

Computer Science Department Annual Report 2004-2005

Summary

For the period July 1, 2004, through June 30, 2005, the resident faculty of the Computer Science Department included 19 full time faculty members (8 Professors, 5 Associate Professors, 6 Assistant Professors) and 1 Visiting Assistant Professor. Permanent professional persons associated with the department included 3 secretarial staff members and 3 technical support personnel.

As of Fall 2004, there were 109 graduate students enrolled in degree programs (50 in the doctoral program and 59 in the MS), and 231 declared undergraduate majors. Additionally, there were a total of 1270 seats offered in service courses, taken primarily by non-majors. During the past fiscal year, 2 students were awarded Ph.D. degrees and 26 graduated with the M.S. degree. Also, 50 bachelor's degrees were awarded.

As a group, the faculty authored, co-authored, or edited 157 research articles and other publications and gave 37 presentations at professional meetings. Many of the faculty members have served on editorial boards of distinguished journals. Our faculty were PI, CO-PI, or contributors to 18 externally funded grants. The amount of the external funding totaled \$4,032,315. Also, the faculty received 5 internal grants for the total amount of \$57,121.

Dr. Shelby Funk was welcomed to our faculty in August 2004. Our recruiting efforts in 2004-2005 resulted in the hiring of Mr. Prashant Doshi and Mr. Lakshmesh Ramaswamy. Mr. Doshi will complete his Ph.D. degree in Computer Science from the University of Illinois, Chicago, in August 2005. Mr. Ramaswamy will complete his Ph.D. in Computer Science from Georgia Tech, in August 2005. Both will assume the position of Assistant Professor in August 2005. In addition, we have recruited Dr. Leon Deligiannidis (Ph.D. in CS, Tufts University) and Dr. Julia Couto (Ph.D. in CS, Universidad Politecnica de Madrid, Madrid, Spain). They will replace two instructors who left UGA in AY04 and will be involved in teaching lower-division CS courses. Both will start in August, 2005.

Major Accomplishments

External Research Funding

2004-2005 has been a very good year for the faculty of the Computer Science Department. A number of new grants were awarded to CS faculty. In total, ten of our faculty members have held externally funded research grants as PIs or CO-PIs. For additional details, please see Appendix B, beginning on page 20.

Dr. Suchi Bhandarkar has continued his work on two externally sponsored grants from the US Dept. of Agriculture.

Dr. Rod Canfield has received a new grant from NSA for a project entitled *Asymptotic Methods in Combinatorics*. The project will last 3 years.

Dr. Eileen Kraemer has continued work on a three year long NSF grant entitled *Program Visualization: Using Perceptual and Cognitive Concepts to Quantify Quality, Support Instruction, and Improve Interactions*.

Dr. David Lowenthal has started work on a new three year grant from NSF entitled *Detecting and Alleviating Sources of Scalability Problems*. Also, he has continued his work on an NSF project: *HC-MPI: A System for Out-of-Core, Heterogeneous Data Distributions*.

John A. Miller and Eileen T. Kraemer (Co-PIs), together with Dr. Jessica Kissinger (PI), a Professor in the Genetics Department at UGA, received a new grant from NIH, entitled “Integrated Databases for Apicomplexan Pathogens”. It is a five year-long project.

Dr. Don Potter has continued his research on the project entitled *SAGA-3 Spray Advisor GA Parameter Setting Analysis*, supported by a grant from the USDA Forest Service.

Dr. Khaled Rasheed has continued his research (as a CO-PI) on a project entitled *Data Driven Design Optimization in Engineering Using Concurrent Integrated Experiment and Simulation*. The project has been funded by the National Science Foundation (the PI is Dr. Doyle Knight of Rutgers University).

Drs. Amit Sheth, Budak Arpinar, John Miller, and Krys Kochut have continued research on a grant from NSF for their project *SemDis: Discovering Complex Relationships in Semantic Web*. This project will last four years.

Drs. Amit Sheth, Budak Arpinar, and Krys Kochut have continued their work on the NSF project entitled *Semantic Association Identification and Knowledge Discovery for National Security Applications*.

Drs. Amit Sheth, Krys Kochut, and John Miller have continued their work on the NIH-sponsored project entitled *Bioinformatics of Glycan Expression*. This is a part of a large five year project (\$6,700,000) originating from the Complex Carbohydrates Research Center (Dr. Michael Pierce, PI).

Drs. Amit Sheth and John Miller have received an *Eclipse Innovation Grant* from IBM.

Scholarly Publishing

The Computer Science faculty members have been very productive in publishing their research results. We have authored, co-authored, or edited 157 articles and other publications in 2004-2005, which is a significant increase from the previous year. They were published or submitted to high quality journals and conference proceedings. Our faculty gave 37 presentations at conferences, 6 of which were presented abroad. Also, we have given one keynote addresses and one invited talk. For the list of publications, please see Appendix C, beginning on page 23.

Conference Organization

Dr. Hamid Arabnia has organized the *2005 International MultiConference on Computer Science and Computer Engineering*. The Conference was held in June 2005, Las Vegas, Nevada. Dr. Arabnia has served as the General Chair of the MultiConference.

Dr. Amit Sheth was the co-organizer of the Dagstuhl Seminar 04391 on *Semantic Interoperability and Integration*, September 19-24, 2004, Dagstuhl, Germany. He also co-organized *Semantic Web meets eGovernment*, an AAAI Spring Symposium Series (SSS-06), Sanford University, CA, March 27-29, 2005.

