

## CURRICULUM VITAE

**Name:** Rajshekhar Sunderraman  
**Rank:** Associate Professor  
**Department:** Computer Science, Georgia State University  
**Web Page:** <http://tinman.cs.gsu.edu/~raj>

### I. EDUCATION

- Ph.D. Computer Science, Iowa State University, Ames, Iowa (1988).  
Dissertation: *Indefinite and Maybe Information in Deductive Relational Databases*.  
Advisor: Ken-Chih Liu
- M. Tech. Computer Engineering, Indian Institute of Technology (IIT), Delhi, India (1982).
- B.E. (Honors) Electronics Engineering, Birla Institute of Technology and Science (BITS), Pilani, India (1980).

### II. PROFESSIONAL CREDENTIALS

1999- Associate Professor (tenured) and Director of Graduate Studies  
Department of Computer Science, Georgia State University, Atlanta, Georgia

1996-1999 Assistant Professor (tenure-track)  
Department of Mathematics and Computer Science, Georgia State University,  
Atlanta, Georgia

1994-1996 Associate Professor (tenured) and Chair (Interim Chair from Dec 94-June 95)  
Department of Computer Science, Wichita State University, Wichita, Kansas

1988-1994 Assistant Professor (tenure-track)  
Department of Computer Science, Wichita State University, Wichita, Kansas

1982-1988 Graduate Teaching Assistant  
Department of Computer Science, Iowa State University, Ames, Iowa

### III. TEACHING EXPERIENCE (ACADEMIC)

1982-1988: Iowa State University, Graduate Teaching Assistant

1988-1996: Wichita State University, Assistant (88-94) and Associate Professor (94-96)

1996-present: Georgia State University, Assistant (96-99) and Associate Professor (99-present)

#### **IV. ADMINISTRATIVE EXPERIENCE (ACADEMIC)**

(Key Committees and service roles at GSU and Wichita State University)

##### **At Georgia State University (1996-present)**

##### **1999-present: Director of Graduate Studies, Computer Science Department.**

As Director of Graduate Studies for the past six years, I am intimately involved in all matters pertaining to graduate education in the department. I take pride in the tremendous strides taken by our graduate programs since 1999. We have grown from a graduate program of about 50 M.S. students in 1999 to a robust and sizeable program with about 55 Ph.D. students and about 65 M.S. students in 2005. In the past four years, we have graduated approximately 120 M.S. students and the first 2 Ph.D. students in Fall 2004. We expect a steady graduation rate of 6 to 8 Ph.D. students each year in the near future. I have personally reviewed hundreds of applications each year and have made final decisions on each one of them. I have worked with each of our current students to review their plans of study and have performed graduation audits on each one who has graduated. I have also been involved in various aspects of the M.S. and Ph.D. degree programs including fine tuning degree requirements, making catalog changes, and introduction of the bioinformatics concentrations in M.S. as well as Ph.D. programs. I have also managed the graduate student budget for assistantships each year by planning and distributing the assistantship awards each year. In addition, I have personally made all GTA assignments, grading and lab assistant assignments, and have interfaced with the departmental staff on student payroll matters. I have conducted the Ph.D. qualifier exam twice a year. I have also organized the CSc 8900/9900 Graduate Seminar in which new students are introduced to the aspects of graduate study and faculty research interests.

##### **College/University Wide Service**

##### **2005-present: University Senate.**

As a new senator starting April 2005, I am a member of two committees: Information Systems and Technology (ISAT) committee and Budget committee.

##### **2002-present: Member of College Graduate Committee (formerly Graduate Council).**

As member of this committee, I have participated in all discussion pertaining to graduate matters college-wide and have been involved in the formulation of several policies.

##### **2003-04: Member of Petitions Sub-Committee, Graduate Council, College of Arts and Sciences, Georgia State University.**

As member of the petitions committee, I have reviewed numerous petitions by graduate students in the College of Arts and Sciences to deviate from regulations. This committee met once each semester and reviewed about 20 petitions each time.

**2004-2005: Member of Triennial Evaluation Committee for Dean of Arts and Sciences (Dean Adamson)**

As member of this committee, I have analyzed the survey data, discussed the analysis, and wrote one section of the report submitted to the Provost.

**2002: Chair of Triennial Evaluation Committee for Chair of Computer Science Department (Dr. Fraser).**

As chair of this committee, I conducted the review for Dr. Fraser. The process involved distributing a survey to eligible faculty, collecting responses, tabulating, and assessing the data to write a final report. This report was then presented to the Dean in a meeting.

**1999-2002: Member of the Ad-Hoc Committee to Respond to Yamacraw RFP.**

I actively assisted the Chair in preparing proposals each year to respond to the Yamacraw Request for Proposals for faculty positions.

**Departmental Service**

**2000-present: Chair of Ph.D. Qualifier Examinations Committee**

I have coordinated the Ph.D. Qualifier Examination since it was first offered in Fall 2000. The exam is offered to students twice each year (Fall and Spring). I have solicited students to take the exam, arranged for a time and venue, coordinated the preparation of the exam through the 3 sub-committees, arranged for the proctoring of the exam, coordinated the grading of the exam, and finalized the results with the help of the sub-committee chairs. I have also communicated the results of the exam to the students.

**2000-present: Chair of Ph.D. Qualifier Examinations Sub-Committee in Automata area**

As chair of this sub-committee, I have prepared questions, proctored and graded the exams, and finalized the results.

**2001-present: Member of Executive Committee, Computer Science Department**

As member of the executive committee, I have advised the Chair of the Department on many issues. I have given recommendations on Merit Pay Raises each year based on the annual reports and teaching portfolios submitted by faculty.

**1999-present: Search Committee (chair 99-03, member 03-present), Computer Science Department**

As chair of the search committee for 4 years and as a member for the past 2 years, I have been actively involved in all faculty searches in the past 6 years when the department has hired 11

tenure track faculty and 4 lecturers. I have given valuable advice to the Chair in the search process.

**2004-present: Member of Computer Security Advisory Committee, Computer Science Department**

As member of this committee I have advised the Chair of the department on computer security matters on numerous occasions.

**2004-present: Member, Students Learning Outcomes Committee**

As member of this committee, I have been involved in the development of learning outcomes as well as assessment instruments for each of our degree programs. I have also been involved in the data collection process.

**1999-present: Chair of Graduate Committee, Computer Science Department**

As chair of the Graduate Committee, I have periodically reviewed catalog changes to each of our graduate programs and concentrations. I have also coordinated catalog changes concerning our graduate coursework. I have also developed several policies for graduate students involving assistantships, ESL requirement compliance, proctoring and student contact.

**1999-present: Promotions and Tenure Committee, Computer Science Department**

In this mandatory committee, I have participated in the tenure and promotion reviews as well as mid-tenure reviews for several faculty members including writing final reports for many. In recent years, I have also advised the Chair on contract renewal for un-tenured faculty.

