.S., "Planning and Optimizing Semantic Information Requests on Heterogeneous Information Sources Using Semantically Modeled Domain and Source Characteristics," July 2001.
- Wonjung Kim, M.S., "[Knowledge Based Personalization](#)," December 2001.
- Madhan Arumugam, M.S., "[The Peer-to-Peer Semantic Web : A Distributed Environment for Sharing Semantic Knowledge on the Web](#)", December 2001.
- Jorge Cardoso, Ph.D., [Quality of Service and Semantic Workflow Composition](#), August 2002.

External Academic Advising

- External expert reviewer for Ph.D. candidate Manual Garcia Solaco, Facultat d'Informatica de la Universitat Politecnica de Catalunya, Barcelona, 1994.
- External advisor and dissertation committee member for Ph.D. student George Karabatis, Univ. of Houston, "Management of Interdependent Data ub a Multidatabase Environment: A Polytransaction Approach", May 1995.
- Member of Ph.D. dissertation committee for Quiang Zhu, "Estimating Local Cost Parameters for Global Query Optimization in a Multidatabase System", University of Waterloo, Canada, August 1995.

Supervised research of Eduardo Mena (Ph.D. candidate, Basque State University, Spain) during his one year work at LSDIS Lab, UGA in 1996 (12 months).

Supervising research of Isabel Scheiding (Ph.D. candidate, University of Frankfurt, Germany) during her work at LSDIS Lab, UGA between July 1997 and December 1997.

Supervised research of Tascisio Lima (Ph.D. student, University of Brazil) during his work at LSDIS Lab, UGA, August 1998- June 2000.

University and Public Service

Served as the primary consultant and directed development to benefit UGA administration in the form of CAPA for the Vice President for Academic Affairs (7/96 – 6/97) and GradWeb for the Graduate School (7/97 – 6/97). Both are fully functional/operational Web-based applications.

- GIScience Faculty Resource at UGA, 1997 - present. <http://summer2002.ucgis2.org/>
- Mentored one faculty and one student under 1995 Summer Undergraduate Research Program for Minority Students and Faculty in Minority Institutions.
- Mentored two students under 1996 Summer Undergraduate Research Program for Minority Students.
- Occasionally given talks and demonstrations on Computers for Kids and on Culture at Athens Montessori.

Service provided in the form of committee participation is as follows.

- Member of Graduate Faculty, 1994 – present.
- Participation in Departmental Committees:
 - Equipment Committee, 1994 – present.
 - Faculty Search Committee, 1995, 2000
 - Graduate Admissions Committee, 1996 – present.
 - Space Committee, 1997 – 1998.