Dr. Thiab Taha organized the *Fourth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory*. The conference was held in Athens, Ga., April 7-10, 2003. Dr. Taha received funding for the organization of the conference from NSF.

Strategic Planning

Computer Science Education

We have continued improving the undergraduate program in Computer Science. Our faculty members have introduced 2 new undergraduate and 3 graduate courses to our curriculum.

The number of graduate students in Computer Science is not as large as in the 2003-2004 academic year. As of Fall 2004, there were 109 students enrolled in graduate degree programs: 50 in the doctoral program and 59 in the MS program. However, we are happy that our Ph.D. program has continued to grow. At the same time, the continued gradual increase in the number of our Ph.D. students is the primary reason for the overall decline in the total number of our graduate students. Recently, we were unable to vigorously recruit new students, due to an insufficient number of assistantships. The average time to graduate with a Masters degree is approximately 2 years, while the time to graduate with a Ph.D. degree is about 4 years, or more. As a result, our Ph.D. students hold funding considerably longer than those in the Masters program, adversely affecting the number of assistantships available for recruiting.

Faculty Recruitment

The department has filled two positions during recent recruiting. Drs. Prashant Doshi and Lakshmish Ramaswamy will start in August, 2005. This brings the number of Ph.D. faculty to 21, still fewer than the 24 projected in our 1999-2004 Strategic Plan.

In addition, we have hired Dr. Leon Deligiannidis (CS Ph.D., Tufts University) and Dr. Julia Couto (CS Ph.D., Universidad Politecnica de Madrid, Madrid, Spain). Drs. Deligiannidis and Couto will replace two instructors who left UGA in AY04 and will be involved in teaching lower-division courses. Both will start in August, 2005.

Space

The department has continued to suffer from an insufficient amount of space, especially in view of the recently hired faculty with research interests in experimental Computer Science. The hires of the two faculty members in Fall 2005 will require additional lab space. Our faculty are now located in three different buildings (Boyd, Hardman, and Barrow), which is not a good situation for fostering cohesiveness among the faculty body.

A. Short-Term Goals for FY 2006

Program Review

During the 2003-2004 academic year, the University conducted the first Program Review and Assessment of the Computer Science Department. We have been reviewing the recommendations of the Program Review Committee. The Department will write a formal reply describing how we have addressed the recommendations in the Fall 2005.

Faculty Recruitment

At present, we have no recruiting plans for AY06.

Space

There was no change in the space available to Computer Science. Both the quantity and quality of the space available to the Department continues to be insufficient.

B. Effectiveness Assessment

A committee composed of Drs. Dan Everett, Liming Cai, and Suchendra Bhandarkar has created a new Computer Science Undergraduate Assessment model. The first report has been created and submitted to the College. We will continue collecting measurements and analyzing the results.

C. Student Retention and Graduation Rates

As of Fall 2004, there were 231 declared undergraduate CS majors, a decrease of 82 students in comparison to Fall 2003. The decreasing trend, typical of many Computer Science departments across the country, has continued in 2004. Several recent publications have indicated declining interest in Computer Science among US students (for example, Jay Vegso, "Interest in CS as a Major Drops Among Incoming Freshmen," *Computing Research News*, Vol. 17/No. 3, and S. Arora and B. Chazelle, "Is the Thrill Gone?," *Communications of the ACM*, Vol. 48, No. 8, pp. 31-33). It is an alarming trend which, if continued, will adversely impact the health of the economy in Georgia and in the whole country. It is a complex issue which we intend to study vigorously and explore the possibilities of popularizing the Computer Science major among the UGA students.

As of Fall 2004, there were 109 students enrolled in graduate degree programs: 50 in the doctoral program and 59 in the MS program. Our Ph.D. degree program has continued to grow. However, the availability of funding for graduate students continues to be a very important factor in the overall health of the graduate program. In Fall 2004, 58 graduate students received financial support, as follows: Graduate Laboratory Assistants, 50%; Graduate Teaching Assistants (in charge of a course), 9%; Research Assistants supported by

external funding, 34%; University Wide Assistantships, 7%. During the past fiscal year, 2 students were awarded Ph.D. degrees and 26 graduated with M.S.

In addition to graduate students and majors, the department taught several courses of a service nature, including CSCI 1100 (Introduction to Personal Computing), CSCI 1210 (Introduction to Computational Science), CSCI 1301 (Introduction to Computing and Programming). A total of 1,270 seats were offered in these courses.

D. Overall Status

The overall record of the faculty in instruction and research continues to be very good. However, we need to pay close attention to the decreasing number of our undergraduate students and undertake steps to attract new students into the Computer Science major. Our graduates are very well trained and have been able to find quality employment. We have graduated 2 more Ph.D. students. Additionally, we have continued to provide quality education to a large number of students, both majors and non-majors. Our research record has continued to improve both in scholarly publishing and in external research funding. We have added two excellent faculty members this year.

We continue to believe that the professional environment for computer science at UGA is very good. The department looks forward to future opportunities to strengthen our research and instruction.

APPENDICES

Attached are detailed listings of professional activities, grants, publications, and presentations of the faculty during the past year.