**2000-2004: Contract Renewal Advisory Committee, Computer Science Department**

I have advised the Chair on contract renewals of un-tenured faculty on a yearly basis until 2004.

**1998-1999: Member of Ad-Hoc Committee for Ph.D. Program Proposal.**

I actively participated in the preparation of the Ph.D. program proposal. I also actively assisted the Chair in preparing the response to the Board of Regents based on which they approved the Ph.D. program.

**1998-1999: Member of Joint Departmental Computing Advisory Committee (with Mathematics)**

As member of this committee, I have advised the Chair of the joint department on computing matters.

**1996-1998: Member of Curriculum Committee, Department of Mathematics and Computer Science**

As member of the curriculum committee, I contributed significantly to the current B.S. Computer Science curriculum including the introduction of Java and C++ into the curriculum and addition of various concentrations to enable students to get sufficient depth and breadth in the discipline.

**1996-1998: Member of Textbook Selection Committee, Department of Mathematics and Computer Science**

As a member of this committee, I reviewed many textbooks and suggested new ones for all 300-level and below courses.

**1996-1998: Member of Computer Science Committee, Department of Mathematics and Computer Science**

As member of this committee, I participated and contributed to the Computer Science issues in the department.

**At Wichita State University (1988-1996)**

**1994-1996: Chair, Computer Science Department.**

Due to the sudden resignation of the chair, I was asked by the Dean to step in as interim Chair of the CS Department in December 1994. In July 1995, I was appointed Chair of the CS department. Within a year, I decided to move on to Georgia State University.

**College/University Wide Service**

**1992-1996: Member of Computing and Telecommunications Strategy Planning, University Committee.**

As a member of this important university wide committee, I participated in the improvement of computing and telecommunication facilities across the university. Several university wide initiatives such as digital voice mail boxes, university web site, university wide servers etc were approved and installed during my tenure in this committee.

**1992-1996: Member of Liberal Arts and Science College Computer Use Committee.**

As member of this committee, I advised the Dean's office on College wide computing issues.

**1992-1996: Member of Natural Science Advisory Committee for Program Review, Liberal Arts and Science College.**

As member of this committee, I performed college wide reviews of undergraduate as well as graduate programs.

### **Departmental Service**

#### **1988-1994: Chair of Curriculum, Communications, Search, Library, and Equipment Committees, Department of Computer Science.**

As chair of the search committee, successfully recruited 6 tenure track faculty, 1 external chair, and several instructors. As chair of Curriculum committee, created an updated B.S. curriculum in 1992 in tune with ACM and IEEE recommendations.

## **V. BUSINESS AND PROFESSIONAL EXPERIENCE**

- 2000-01: Software Consultant, Institute for Customer Relationship Management, Atlanta.
- 2005: Database Consultant, Life Span Services Inc., Atlanta.

## **VI. COURSES TAUGHT**

### **A. CLASSROOM TAUGHT COURSES:**

#### **At Georgia State University (1996-present)**

- CSc 8711, Databases and the Web
- CSc 4340/6340, Introduction to Compilers
- CSc 4710/6710, Database Systems
- CSc 8710, Deductive Databases and Logic Programming
- CSc 3320 System-Level Programming
- CSc 2310, Principles of Computer Programming I (Java)
- CSc 3210, Computer Organization and Programming
- CSc 481/681, Automata
- CSc 227, Principles of Programming II (Pascal)
- CSc 226, Principles of Programming I (Pascal)

#### **At Wichita State University (1988-1996)**

- CS 210, Introduction to Computer Science (Breadth First)
- CS 320, Discrete Structures for Computer Science
- CS 350, Oracle Programming
- CS 405, File Systems
- CS 410, Programming Paradigms
- CS 420, Automata and Formal Languages
- CS 440, Computer Architecture
- CS 560, Analysis of Algorithms

- CS 665, Introduction to Database Systems
- CS 697, Internet Programming
- CS 771, Artificial Intelligence
- CS 750, Data Structures
- CS 821, Advanced Algorithms
- CS 862, Advanced Database Systems

## **B. RESEARCH CLASSES**

### **Ph.D. Dissertations Directed (CSc 9999)**

#### **Current:**

1. Praveen Madiraju, *Global Constraint Checking and Querying in Multi-Databases and XML Databases*, expected to graduate in Summer 2005.
2. Haibin Wang, *Representing and Manipulating Fuzzy, Vague, Neutrosophic, and Inconsistent Data in Databases*, expected to graduate in 2005.
3. Yuanchen He, *Efficient XML Query Processing and Translation Schemes using XML to Relational Mappings*, expected to graduate in 2006.
4. Hao Tian, *Data Modeling for neuro-informatics*, expected to graduate in 2006.
5. Yanchao Wang, *Data Modeling for bio-informatics*, expected to graduate in 2006.

### **M.S. Thesis Directed (Csc 8999)**

#### **At Georgia State University**

1. Anila Saeed, *A Mobile Agent Based Approach to Querying a System of Databases*, Fall 2004.
2. Alka Mukker, *Data Integration with Dynamic XML and Web Services*, Fall 2004.
3. Nabanita Banerjee, *Open Archive Initiative Protocol in Digital Library with UDDI Registry*, Fall 2004.
4. Lan Lan, *Web Application System for Data Exchange Among Relational Databases*, Summer 2004.
5. Shasha Luo, *XML Querying using XML-Relational Mappings: An Implementation*, Spring 2004.
6. Arunkumar Mothe, *Querying Unconventional Data Sources, Design and Implementation of a Java API*, Fall 2003.
7. Yanchao Wang, *Web Services for Global Query*, Summer 2003.
8. Bai Hong, *Dynamic Composition of Web Services*, Summer 2003.
9. Laxmikanth Malladi, *SyDQL: A Java API for Global Querying*, Summer 2002.
10. Wei Chen, *XML to Object-Relational Mapping and Querying on the Web*, Spring 2002.
11. Meimei Wu, *Dynamic XSL Stylesheet Generation for XML Data*, Spring 2001.
12. Radhika Venkataraman, *Ad-hoc Querying of XML Data on the Web*, Spring 2001.
13. Jiangyan Shi, *Web Survey Management System*, Summer 2001.
14. Yanqing Lu, *Application-level Caching for Web-based Database Access*, Fall 2000.

15. Yehuda Romano, *Software Architecture for Developing Online Applications for Mobile Devices*, Fall 2000.
16. Tao Tao, *An XML-Lore Web Query System*, Summer 2000.
17. Yanling Zhang, *An Integrated Deductive Database Management System*, Summer 2000.
18. Shahnaz Ahmed, *Exact-Finder, A Meta-search Engine With Database as Backend*, Spring 2000.
19. Yingwei Wang, *A Java Implementation of Relational Query Languages*, Spring 2000.
20. Bhavini Patel, *Querying Web Data: An Object-Oriented Approach*, Fall 1999.
21. Yan He, *A JDBC Implementation for Datalog*, Fall 1999.
22. Xiaoyin Dai, *ACM SIGGRAPH Digital Library Web Query System*, Fall 1999.
23. Vishal Verma, *XMLLore: Extending the Lore Interface to Support XML*, Fall 1999.
24. Nagarajan Mouragane, *Metagenie: A Metasearch Engine for Multi-Databases*, Summer 1999.
25. Xiaoguang Li, *Querying Unified Web Sources of Data*, Summer 1999.
26. Arun Mathur, *Image Processing and Management using Oracle 8 Database*, Fall 1998.