A. PROFESSIONAL HONORS AND RECOGNITIONS

H. R. Arabnia

Editor-in-Chief, Journal of Supercomputing (Kluwer Publishing), Nov. 1997 - present.

Member, Editorial Advisory Board, The International Journal of Communication Systems (IJCS), published by John Wiley, 2000 – present.

Member, Editorial Board, Computing Letters, Cambridge International Science Publishing Ltd., 2001 – present.

Member, Board of Advisors, The International Journal of Information Technology and Systems (Editor-in-Chief, Prof. David Rine, George Mason University), 2002 – present.

Editorial Board Member, International Journal of Information Technology and Web Engineering, 2004 – present.

Member of Executive Board of Editors, American Journal of Applied Sciences, ISSN#: 1546-9239.

Field Reviewer for the Naval Research Laboratory (NRL) - Postdoctoral Fellowship Application Review. The American Society for Engineering Education (ASEE), 2004.

Member of Review Panel: US Department of Defense, National Defense Science and Engineering Graduate (NDSEG) Fellowship Program; Alexandria, Virginia, Feb. 2004.

Member, Advisory Committee, IEEE Task Force on Cluster Computing (IEEE/TFCC), 2003 – present.

Associate Editor, International Journal of Computers and Applications published by ACTA Press, 2002 – present.

Journal of Parallel and Distributed Computing, JPDC, 1994 – present.

IEEE Transactions on Parallel and Distributed Systems, 1995 – present.

Member of Editorial Board Lecture series on Computer and Computational Sciences, VSP (Brill Academic Publishers), 2004 – 2007.

Member of Scientific Advisory Board, IOS Press, Medical and Care Compunetics, ISSN# 0926-9630, 2004.

Member of the IEEE Program Committee for 2004 International Conference on Advances in Intelligent Systems - Theory and Applications (AISTA2004: Nov. 15-18, Luxembourg), 2004.

Member, IEEE Steering Committee of ICMLA'04 (3rd International Conference on Machine Learning and Applications); Louisville, Kentucky, USA, December 16-18, 2004.

Member of Steering Committee, The 2004 International Conference on Communications in Computing, CIC'04, Las Vegas, USA, 2004.

Member of the Program Committee of International Conference on Embedded and Ubiquitous Computing (EUC-04: August 26-28, 2004, Aizu, Japan.).

Member of the Program Committee of The 2004 GITEX Research Conference on Innovations in Information Technology (IIT'2004: Dubai, UAE.).

Member of the Scientific Committee of SNPD 2004 (International Conference on Software Engineering, Artificial Intelligence, Networking, Parallel/Distributed Computing), P. R. China.

Member of Technical Committee, ACIT'04, The International Arab Conference on Information Technology, Algeria, December 12-15, 2004.

Member of Technical Program Committee for The International Conference on Embedded Software and Systems (ICCESS'04: Hangzhou, P. R. China), 2004.

Member of Program Committee for The Fifth International Conference of Parallel and Distributed Computing, Applications and Technologies (PDCAT'04, Singapore, Dec 8-10, 2004.).

Member of Program Committee for The 7th International Conference on Information Fusion, June, 2004, Stockholm, Sweden, 2004.

Prepared Questions for Educational Testing Service (ETS) GRE Computer Science Subject Test ETS, 2004.

Listed in Marquis Who's Who in Science and Engineering, 2004.

Interviewed by New Scientist Magazine about recent advances in supercomputing technology (October, March and also July 2004.).

Referee for the Natural Sciences and Engineering Research Council of Canada, a research funding agency, 2004.

Referee for Inderscience Journals; International Journal of Embedded Systems, 2004.

Evaluated book proposals for Springer's Computing & Information Science book program, 2004.

Referee for Postdoctoral Fellowship, Fund for Scientific Research - Flanders, Belgium, 2005.

Referee for University of Bath, UK, BSC Distinguished Dissertations Award 2004, May 2004.

Referee, ACMSE 2005 Conference (ACM South East Regional), Kennesaw, Georgia, USA, 2004/2005.

External Evaluator of Promotion dossier, University of California, Los Angeles, USA, 2004.

External Evaluator of Promotion dossier, State University of New York at Brockport, New York, USA, 2004.

External Evaluator of Promotion dossier (an Appeal's Case), University of Guelph, Canada, 2004/2005.

External Evaluator of Promotion dossiers, University of Technology, Sydney, Australia, 2004.

External Evaluator of Promotion dossiers, University College, Cork, Ireland, 2004.

External Evaluator of Promotion dossier, Southern Illinois University, Carbondale, USA, 2004.

External Evaluator of Promotion dossier, Drexel University, Philadelphia, USA, 2004.

External Evaluator of Promotion dossier, United Arab Emirates University, 2004.

Panelist, Review Panel, Department of Defense, National Defense Science and Engineering (NDSEG Fellowship Program), Alexandria, Virginia, Feb. 20-22, 2004.

Evaluated a Research Proposal for Vanderbilt University, Tennessee, program entitled "Defense Experimental Program to Stimulate Competitive Research", 2004.

PhD External Examiner, Monash University, Clayton, Australia, 2004.

I. Budak Arpinar

Member, IEEE Computer Society, 2002 – present.

Member, ACM Sigmod, 1999 – present.

Program Committee Member, 11th Intl. Conference on Artificial Intelligence: Methodology, Systems, and Applications (AIMSA 2004).