### **At Wichita State University**

27. Manoj Nair, *SQLP: An SQL Interface to Prolog for Relational Databases*, Spring 1995.
28. Mary Flagg, *An SQL Implementation for General Deductive Databases*, Summer 1994.
29. Ramanathan Kalyanakrishnan, *TQBE: A Query Language for Historical Relational Databases*, Summer 1994.
30. Kalaiselvi Eswaran, *Explicit Negation in Disjunctive Databases*, Summer 1994.
31. Thomas Gerlach, *Reusable Software Toolkit for Business*, Spring 1994.
32. Rajaraman Sunderraman, *A Deductive Rules Processor for SQL*, Spring 1993.
33. Geetha Ramamurthy, *A Database Management System for Disjunctive Databases*, Spring 1993.
34. Cecil Schmidt, *A Query Optimizer for Deductive Databases*, Spring 1993.
35. Prathap Reddy, *Query Processing in Hierarchical Deductive Databases: An Implementation*, Summer 1992.

### **M. S. Projects Directed (CSc 8981/8980)**

#### **At Georgia State University**

1. Loc Le, *A Web Services Implementation of an Airline Reservation System*, Fall 2003.
2. Hung Nguyen, *A Personalized Storefront to amazon.com using Web Services*, Fall 2003.
3. Wissam Ramlawi, *Wireless Point of Sale System*, Fall 2002.
4. Xianyu Hong, *A Portfolio Management System on the Web for English Majors*, Fall 2002.
5. Haibin Wang, *E-University, A Web Services based Approach for Data Integration*, Summer 2002.
6. Xiukun Chang, *Optimized Search Engine for Property based Data on the Web*, Summer 2002.
7. Jingwu He, *Personal Stock Portfolio Management System on iPAQ*, Spring 2002.
8. Ken Nguyen, *ObjectStore Data Browser*, Fall 2001.

## At Wichita State University

9. Tammam Al-Hamwy and Muhammad A. Suhail, *WWW Interface to Graduate Information System*, Summer 1996.
10. Krishna Komoravolu, *Access Structures and Efficient Storage Mechanisms for Object-Oriented Systems*, Summer 1996.
11. Xianlao Lao, *An Implementation of the Path Finding Method for Constraint Checking in Deductive Databases*, Summer 1996.
12. Seshadri Narayanan, *Web Interface to Oracle*, Summer 1996.
13. Malleshwar Dudhyala, *Job Search Engine on the WWW*, Summer 1996.
14. Vasu Chinnathimreddygari and Salim Achouche, *A Web QBE interface to Oracle database*, Summer 1996.
15. Poh Peng Siah, *Publishers Search Engine on the WWW*, Summer 1996.
16. Murali K. Ponnala, *A Relational Algebra Query Processing Tool*, Summer 1996.
17. Robert G. Harder, *IBAX to AFFINITY Data Conversion (Newton Medical Center)*, Spring 1996.
18. Padmavathy Chellapan, *A Relational Calculus Query Processing Tool*, Fall 1995.
19. Jin Zhong, *EPIC: Excel Payroll Information Conversion*, Fall 1995.
20. Mohammad Tariq, *A Deductive DBMS with Self-Supporting Relational Database Modules: Semi-Naive Approach*, Fall 1995.
21. Hikmat Haj-Yahya, *Supporting Set Terms in Horn Clause Programs*, Summer 1995.
22. Vasu Arramraju, *Producer Lien Notification System*, Summer 1995.
23. Anil Boggaram, *Query/Subquery Technique for Processing Deductive Database Queries*, Summer 1995.
24. Satish Purushothaman, *Bottom-Up Query Processor for Deductive Databases*, Spring 1995.
25. Golam Sarwar, *Systems Integration of MIL-STD-1553B Bus for Communication to its Environment*, Spring 1994.
26. Regina Selvasaram, *X-QBE: An X-Window Based QBE System*, Spring 1994.
27. Charles Bouska, *An Algorithm for Converting Arbitrary QBE Queries into Semantically Equivalent SQL Statements*, Spring 1993.
28. Fang Ming Liu, *Temporal Databases: An Implementation*, Summer 1992.
29. Amit Agarwal, *An X-Window Interface to QBE*, Summer 1992.
30. Tian Tey, *A Prolog Database System*, Summer 1990.
31. Howard Johnson, *DB2 Database Administration: Guide and Procedures*, Spring 1990.
32. Usha Santhanam, *An Expert System to Select ADT Implementations for a Computer Program*, Spring 1990.
33. Hien Kieu, *Storage Management*, Fall 1988.

## VII. INTELLECTUAL CONTRIBUTIONS

### CURRENT RESEARCH INTERESTS:

*Database Models, Systems, and Applications*: Incomplete, Negative, Imperfect, and Inconsistent Information in Databases, Constraint Planning and Checking for Multi-databases, Deductive

Databases and Logic Programming, Deductive Object-Oriented Databases, Semi-structured Data Model, Digital Libraries, Mobile and Embedded Databases, Temporal Databases, Bio-informatics and Database Technology, Data Models for Life Science Data.