Program Committee Member, 2nd Workshop on Semantics in Peer-to-Peer and Grid Computing at the 13th Intl. WWW Conference, May 17-18, 2004, New York.

Program Committee Member, 2004 IEEE/WIC/ACM International Conference on Intelligent Agent Technology, September 20-24, 2004, Beijing, China.

Program Committee Member, 2004 IEEE/WIC/ACM International Conference on Web Intelligence, September 20-24, 2004, Beijing, China.

Program Committee Member, Net.ObjectDays 2004, 5th Annual International Conference on Object-Oriented and Internet-based Technologies, Concepts, and Applications for a Networked World, Erfurt, Germany, September 27-30, 2004.

Program Committee Member of the IASTED International Conference on Knowledge Sharing and Collaborative Engineering (KSCE 2004), November 22-24, 2004, St. Thomas, US Virgin Islands.

Program Committee Member of the 20th International Symposium on Computer and Information Sciences, Istanbul, Turkey, 2005.

Reviewer, IEEE Internet Computing.

Reviewer, IEEE Transactions on Systems, Man, and Cybernetics.

Reviewer, IEICE Transactions on Information and Systems.

Reviewer, Journal of Intelligent Systems.

Reviewer, Data and Knowledge Engineering Journal.

Reviewer, Encyclopedia of Database Technologies and Applications.

Reviewer, WWW Conference, 2005.

Reviewer, ETRI Journal.

S. M. Bhandarkar

Associate Editor, International Journal of Applied Intelligence, November 1999 - present.

Associate Editor, The Computer Journal, May 1999 - present.

Program Committee Member, IEEE Computer Society Bioinformatics Conference (CSB 2004), Stanford University, Palo Alto, CA, August 2004.

Program Committee Member, European Conference on Parallel and Distributed Computing (EuroPar 2004), August 2004.

Program Committee Member, International Conference on Pattern Recognition (ICPR 2004), Cambridge, UK, August 2004.

Program Committee Member, International Conference on Parallel Processing, (ICPP 2004), Montreal, Quebec, August 2004.

Member, Technical Committee on Multimedia Computing, IEEE Computer Society, 1998-present.

Member, Technical Committee on Pattern Analysis and Machine Intelligence, IEEE Computer Society, 1992-present.

Member, Association for Computing Machinery (ACM), 1990-present.

Member, International Society of Photo-optical and Instrumentation Engineers (SPIE), 1987-present.

Member, American Association for Artificial Intelligence (AAAI), 1985-present.

Member, Institute for Electrical and Electronic Engineering (IEEE), 1982-present.

Reviewer, USDA National Research Initiative Competitive Grants Program, 2000 – 2004.

Referee, National Science Foundation, 2000 – 2003.

Reviewer, USDA SBIR Program 2003, 2004.
Referee, IEEE Trans. Multimedia, 2003, 2004.
Referee, IEEE Trans. Circuits and Systems for Video Technology, 2002, 2003, 2004.
Reviewer, Office of Naval Research, 2004.
Referee, IEEE Transactions on Pattern Analysis and Machine Intelligence, 2001 – 2004.
Referee, Journal of Applied Intelligence, 2000 – 2004.
Referee, Pattern Recognition Letters, 1994 – 2004.

L. Cai

Member of professional organizations: ACM, SIGACT, EATCS, (1992 -present).
Reviewer, Mathematical Reviews, 1998 -present.
Reviewer, SIAM Journal on Discrete Mathematics.
Reviewer, IEEE Transactions in Computer.
Reviewer, Journal of Algorithms.
Reviewer, Information and Computation.
Reviewer, Journal of Automata, Languages, and Combinatorics.
Reviewer, Information Processing Letters.
Reviewer for IEEE Transactions on Pattern Analysis and Machine Intelligence, 2005.
Reviewer for Theoretical Computer Science, 2005.
Reviewer for proposals: Austria FWF Research Foundation, 2004.

E. R. Canfield

Reviewer, Math Reviews.
Referee, Journal Combinatorial Theory, Series A and B.
Referee, American Mathematical Monthly.
Referee, National Science Foundation.
Member of the Association for Computing Machinery.

Editor, Electronic Journal of Combinatorics.

S. H. Funk

Member of IEEE

Member of ACM

M. Hybinette

Member, Association for Computing Machinery.

Member, Institute of Electrical and Electronics Engineers.

Reviewer, Journal of Parallel and Distributed Computing.

Reviewer, International Journal of Formal Methods.

Reviewer, Winter Simulation Conference (WSC), 1996 – present.

Reviewer, Workshop on Parallel and Distributed Simulation (PADS), 1997 – present.

K. J. Kochut

Member, Association for Computing Machinery.

Member, SIGMOD.

Member, SIGCOMM.

Reviewer, IEEE Transactions on Knowledge and Data Engineering.

Reviewer, Information Systems.

E. T. Kraemer

Participant, Grant Proposal Review Panel, National Science Foundation, 2004.

Member, Program Committee for SoftVis2005 Conference, 2004.

Participant, Grant Proposal Review Board, National Institute of Health, 2004.

Referee, Grace Hopper Conference, 2004

Referee, Grace Hopper Scholarship Competition, 2004
Referee, Vis2004
Referee, International Journal of Human-Computer Systems, 2004.
Referee, National Science Foundation, Advanced Computational Research Program.
Referee, IEEE Transactions on Visualization and Computer Graphics.
Referee, IEEE Transactions on Software Engineering.
Referee, IEEE Transactions on Parallel and Distributed Systems.
Referee, Transactions on Software Engineering and Methodology.
Referee, Bioinformatics.
Referee, Journal of Parallel and Distributed Computing.
Referee, The Computer Journal.
Referee, Software-Practice and Experience Cybernetics and Systems.

Kang Li

Reviewer, Multimedia Computing and Networking.
Reviewer, ACM Multimedia.
Reviewer, IEEE Transactions of Parallel and Distributed Computing.
Reviewer, NOSSDAV and IEEE Security and Privacy.

D. K. Lowenthal

Member, ACM, 1992-present.
Member SIGPLAN, 1992-present.
Member, SIGOPS, 1992-present.
Referee, International Parallel and Distributed Processing Symposium (IPDPS).
Referee, Computer Languages.
Referee, Architectural Support for Programming Languages and Operating Systems (ASPLOS).
Program Co-Chair, Workshop on High-Performance, Power-Aware Computing, 2005.

National Science Foundation Grant Review Panel Member, 2004.

Program Committee Member, HiPC (2004, 2005), HIPS (2005), CLADE (2005), WNDA (2004).

J. A. Miller

Editorial Board Member of International Journal of Simulation and Process Modelling (IJSPM), 2004 – present.

Associate Editor, ACM Transactions on Modeling and Computer Simulation (TOMACS), 1999- present.

Associate Editor, IEEE Transactions on Systems, Man and Cybernetics (TSMC), 1999-present.

Program Committee Member, Annual Simulation Conference (ANSS), 1992-present.

Panel Moderator: Panel on Academic and Industrial Research: “Do Their Approaches Differ in Adding Semantics to Web Services?”, *Semantic Web Services and Web Process Composition: First International Workshop*, San Diego, CA, July 2004.

Session Chair: “Ontologies for Modeling and Simulation”, The 2004 Winter Simulation Conference, Washington, DC, December 2004, Speakers: P. Fishwick, J. Miller, K. Morse, L. Lacy.

Referee, ACM Transactions on Modeling and Simulation.

Referee, IEEE Transactions on Systems, Man and Cybernetics (TSMC).

Reviewer for National Science Foundation, 2004.

W. D. Potter

Editorial Board Member, "Applied Intelligence", since 1993. (The International Journal of Artificial Intelligence, Neural Networks, and Complex Problem-Solving Technologies, Editor-in-Chief: Professor Moonis Ali, Kluwer Academic Publishers).

Regional Editor, International Journal of Hybrid Intelligent Systems, 2003 – present.

Associate Editor, Journal of Intelligent and Fuzzy Systems, 2003 – present.

Program Committee Member, International Conference on Artificial Intelligence (IC-AI'2004), Las Vegas, Nevada, June, 2004.

Program Committee Member, International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems, (IEA/AIE'2003), June 2005; Italy.

Program Committee Member, International Conference on Knowledge Based Computer Systems, 2004, India.

Program Committee Member, International Conference on Informatics in Control, Automation, and Robotics, August, 2004, Portugal.

Referee, IEEE Computer.

Referee, IEEE Trans. On Systems, Man, & Cybernetics.

Referee, International Journal for Applied Intelligence.

Referee, Journal of Intelligent and Fuzzy Systems: JIFS.

Referee, Pattern Recognition Letters.

K. M. Rasheed

Member, Institute of Electrical and Electronics Engineers (IEEE).

Member, IEEE Computer Society.

Member, IEEE Neural Network Society.

Member, International Society for Genetic and Evolutionary Computation (ISGEC).

Member, American Association for Artificial Intelligence (AAAI).

Journal guest editor, Soft Computing Journal: special issue on approximation and learning in evolutionary computation.

Session Chair, The International Multiconferences in Computer Science (MLMTA'2004).

Program committee member, The Congress on Evolutionary Computation (CEC'2004, CEC'2005).

Session Chair, Genetic and Evolutionary Computation Conference (GECCO'2005).

Program committee member, Genetic and Evolutionary Computation Conference (GECCO'99, 2000, 2002, 2003, 2004, 2005).

Program committee member, The European Workshop on Evolutionary Algorithms in Stochastic and Dynamic Environments (2003, 2004, 2005).

Program committee member, The 8th International Conference on Parallel Problem Solving From Nature (PPSN'2004).

Referee, IEEE Intelligent Systems.

Referee, IEEE Transactions on Evolutionary Computation

Referee, IEEE Transactions on Systems, Man and Cybernetics (Part A).

Referee, Journal of Machine Learning Research (JMLF).
Referee, Journal of Artificial Intelligence Research (JAIR).
Referee, Artificial Intelligence in Engineering Design and Manufacturing (AIEDAM).
Referee, International Association for Mathematics and Computers in Simulation (IMACS).
Referee, Machine Learning Journal (MLJ).
Referee, Applied Intelligence.
Referee, Pattern Recognition Letters.

R. W. Robinson

Editorial Board, Journal of Combinatorial Mathematics and Combinatorial Computing (1987-present).
Referee, SODA05 (ACM-SIAM Symposium on Discrete Algorithms 2005).