## A. PUBLICATIONS – JOURNAL ARTICLES

*Student co-authors are italicized in all publications*

1. *Praveen Madiraju*, Yanqing. Zhang, Scott Owen, Rajshekhar Sunderraman, and Ying Zhu, “Graphical Web Mining Agent for Class Room Teaching Enhancement”, *International Journal for Infonomics*, To appear 2005.
2. *Haibin Wang*, *Praveen Madiraju*, Yanqing Zhang, and Rajshekhar Sunderraman, “Interval Neutrosophic Sets”, *International Journal of Applied Mathematics and Statistics*, Vol. 3, Num. M05, Pages 1-18, March 2005.
3. *Tushar M. Dave*, Yanqing Zhang, Scott Owen and Rajshekhar Sunderraman, “Intelligent Web Agents for 3-D Virtual Community”, *International Journal for Infonomics*, Issue 1, Pages 38-49, January 2005.
4. Scott Owen, Rajshekhar Sunderraman and Yanqing Zhang, “The Development of a Digital Library to Support the Teaching of Computer Graphics and Visualization”, *Computers and Graphics*, Vol. 24, Pages 623-627, 2000.
5. Rajiv Bagai and Rajshekhar Sunderraman, “Computing the Well-Founded Model of Deductive Databases”, *The International Journal of Uncertainty, Fuzziness and Knowledge-based Systems*, Vol. 4, No. 2, Pages 157-176, 1996.
6. Rajiv Bagai and Rajshekhar Sunderraman, “A Bottom-Up Approach to Compute the Fitting Model of General Deductive Databases”, *Journal of Intelligent Information Systems*, Vol. 6, No. 1, Pages 59-75, 1996.
7. Rajiv Bagai and Rajshekhar Sunderraman, “A Paraconsistent Relational Data Model”, *International Journal of Computer Mathematics*, Vol. 55, No. 1--2, Pages 39--55, 1995.
8. Rajshekhar Sunderraman and Rajiv Bagai, “Explicit Negation in Relational Databases”, *Journal of Computing and Information*, Vol. 1, No. 1, Special Issue: Proc. of the 6th International Conference on Computing and Information, Pages 1263--1278, 1994.
9. Ken-Chih Liu and Rajshekhar Sunderraman, “A Generalized Relational Model for Indefinite and Maybe Information”, *IEEE Transactions on Knowledge and Data Engineering*, Vol. 3, No. 1, Pages 65--77, 1991.
10. Ken-Chih Liu and Rajshekhar Sunderraman, “Indefinite and Maybe Information in Relational Databases”, *ACM Transactions on Database Systems*, Vol. 15, No. 1, Pages 1--39, 1990.
11. Marek A. Suchenek and Rajshekhar Sunderraman, “On Negative Information in Deductive Databases”, *Journal of Database Administration*, Vol. 1, No. 1, Pages 28--41, 1990.

## B. PUBLICATIONS – BOOKS/MONOGRAPHS/CHAPTERS

12. *Haibin Wang*, Florentin Smarandache, Yanqing Zhang, and Rajshekhar Sunderraman, Interval Neutrosophic Sets and Logic: Theory and Applications in Computing, HEXIS Neutrosophic Book Series, No. 5, Books on Demand, Ann Arbor, Michigan, 2005.
13. Rajshekhar Sunderraman, Oracle9i Programming: A Primer, Addison-Wesley, 2004 (438 Pages).
14. Rajshekhar Sunderraman, Oracle8 Programming: A Primer, Addison-Wesley, 2000 (334 Pages).
15. Rajshekhar Sunderraman, Oracle Programming: A Primer, Addison-Wesley, 1999 (258 Pages). This books was also translated into Greek and published by Ion Publishers in Greece (ISBN: 960-405-938-6)

## C. PUBLICATIONS – PROCEEDINGS (REFEREED)

16. *Haibin Wang*, Yanqing Zhang and Rajshekhar Sunderraman, “Truth-Value Based Interval Neutrosophic Sets”, *Proceedings of the IEEE International Conference on Granular Computing*, Beijing, July 25-27, 2005.
17. *Haibin Wang*, Florentin Smarandache, Yanqing Zhang and Rajshekhar Sunderraman, “Single Valued Neutrosophic Sets”, Proceedings of the 10<sup>th</sup> International Conference on Fuzzy Theory and Technology (in conjunction with the 8<sup>th</sup> Joint Conference on Information Systems), Salt Lake City, Utah, July 21-26, 2005.
18. *Haibin Wang*, Rajshekhar Sunderraman, Yanqing Zhang, and *Praveen Madiraju*, “A Generalized SQL Query Construct for Paraconsistent Intuitionistic Fuzzy Databases”, Proceedings of 2005 Annual North American Fuzzy Information Processing Conference, (NAFIPS-2005), Ann Arbor, Michigan, June 22-25, 2005.
19. *Jason A. Pamplin*, Ying Zhu, Paul S. Katz, and Rajshekhar Sunderraman, “A 3D user interface for visualizing neuron location in invertebrate ganglia”, Proceedings of the 4<sup>th</sup> International Workshop on Computer Graphics and Geometric Modeling (CGGM), Atlanta, Georgia, May 2005.
20. Rajshekhar Sunderraman, Erdogan Dogdu, *Praveen Madiraju*, *Laxmikanth Malladi*, “A Java API for Global Querying and Updates for a System of Databases”, Proceedings of the 43<sup>rd</sup> ACM South East Conference, March 2005.
21. *Haibin Wang*, Rajshekhar Sunderraman. “A Data Model Based On Paraconsistent Intuitionistic Fuzzy Relations”, Proceedings of the 15th International Symposium on Methodologies for Intelligent Systems (ISMIS), Saratoga Springs, NY, May 2005.
22. *Praveen Madiraju* and Rajshekhar Sunderraman. “An Efficient Constraint Planning Algorithm for Multi-databases”, Proceedings of the 3<sup>rd</sup> ACS/IEEE International Conference on Computer Systems and Applications (AICCSA 2005), Cairo, Egypt, January 2005.

23. Claudio Cesar de Sá and Rajshekhar Sunderraman, “MUST: Mais Um Simulador da Máquina de Turing”, Proceedings of the *Regional Workshop de Educação em Informática*, Vitoria, Brazil, November 2004 (in Portuguese).
24. Haibin Wang, Yanqing Zhang, Rajshekhar Sunderraman, “Soft Semantic Web Services Agent”, Proceedings of *North American Fuzzy Information Processing Society Conference (NAFIPS-2004)*, June 2004, pages 126-129.
25. Praveen Madiraju, Rajshekhar Sunderraman and Shamkant B. Navathe, “Semantic Integrity Constraint Checking for Multiple XML Databases”, Proceedings of *14th Workshop on Information Technology and Systems (WITS 2004)*, Washington D.C., December, 2004.
26. Sushil K. Prasad, Vijay Madiseti, Shamkant B. Navathe, Rajshekhar Sunderraman et al., “SyD: A Middleware Testbed for Collaborative Applications over Small Heterogeneous Devices and Data Stores”, Proceedings of *ACM/IFIP/USENIX, 5th International Middleware Conference*, Toronto, Ontario, Canada, October 18th - 22nd, 2004.
27. Praveen Madiraju, Sushil K. Prasad, Rajshekhar Sunderraman and Erdogan Dogdu, “An Agent Module for a System on Mobile Devices”, Proceedings of the *3rd International Workshop on Agents and Peer-to-Peer Computing (AP2PC 2004)* in conjunction with *Third International Joint Conference on Autonomous Agents and Multi Agent Systems (AAMAS 2004)*, New York, July 2004.
28. Arthi Hariharan, Sushil K. Prasad, Anu G. Bourgeois, Erdogan Dogdu, Shamkant B. Navathe, Rajshekhar Sunderraman, and Yi Pan, “A Framework for Constraint-based Collaborative Web Service Applications and a Travel Application Case Study”, Proceedings of the *International Symposium on Web Services and Applications*, (2004), pp. 866-872.
29. Jagbir S. Hooda, Erdogan Dogdu, and Rajshekhar Sunderraman, “Health Level-7 (HL7) Compliant Clinical Patient Records System”, Proceedings of the *19<sup>th</sup> Annual ACM Symposium on Applied Computing*, March 14-17 2004, Nicosia, Cyprus.
30. Praveen Madiraju and Rajshekhar Sunderraman, “A Mobile Agent Approach for Global Database Constraint Checking”, Proceedings of the *19<sup>th</sup> Annual ACM Symposium on Applied Computing*, March 14-17 2004, Nicosia, Cyprus.
31. Sushil K. Prasad, Rajshekhar Sunderraman, Yanqing Zhang, and Atul Parvatiyar, “A Web-Based Game-Oriented College Selection System Employing Fuzzy Rule Trees”, Proceedings of the *37<sup>th</sup> Annual Hawaii International Conference on System Sciences (HICSS04)*, Track 3, Volume 3, IEEE Computer Society Press, January 2004.
32. Menglei Tang, Yanqing Zhang, Scott Owen and Rajshekhar Sunderraman, “A Smart Search Agent for Image/Graphics Based Educational Databases”, *SPIE's AeroSense 2003: Conference on Intelligent Computing: Theory and Applications*, 2003.
33. Tushar M. Dave, Yanqing Zhang, Scott Owen and Rajshekhar Sunderraman, “Knowledge-based Web Agents for a 3-D Virtual Community”, *SPIE's AeroSense 2003: Conference on Intelligent Computing: Theory and Applications*, 2003.