A. P. Sheth

Member of the Editorial Board, Journal on Web Semantics: Science, Services and Agents on the World Wide Web, 2003 – present.
Senior Member (2003), IEEE and IEEE Computer Society, including Technical Committee on Database Engineering, 1981 – present.
Member of the Editorial Board, International Journal of Intelligent and Cooperative Information Systems, 1995 – present.
Editor, IEEE Multimedia, November 1998 – present.
Member of the Editorial Board, Information Systems - an Intl. Journal, 1993 – present.
Member of the Editorial Board, Journal on Distributed and Parallel Databases, 1992 - present.
Associate Editor, SIGMOD Record, 1988 – present.
Member, Association for Computing Machinery, SIGMOD and other SIGs.
Member, IEEE Computer Society, including Technical Committee on Database Engineering.
Member of the Board and Founding Member, International Foundation on Cooperative Information Systems, 1996 – present.

Editorial Board, International Journal of Cooperative Information Systems, 1996 – present.

Editorial Board, Information systems-An International Journal, 1998 – present.

Advisory Board, Coca-Cola Center for Marketing Studies, Terry College of Business, 2001 – present.

PC Member, W3C Workshop on Frameworks for Semantics in Web Service, Innsbruck, Austria, June 9-10, 2005.

PC Member, IEEE International Conference on Intelligence and Security Informatics (ISI-2005), Atlanta, GA, May 19-20, 2005.

PC Member, 21st International Conference on Data Engineering, Tokyo, Japan, April, 2005.

PC Member, 1st UK Young Researchers Workshop on Service Oriented Computing (YR-SOC), Leicester, UK, April 21-22, 2005.

PC Member, AAAI 2004 Workshop on Semantic Web Personalization, San Jose, CA, USA, July 25-26, 2004.

PC Member, IEEE International Conference on Web Services (ICWS 2004), San Diego, CA, July 6-9, 2004.

PC Member, 14th International World Wide Web Conference (WWW2004): Web Services track, New York, May 17-22, 2004.

PC Member, 14th International World Wide Web Conference (WWW2004): Semantic Web track, New York, May 17-22, 2004.

PC Member, 2nd Workshop on Semantics in Peer-to-Peer and Grid Computing (at WWW2004), New York, May 17-18, 2004.

Co-organizer, Semantic Interoperability and Integration, Dagstuhl Seminar 04391, September 19-24, 2004, Dagstuhl, Germany.

Program Co-Chair, 2004 IEEE International Conference on Services Computing (SCC 2004), Shanghai, China, September 15-18, 2004.

Program Committee Member, the Workshop on Semantic Web and Databases, Berlin, Germany, September 13-14, 2004.

Co-organizer, “Semantic Web meets eGovernment”, AAAI Spring Symposium Series (SSS-06), Sanford University, CA, March 27-29, 2005.

Co-chair, 2nd International Workshop on Semantic and Dynamic Web Processes” (SDWP2005), Orlando, FL, July, 2005.

Referee, VLDB Journal.

Referee, National Science Foundation.

Referee, Research Council of Norway.

Referee, Information Systems.

Referee, Intelligent Information Systems.

Referee, Distributed and Parallel Databases.

Referee, Intelligent and Cooperative Information Systems.

Referee, Computer.

Referee, IEEE Transaction on Knowledge and Data Engineering.

Referee, Edited 3 Database Research Center Reports for *ACM SIGMOD Record* as Associate.

Referee, Edited 3 Media Reviews for IEEE Multimedia.

Proposal Reviewer, Swiss National Science Foundation, 2005.

Proposal Reviewer, Singapore (Science & Engineering Research Council Agency for Science), 2005.

J. W. Smith

Member of IEEE

Reviewer for Computing Reviews, 1978 - 1986, 1990, 1994 - present.

T. R. Taha

Member, Association of Computing Machinery (ACM).

Member, Society for Industrial and Applied Mathematics (SIAM).

Member, SIAM SEAS.

Member, International Association for Mathematics and Computers in Simulation (IMACS).

Member, SIAM Activity Group on Supercomputing.

Member, SIAM Activity Group on Computational Science.

Member, IMACS technical committee on Dynamical Systems and Nonlinear Science, 1992 - present.

Member, Institute of Electrical and Electronics Engineers (IEEE), Inc.

Referee, Journal of Computational Physics.

Referee, Applied Numerical Mathematics (IMACS Journal).

Referee, Computers and Mathematics with applications.

Referee, Mathematics and Computers in Simulation.

Referee, Numerical Mathematics for Partial Differential Equations.

Referee, Institute of Physics Publishing Research Journal, UK, 1997 – present.

Referee, Simulation: The Journal of the Society for Computer Simulation, Hong Kong.

Referee, Journal of Science and Technology/Sultan Qaboos University of Oman.

Referee, Derasat/Journal of Sciences, University of Jordan, Jordan.

Referee, Journal of Physics A: Mathematical and General.

Referee, Journal of Physics B: Molecular and Optical Physics.

Referee, Numerical Algorithms, C. Brezinski, Editor-in-Chief, France.

Referee, The Korean Journal of Computational and Applied Mathematics.

Referee, Journal of Parallel and Distributed Computing.

Referee, IEEE Transactions on Systems, Man, and Cybernetics.

Member, Editorial Board of The International Arab Journal of Information Technology (IAJIT).