34. Sushil K. Prasad, Anu G. Bourgeois, Erdogan Dogdu, Rajshekhar Sunderraman, Yi Pan, Shamkant B. Navathe, and Vijay Madiseti, "Enforcing Interdependencies and Executing Transactions Atomically over Autonomous Mobile Data Stores using SyD Link Technology", Proceedings of the *Workshop on Mobile and Wireless Networks (in the 23rd Int. Conference on Distributed Computing Systems)*, May 19-22, 2003. Providence, RI, USA.
35. Sushil K. Prasad, Michael Weeks, Yanqing Zhang, Alexander Zelikovsky, Saeid Belkasim, Rajshekhar Sunderraman, and Vijay Madiseti, "Toward an Easy Programming Environment for Implementing Mobile Applications: A Fleet Application Case Study using SyD Middleware", Proc. of *IEEE International Workshop on Web Based Systems and Applications, in conjunction with the 27th Annual International Computer Software and Applications Conference (COMPSAC 2003)*, IEEE Computer Society, Pages 696-701, 2003.
36. Sushil K. Prasad, Anu G. Bourgeois, Erdogan Dogdu, Rajshekhar Sunderraman, Yi Pan, "Implementation of a Calendar Application Based on SyD Coordination Links", Proceedings of *The Third International Workshop on Internet Computing and E-Commerce (ICEC'03), IPDPS 2003 Workshop*, Nice, France, April 22-26, 2003.
37. Sushil K. Prasad, Erdogan Dogdu, Rajshekhar Sunderraman, Bing Liu, and Vijay Madiseti, "Design and Implementation of a Listener Module for Handheld Mobile Devices", Proceedings of the *41<sup>st</sup> ACM Southeast Conference*, March 7-8, 2003, Savannah, Georgia, USA, 2003.
38. Yanqing Zhang, Marina Shteynberg, Sushil K. Prasad, and Rajshekhar Sunderraman, "Granular Fuzzy Web Intelligence Techniques for Profitable Data Mining", Proceedings of *2003 IEEE International Conference on Fuzzy Systems*, Pages 1462-1464, St. Louis, May 2003.
39. Yi Qin, Yanqing Zhang, Kim N. King and Rajshekhar Sunderraman, "Rule-based Statistical Data Mining Agents for an e-Commerce Application", Proceedings of *SPIE's AeroSense 2003: Conference on Data Mining and Knowledge Discovery: Theory, Tools, and Technology*, vol. 5098, Pages 124-129, Orlando, April, 2003.
40. Peter Vo, Yanqing Zhang, Scott Owen and Rajshekhar Sunderraman, "Real Time Graphical Chinese Chess Game Agents Based on the Client and Server Architecture", Proceedings of the *3rd International Workshop on Intelligent Systems Design and Applications*, Tulsa, Oklahoma, Pages 173-182, Tulsa, Aug. 2003.
41. Erdogan Dogdu and Rajshekhar Sunderraman, "A Web Services Testing Tool", Proceedings of the *7<sup>th</sup> IASTED International Conference on Internet and Multimedia Systems and Applications*, August 13-15, 2003, Honolulu, Hawaii, USA, 2003.
42. Sushil K. Prasad, Michael Weeks, Yanqing Zhang, Alexander Zelikovskiy, Saeid Belkasim, Rajshekhar Sunderraman, and Vijay Madiseti, "Mobile Fleet Application Using SOAP and System on Devices (SyD) Middleware Technologies", *Communications, Internet and Information Technology (CIIT 2002)*, St. Thomas, Virgin Islands, USA, November 18-20, 2002.

43. Yanfei Wang, Yanqing Zhang, Saeid Belkasim and Rajshekhar Sunderraman, "Real Time Fuzzy Personalized Web Stock Information Agent", Proceedings of the *2nd International Workshop on Intelligent Systems Design and Applications*, Pages 104-107, August 2002.
44. Atul Parvatiyar, Sushil K. Prasad, Rajshekhar Sunderraman and Yanqing Zhang, "Smart Advisor and Search Optimizer: Web-based Applications of Fuzzy Rules, Intelligence Systems and Hierarchical Clustering for Relational Decisions", Proceedings of the *Sixth Research Conference on Relational Marketing and CRM*, June 6-12, 2002.
45. Yanqing Lu and Rajshekhar Sunderraman, "Application-level Caching for Web-based Database Access", Proceedings of the *39<sup>th</sup> ACM Southeast Conference*, Athens, GA, March 2001. ACM Press, Pages 269-277.
46. Bhavini Patel and Rajshekhar Sunderraman, "Querying Web Data: An Object-Oriented Approach", Proceedings of the *38<sup>th</sup> ACM Southeast Conference*, Clemson, South Carolina, April 2000, ACM Press, Pages 253-262.
47. Rajshekhar Sunderraman, "ReQueSS: Relational Querying of Semi-Structured Data", Demonstration paper, *IEEE Conference on Data Engineering*, San Diego, California, February-March 2000.
48. Yanqing Zhang, Scott Owen and Rajshekhar Sunderraman, "Quick Granular Rule Generation from a Database", Proceedings of the *Fifth Joint Conference on Information Sciences (JCIS)*, Vol. 1, Pages 194-197, 2000.
49. Yanqing Zhang, Scott Owen, Rajshekhar Sunderraman and George Vachtsevano, "Intelligent Internet2 Agents for Distributed Data Mining", *Internet2 Network Research Workshop*, June 28-29, 2000.
50. Scott Owen and Rajshekhar Sunderraman, "The development of a digital library to support the teaching of computer graphics and visualization", Proceedings of *Graphics and Visualization Education (GVE-99)*, 1999.
51. Wade Warner and Rajshekhar Sunderraman, "Network Documentation: A Web-based Relational Database Approach", Proceedings of the *First USENIX Conference on Network Administration (NETA 1999)*, Santa Clara, CA, April 1999, Pages 31-38.
52. Rajshekhar Sunderraman and Rajaraman Sunderraman, "A Deductive Rules Processor for SQL Databases", Proceedings of the *36th Annual ACM Southeast Conference*, K. N. King, Editor, ACM, New York, Pages 64-73, 1998.
53. Rajshekhar Sunderraman, "Relational Querying of Semi-structured Web Data", Proceedings of the *Seventh Annual Workshop on Information Technologies and Systems (WITS'97)*, A. Segev and V. Vaishnavi (Eds.), Atlanta, GA, December 1997, Pages 11--20.
54. Rajshekhar Sunderraman, "Modeling Negative and Disjunctive Information in Relational Databases", in Abdelkader Hameurlain and A. Min Tjoa (Eds.), *Database and Expert Systems Applications (DEXA-97)*, Lecture Notes in Computer Science, Vol 1308, Springer-Verlag, Berlin, Pages 337--346, 1997.

55. Rajshekhar Sunderraman, "A Temporal Deductive Database Model", Proceedings of the 35<sup>th</sup> Annual ACM Southeast Conference, C. Pettey, L. Dowdy and J. Yoo, Editors, ACM, New York, Pages 290-297, 1997.
56. Rajshekhar Sunderraman and Rajiv Bagai, "Uncertainty and Inconsistency in Relational Databases", In S. Chaudhuri, A. Deshpande and R. Krishnamurthy (eds.), *Advances in Data Management (COMAD-95)*, Tata McGraw Hill Publishing, pp. 206-220, 1995.
57. Rajiv Bagai and Rajshekhar Sunderraman, "An Algebraic Construction of the Well-founded Model", in V.S. Alagar and M. Nivat (Eds.), *Algebraic Methodology and Software Technology (AMAST-95)*, Lecture Notes in Computer Science, Vol 936. Springer-Verlag, Berlin, Pages 518--530, 1995.
58. Suad Alagic, Rajshekhar Sunderraman and Ashvin Radiya, "Typed Declarative Object-Oriented Database Programming", in V.S. Alagar and R. Missaoui (Editors), *Object-Oriented Technology for Database and Software Systems*, World Scientific Press, Pages 58--76, 1995.
59. Suad Alagic, Rajshekhar Sunderraman and Rajiv Bagai, "A Typed Object-Oriented Database Technology with Deductive and Reflective Capabilities", Proceedings of *International Symposium on Advanced Database Technologies and their Integration, ADTI'94*, Nara, Japan, October 1994, Pages 221--228.
60. Rajiv Bagai and Rajshekhar Sunderraman, "Algebraic Computation of the Weak Well-Founded Model for General Deductive Databases", in D.S. Bowers (Editor), *Directions in Databases (BNCOD-94)*, Lecture Notes in Computer Science, Vol. 826, Springer-Verlag, Berlin, Pages 90--104, 1994.
61. Suad Alagic and Rajshekhar Sunderraman, "Expressivity of Typed Logic Paradigms for Object-Oriented Databases", in D.S. Bowers (Editor), *Directions in Databases (BNCOD-94)*, Lecture Notes in Computer Science, Vol. 826, Springer-Verlag, Berlin, Pages 73--89, 1994.
62. Suad Alagic, Rajshekhar Sunderraman, and Rajiv Bagai, "Declarative Object-Oriented Programming: Inheritance, Subtyping and Prototyping", in M. Tokoro and R. Pareschi (Editors), *Object-Oriented Programming (ECOOP-94)*, Lecture Notes in Computer Science, Vol 821, Springer-Verlag, Berlin, Pages 236--259, 1994.
63. Rajiv Bagai, Suad Alagic and Rajshekhar Sunderraman, "A Prototyping Technology for Typed Object-Oriented Software Development", in M. Ross, C.A. Brebbia, G. Staples and J. Stapleton (Editors), *Building Quality into Software, Software Quality Management II*, Vol. 2, Computational Mechanics Publications, Southampton Boston, Pages 441--456, 1994.
64. Rajshekhar Sunderraman, "Deductive Databases with Conditional Facts", in W. Worboys and A.F. Grundy (Editors), *Advances in Databases (BNCOD-93)*, Lecture Notes in Computer Science, Vol 696, Springer-Verlag, Berlin, Pages 162--175, 1993.
65. Rajshekhar Sunderraman, "Algebraic Evaluation of Disjunctive Deductive Databases", Proceedings of the 20<sup>th</sup> Annual ACM Computer Science Conference, Kansas City, Missouri, ACM Press, New York, Pages 415--422, 1992.

66. Rajshekhar Sunderraman, "Bottom-Up Evaluation in Indefinite Deductive Databases", Proceedings of the *6th International Symposium on Methodologies for Intelligent Systems* (Poster Session), Charlotte, North Carolina, Pages 179--190, 1991.
67. Marek A. Suchenek and Rajshekhar Sunderraman, "On Reasoning from Closed World Databases with Disjunctive Views", Proceedings of the *Workshop on Logic Programming and Non-Monotonic Reasoning at NAACL 1990*, Austin, Texas, November 1-2, Pages 132--149, 1990.
68. Ken-Chih Liu and Rajshekhar Sunderraman, "An Algebraic Approach to Indefinite Deductive Databases", in Ras, Z., Zemankova, M., and Emrich, M. L. (Editors), Proceedings of the *5<sup>th</sup> International Symposium on Methodologies for Intelligent Systems*, Elsevier, New York, NY, Pages 166--173, 1990.
69. Marek A. Suchenek and Rajshekhar Sunderraman, "Minimal Models for Closed World Databases with Views", in Ras, Z., Zemankova, M., and Emrich, M. L. (Editors), Proceedings of the *5<sup>th</sup> International Symposium on Methodologies for Intelligent Systems*, Elsevier, New York, NY, Pages 182--193, 1990.
70. Ken-Chih Liu and Rajshekhar Sunderraman, "On Representing Indefinite and Maybe Information in Relational Databases: A Generalization", Proceedings of the *Sixth International Conference on Data Engineering*, Los Angeles, California, Pages 495--502, 1990.
71. Ken-Chih Liu and Rajshekhar Sunderraman, "General Indefinite and Maybe Information in Relational Databases", in G.X. Ritter (ed.), *Information Processing 89*, Elsevier Science Publishers B.V. (North-Holland), Pages 809--814, 1989.
72. Ken-Chih Liu and Rajshekhar Sunderraman, "On Representing Indefinite and Maybe Information in Relational Databases", Proceedings of the *Fourth International Conference on Data Engineering*, Los Angeles, California, Pages 250--257, 1988.
73. Ken-Chih Liu and Rajshekhar Sunderraman, "Applying an Extended Relational Model to Indefinite Deductive Databases", in Ras, Z. and Zemankova, M. (Editors), Proceedings of the *2<sup>nd</sup> International Symposium on Methodologies for Intelligent Systems*, Elsevier, New York, NY, Pages 175--184, 1987.
74. Ken-Chih Liu and Rajshekhar Sunderraman, "An Extension to the Relational Model for Indefinite Databases", Proceedings of the *ACM-IEEE Computer Society Fall Joint Computer Conference*, Dallas, Texas, Pages 428--435, 1987.