Member, Steering Committee of the 2004 Arab Conference on Information Technology (ACIT'2004) December 12-15, 2005, Mentouri University of Constantine, Algeria.

Reviewer, The 2004 Arab Conference on Information Technology (ACIT'2004) December 12-15, 2005, Mentouri University of Constantine, Algeria.

Member, Organizing Committee for the upcoming Bioinformatics Conference, 2005.

Program Chair and conference coordinator of the Fourth IMACS International Conference on “Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory”, Athens, GA, April 11-14, 2005.

Session Organizer and Chair, “Nonlinear waves: computation and theory” at the 17th IMACS World Congress, Paris, France, July 11-15, 2005.

Reviewer, 17th IMACS World Congress, Paris, France, July 11-15, 2005.

Member, The International Program Committee for the 17th IMACS World Congress, Paris, France, July 11-15, 2005.

Member, Steering Committee of the 2005 Arab Conference on Information Technology (ACIT'2005), Al-Isra Private University, Jordan, December 6-8, 2005.

Senior Editor for the Journal Mathematics and Computers in Simulation, December 2004 – present.

Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulation on “Optical Solitons-II”, 2004.

Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulation on “Nonlinear Waves: Computation and Theory-III”, 2004.

Guest Editor of the Special Issue of the Journal Mathematics and Computers in Simulation on “Nonlinear Waves: Computation and Theory-IV”, 2004.

GRANTS AWARDED OR CURRENT

EXTERNALLY FUNDED GRANTS

Bhandarkar, S.M. (with Dr. J. Arnold, Co-PI) US Dept. of Agriculture, “Novel Statistical Methods for Generation of Integrated Genomic Maps”, Sept. 1, 2002 - Aug. 31, 2005, \$280,644.

Bhandarkar, S.M., “Design and Prototype Development of a Computer Vision-based Lumber Production Planning System”, US Department of Agriculture, \$190,000, Dec. 15, 2000 – Aug. 31, 2005. (In addition, \$35,000 matching funds from VP for Research.)

Canfield, E.R. (PI), National Security Agency, Mathematical Sciences program, “Asymptotic Methods in Combinatorics”, \$87,185, November 26, 2004 – June 30, 2006.

Canfield, E.R. (PI), J.W. Smith and H.R. Arabnia, University of Georgia Yamacraw Program (2003-2004), Georgia Governor’s Office, \$614,870, continued support for permanent/continued staff and faculty positions for the Department of Computer Science.

Kissinger, Jessica (PI), John A. Miller and Eileen T. Kraemer (Co-PIs), “Integrated Databases for Apicomplexan Pathogens”, National Institutes of Health (NIH), July 2004 – June 2009, \$3,100,000 (CS Portion \$538,816).

Kraemer, Eileen and Elizabeth Davis, NSF "Program Visualization: Using Perceptual and Cognitive Concepts to Quantify Quality, Support Instruction, and Improve Interactions," \$303,606, June 15, 2003 – June 14, 2006.

Lowenthal, David (PI), National Science Foundation Advanced Computational Research Program (ACR), "HC-MPI: A System for Out-of-Core, Heterogeneous Data Distributions", \$150,000, July 1, 2003 – June 30, 2005 (additionally, \$6000 on an REU supplement).

Mueller, Frank (PI), David Lowenthal (Co-PI), National Science Foundation Computing Processes and Artifacts (FCPA), “Detecting and Alleviating Sources of Scalability Problems”, September 2004 – August 2007, \$164,152.

Potter, W.D., “SAGA3: Spray Advisor GA Parameter Setting Analysis,” \$37,000, USDA Forest Service, 8/2003 – 9/2004.

Knight, Doyle (PI), Khaled Rasheed (Co-PI) and 3 other Co-PIs, National Science Foundation (NSF), “Data Driven Design Optimization in Engineering Using Concurrent Integrated Experiment and Simulation,” \$1,200,000, Oct. 1, 2001 – Sept. 30, 2004 (UGA's portion \$137,295).

Pierce, Michael (PI), et al., Co-PI’s in CS: Amit P. Sheth, Krys J. Kochut and John A. Miller, “Bioinformatics of Glycan Expression,” National Institutes of Health (NIH), July 2003 - July 2008, \$6,700,000 (Computer Science portion \$709,401).

Sheth, A. (PI) “Ontology, Metadata and Semantic Association Support for Semantic Agent Based Document Protection”, ARDA funded project (subcontract to CTA, Inc.), \$201,216, October 19, 2004 – November 30, 2005.

Sheth, Amit P., Budak I. Arpinar, John A. Miller and Krys J. Kochut, “SemDis: Discovering Complex Relationships in Semantic Web,” National Science Foundation, Information Technology Research (NSF-ITR), October 1, 2003 – September 30, 2007, \$800,000.

Sheth, Amit P. (PI), John Miller (Co-PI), “Eclipse Innovation Grant”, IBM Eclipse Foundation, Jan 1, 2004 - , \$85,000.

Sheth, Amit, Budak Arpinar, Krys Kochut, National Science Foundation, "ITR: Semantic Association Identification and Knowledge Discovery for National Security Applications", (IDM program) CISE-ITR-0219649, \$200,000, July 1, 2002-June 30, 2005.

Sheth, Amit P. (PI), E. Lynn Usery, I. Budak Arpinar, Xiaobai Yap (Co-PIs), Homeland Security Workshop, UCGIS, \$15,000, August 2003 – July 2005.