#### **D. PROFESSIONAL PRESENTATIONS (Invited)**

- Database Technologies: Past, Present, and Future, *The Associated Colleges of Central Kansas Computer Science Departments Colloquium Series*, McPherson, Kansas, April 2005.

- System on Devices (SyD): A Middleware Testbed for Collaborative Applications, *The Associated Colleges of Central Kansas Computer Science Departments Colloquium Series, McPherson, Kansas*, April 2005.
- Identified Neuron Database Project, *South East Center for Applied Bio-Computing (SECABC) Annual Conference*, January 2005.
- Identified Neuron Database: Issues of Design and Implementation, *Identified Neuron Database Workshop*, Atlanta, Georgia, December 2004.
- Incomplete, Negative, and Inconsistent Information in Relational Databases, *Neurons and Networks Research Group Seminar*, November 2004.
- Applying Database Technologies to Represent and Manipulate Protein Data, *South East Center for Applied Bio-Computing (SECABC) Annual Conference*, May 2004.
- Overview of Networked Portable Applications Development Platform (NP2), *Yamacraw Industrial Advisory Board Conference*, Atlanta, Georgia, April 2003.
- SydQL: Design and Implementation of a Java API for global querying, *Yamacraw Industrial Advisory Board Conference*, Atlanta, Georgia, April 2002.
- System of Databases (SyD): A Powerful New Software Architecture, *Yamacraw Industrial Advisory Board Conference*, Atlanta, Georgia, April 2001.
- Databases: Past, Present, and Future, *GSU ACM Local Chapter Meeting*, Atlanta, Georgia, February 1997.

## E. EDITORIAL/REVIEWER PROJECTS

## F. GRANTS AND EXTERNAL FUNDING

Participated in external grants and contracts with funds totaling over **\$4.6M** and in internal grants with funds totaling over **\$80K**. External grants and contracts were from National Science Foundation, National Institutes of Health, Centers for Disease Control and Prevention, Georgia Electronic Design Center (GEDC – formerly Yamacraw), Boeing Defense and Space Group, Department of Defense, and Federal Aviation Administration.

### External Grants

1. PI: Margo Brinton (Biology), Consultant: Rajshekhar Sunderraman, “Analysis of SNPs Associated with West Nile Virus Induced Disease”, *Centers for Disease Control and Prevention*, 2004 to 2007, \$170,000.
2. PI: Sushil K. Prasad, Co-PI: Rajshekhar Sunderraman et al., Distributed and Mobile Systems Research (DiMoS) Research, *Georgia Research Alliance / Georgia Electronic Design Center (GEDC)*, November 2003 to June 2004, \$93,780.
3. PI: Robert W. Harrison, Lead Investigator: Rajshekhar Sunderraman, Georgia State University Biomedical Computing Center (Planning Grant), *National Institute of Health*, 2003 to 2006, ~\$1,090,000.
4. PI: Rajshekhar Sunderraman, Co-PI: Irene Weber, Integration, Querying, and Mining of Structural and Functional Data for HIV Protease and Families of related Proteins, Project with *P20 Planning Grant*, NIH, 2003-2005, \$34,736.

5. PI: Sushil K. Prasad, Co-PI: Rajshekhar Sunderraman et al., System on Devices: A Middleware for Collaborative Applications on Handheld Devices, *Yamacraw/Georgia Center for Advanced Telecommunications Technology*, July 2002 to June 2003, \$318,000.
6. PI: Sushil K. Prasad, Co-PI: Rajshekhar Sunderraman et al., System on Devices (SyD) – Yamacraw Embedded Software Research, *Yamacraw/Georgia Center for Advanced Telecommunications Technology*, July 2001 to June 2002, \$233,000.
7. PI: Sushil K. Prasad, Co-PI: Rajshekhar Sunderraman et al., Yamacraw Embedded Software Research, *Yamacraw/Georgia Center for Advanced Telecommunications Technology*, July 2000 to June 2002, \$250,000, Additional \$75,000 for computer equipment.
8. PI: Yanqing Zhang, Co-PI: Rajshekhar Sunderraman et al., Proposal for Internet2 Agents for Distributed Data Mining, *Internet2 Network Research Workshop Planning Committee*, June 28-29, 2000, Chicago. Funded travel for participants.
9. PI: Scott Owen, Co-PI: Rajshekhar Sunderraman, A Digital Library of Reusable Science and Math Resources for Undergraduate Education, *National Science Foundation*, Consortium project with the Collegis Research Institute, University of North Carolina at Wilmington, The College of New Jersey, Grand Valley State University, Virginia Tech and Georgia State University, January 2000 to December 2001, Georgia State University funding: \$129,849.
10. PI: Scott Owen, Co-PI: Rajshekhar Sunderraman and Yanqing Zhang, DLI-Phase 2: Research on a Digital Library for Graphics and Visualization Education, *National Science Foundation*, October 1999 to September 2004, \$330,278.
11. PI: Scott Owen, Co-PI: Rajshekhar Sunderraman, Digital Library Research on CCD Funded Educational Repositories, *National Science Foundation*, September, 1998 to August, 2000, \$283,160.
12. PI: Rajiv Bagai, Co-PI: Rajshekhar Sunderraman, Translation of Real-Time Legacy Code for Military Applications, *Boeing Defense and Space Group*, March 1996 to September 1996, \$32,492.
13. PI: Rajshekhar Sunderraman, Co-PI: Rajiv Bagai, Testing and Analysis of Real-Time Code in Commercial Aircrafts, *Boeing Defense and Space Group*, March 1996 to September 1996, \$34,687.
14. PI: Suad Alagic, Co-PI: Rajshekhar Sunderraman and Ashvin Radiya, Integrated Object-Oriented Environment for Modeling, Simulation, Prototyping, and Active Databases, *DOD Defense University Research Instrumentation Program grant*, November 1994 to October 1995, \$68,000.
15. PI: John Hutchinson, Co-PI: Rajshekhar Sunderraman et al., International Aircraft Operator Information System (Phase II), *Federal Aviation Administration*, September 1990 - July 1992, ~\$1,000,000.
16. PI: John Hutchinson, Co-PI: Rajshekhar Sunderraman et al, International Aircraft Operator Database (Phase I), *Federal Aviation Administration*, October 1989 - July 1990, ~\$500,000.

### **Internal Grants**

1. PIs: Rajshekhar Sunderraman, Paul Katz, and Ying Zhu, Identified Neuron Database, *Brains and Behavior Seed Grant*, Georgia State University, 2004 to 2005, \$26,649.
2. PI: Scott Owen, Co-PI: Rajshekhar Sunderraman, Research into the Design and Development of Digital Libraries for Education, *GSU Research Program Enhancement*, July 1999 to June 2000, \$15,900.

3. PI: Rajshekhar Sunderraman, Ad-hoc Querying of Semi-structured Data on the Web, Georgia State University, *Research Initiation Award*, July 1998 to June 1999, \$5,000.
4. PI: Rajshekhar Sunderraman, Co-PI: Sushil K. Prasad and Krishnan Balakrishnan, Developing and Implementing Efficient Parallel Query Processing Algorithms for Disjunctive Deductive Databases, *Georgia State University Research Team Award*, July 1997 to June 1998, \$10,800.
5. PI: Rajshekhar Sunderraman, Explicit Negation in Disjunctive Databases, Wichita State University, *University Research Grant*, 1993 to 1994, \$4,500.
6. PI: Rajshekhar Sunderraman, Temporal Deductive Databases, Wichita State University, *Faculty Summer Research Award*, June 1991, \$3,000.
7. PI: Rajshekhar Sunderraman, Algebraic Approach to Implement Indefinite Deductive Databases, *Fairmount College of Liberal Arts and Science Summer Research Fellowship*, Wichita State University, June 1990, \$3,500.

## G. PATENT APPLICATIONS

### Utility Patents:

1. Sushil K. Prasad, Vijay Madiseti, Rajshekhar Sunderraman, Yi Pan, Alex Zelikovsky, Yanqing Zhang, Michael Weeks, Saied Belkasim, V. Dasigi, Raghupathy Sivakumar, and S. Navathe. "Multiple Mobile Data-Stores Enabled with Coordination-Link Primitives and a Calendar Application", Application for US Utility Patent, Attorney Docket Number 06078.0004U2, April 2002.
2. Sushil K. Prasad, Michael Weeks, Yanqing Zhang, Saied Belkasim, Alex Zelikovsky, Rajshekhar Sunderraman, Vijay Madiseti, Yi Pan, V. Dasigi, and Raghupathy Sivakumar. "Mobile Fleet Communication System for Multiple Mobile Data-Stores", Application for US Utility Patent, Attorney Docket Number 06078.0005U2, April 2002.
3. Vijay Madiseti, Sushil K. Prasad, Michael Weeks, Raghupathy Sivakumar, Rajshekhar Sunderraman, Sham Navathe, Yi Pan, Yanqing Zhang, Saied Belkasim, and Alex Zelikovsky. "An Enabling Technology for Programming Applications on Multiple Mobile Data-Stores", Application for US Utility Patent, Attorney Docket Number 06078.0007U2, April 2002.

### Provisional Patents:

4. Sushil K. Prasad, Vijay Madiseti, Rajshekhar Sunderraman, Erdogan Dogdu, Yi Pan, Anu Bourgeois, Michael Weeks, Alex Zelikovsky, Sham Navathe, Yanqing Zhang, Saied Belkasim, and Raghupati Sivakumar, Janaka Balasooriya, Pooja Bhatia, Wei Chen, Swetha Desetty, Brian Gamulkiewicz, Arthi Hariharan, Jingwu He, Yuanchen He, Praveena Jayanthi, Bing Liu, Hui Liu, Praveen Madiraju, Srilaxmi Malladi, Wissam Ramlawi, Feng Tan, Yuchun Tang, Hui Wang, Wei Zhong. "SyD Kernel Design and Implementation", Provisional Patent filed, Oct. 2002.
5. Praveen Madiraju, Sushil K. Prasad, and Rajshekhar Sunderraman, "SyD Engine Module with Group Transaction Support", Provisional Patent filed, Oct. 2002.
6. Pooja Bhatia, Jingwe He, Rajshekhar Sunderraman, and Sushil K. Prasad, "XML-based Inter-device Communication in SyD", Provisional Patent filed, Oct. 2002.

7. Sushil K. Prasad, Vijay Madiseti (GIT), Rajshelhar Sunderraman, Erdogan Dogdu, Yi Pan, Anu Bourgeois, Michael Weeks, Alex Zelikovsky, Sham Navathe (GIT), Yanqing Zhang, Saied Belkasim, and Raghupati Sivakumar (GIT). Janaka Balasooriya, Pooja Bhatia, Wei Chen, Swetha Desetty, Brian Gamulkiewicz, Arthi Hariharan, Jingwu He, Yuanchen He, Praveena Jayanthi, Bing Liu, Hui Liu, Praveen Madiraju, Srilaxmi Malladi, Wissam Ramlawi, Feng Tan, Yuchun Tang, Hui Wang, and Wei Zhong, “How to Rapidly Develop a SyD Application?”, Provisional Patent filed, Oct. 2002.
8. Sushil K. Prasad, Yanqing Zhang, Rajshekhar Sunderraman, Yi Pan, and Yu Tang, “Personalized Dynamic Navigation Trails”, Provisional Patent filed, April. 2002.
9. Sushil K. Prasad, Yi Pan, Sunderraman, Rajshekhar and Yanqing Zhang, “Smart Web Browsing and Searching on PDAs and Cell Phones”, Provisional Patent filed, April 2001.

## **VIII. PROFESSIONAL AND HONOR ORGANIZATION ACTIVITIES**

### **A. MEMBERSHIP**

- Member of ACM
- Member of IEEE
- Member of Kansas Academy of Science
- Member of Hypermedia and Visualization Laboratory, CS Department, GSU
- Phi Kappa Phi (Honor Society)

### **B. OFFICES/COMMITTEES**

- Faculty Associate, Georgia Electronic Design Center (GEDC), formerly called the State of Georgia’s Yamacraw Project, 2001-present.
- Session Chair, Database Systems, 36th Annual ACM Southeast Conference, Marietta, Georgia, April 1998.
- Faculty Associate, Information Systems Laboratory, National Institute of Aviation Research, Wichita State University, 1990 to 1996.
- Member of the Organizing Committee, 1993 Midwest Conference on Combinatorics, Computing, and Cryptography, Wichita, Kansas.

### **C. REVIEWER ACTIVITIES**

#### **Reviewed papers for following journals:**

- IEEE Transactions on Systems, Man and Cybernetics (SMC)
- ACM Transactions on Database Systems
- IEEE Transactions on Knowledge and Data Engineering
- Data and Knowledge Engineering
- Annals of Mathematics and Artificial Intelligence

- Journal of Automated Reasoning
- Journal of Computational Intelligence
- Journal of Database Administration
- DATA BASE Journal
- Journal of Very Large Data Bases

**Reviewed papers for the following conferences:**

- International Symposium for Methodologies for Intelligent Systems
- International Conference on Data Engineering
- International Conference in Information and Knowledge Management
- ACM Southeast Conference
- International Conference on Management of Data (COMAD)

**IX. HONORS, AWARDS AND RECOGNITION**

- 1994 Emory Lindquist Mentor (Teaching Award), Wichita State University
- Member of Phi Kappa Phi
- Over 60 citations in published work