Sheth, A., donations from various sources to support research activities in the LSDIS Lab at the University of Georgia, current funding, \$83,000.

Taha, Thiab (PI), NSF, Support for the Fourth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory Conference", \$15,000, August 1, 2004 - July 31, 2006.

INTERNALLY FUNDED GRANTS

Bhandarkar, S.M. (with Dr. E. William Tollner, Co-PI and Dr. Jack Yu, MD, Medical College of Georgia, Co-PI), “Exploiting Computer Vision and Computer-aided Design and Manufacturing Technologies in Computer-Assisted Reconstructive Surgery”, University of Georgia Engineering Research Grant, \$33,000, August 15, 2003 – August 14, 2004.

Li, Kang (PI), “Resisting SPAM with Network Puzzles”, UGA Junior Faculty Research Grant, \$9,572, February 2, 2004 – December 31, 2004.

Deligiannidis, L., and W.D. Potter, “Enriching CSCI-1302: Controlling External Hardware Devices Using Java,” UGA LTG program, \$6,549, July 1, 2004 – June 30, 2005.

Rasheed, Khaled, UGA Faculty Research Grant, “Modeling, Evaluation & Design of External Skeletal Fixation Structures”, \$5000, January 2004 – December 2004.

Taha, Thiab, Research Foundation of The University of Georgia, “Support for the Fourth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, \$3000, April 2005.

B. FACULTY PUBLICATIONS AND PRESENTATIONS

PUBLISHED ARTICLES AND CHAPTERS IN BOOKS: (senior author listed first)

1. H. Valafar, H. R. Arabnia, and G. Williams, "Distributed Global Optimization and Its Development on the MultiRing Network", *International Journal of Neural, Parallel & Scientific Computations* (Dynamic Publishers), Vol 12, No. 4, December 2004, pp. 465-490.
2. Buhari and H. R. Arabnia, "Running Multicast Applications Using Reconfigurable Parallel System", *International Journal of Computing and Information Sciences (IJCIS-ISSN 1708-0460)*, accepted, in press, 2005.
3. Arabnia H. R. and Leonidas Deligiannidis, "Performance Evaluation of the Multi-Ring Interconnection Network Topology in a Simulated Environment", *Special Issue of The Journal of Telecommunications Systems* (selected papers of IEEE INFOCOMM 2005), accepted, 2005.
4. He Xiangjian and Arabnia H. R., "Scalable Switch for Bi-Directional MultiRing Network", *Proceedings of The 4th IEEE International Symposium on Signal Processing and Information Technology, ISSPIT'04, (IEEE Signal Processing and IEEE Computer Society)*, December 18-21, 2004, Rome, Italy, pp. 279-282, 2004.
5. Arabnia H. R. and He Xiangjian, "Scalable Switch for Uni-Directional MultiRing Network", *Proceedings of the ISCA 17th International Conference on Parallel and Distributed Computing Systems (PDCS-2004, San Francisco, USA)*, September 15-17, ISBN# 1-880843-52-8, paper acceptance rate of 36%; Editors: D. A. Bader and A. A. Khokhar; pp. 302-307, 2004.
6. Thapliyal Himanshu, Srinivas M. B., and Arabnia H. R., "A Need of Quantum Computing: Reversible Logic Synthesis of Parallel Binary Adder-Subtractor", *Proceedings of the 2005 International Conference on Embedded Systems and Applications, ESA'05, June, Las Vegas*, pp. 60-67, 2005.
7. Chowdhury Ananda S., Arabnia H. R., and Bandyopadhyay Dipankar, "Improved Stereo Correlation Using Moravec Operator and Kolmogorov-Smirnov Test", *Proceedings of the 2005 International Conference on Computer Vision (VISION'05: June 20-23, Las Vegas, USA)*, pp. 24-30, 2005.
8. Thapliyal Himanshu, Srinivas M. B., and Arabnia H. R., "A Reversible Version of 4 X 4 Bit Array Multiplier With Minimum Gates and Garbage Outputs", *Proceedings of the 2005 International Conference on Embedded Systems and Applications, ESA'05, June, Las Vegas*, pp. 106-114, 2005.
9. Qu Junfeng and Arabnia H. R., "Mining Structural Changes in Financial Time Series With Gray System", *Proceedings of the 2005 International Conference on Data Mining, DMIN'05, June, Las Vegas*, pp. 173-178, 2005.
10. Thapliyal Himanshu, Srinivas M. B., and Arabnia H. R., "Reversible Logic Synthesis of Half, Full and Parallel Subtractors", *Proceedings of the 2005 International Conference on Embedded Systems and Applications, ESA'05, June, Las Vegas*, pp. 165-172, 2005.

11. Arabnia H. R. and Deligiannidis Leonidas, "MRSIM: A Simulator for the MultiRing", Proceedings of the 2005 International Conference on Parallel and Distributed Processing Techniques and Applications PDPTA'05, June, Las Vegas, pp. 571-577, 2005.
12. Thapliyal Himanshu, Srinivas M. B., and Arabnia H. R., "Faster RSA Encryption/Decryption Architecture Using an Efficient High Speed Overlay Multiplier", Proceedings of the 2005 International Conference on Security and Management, SAM'05, June, Las Vegas, pp. 40-44, 2005.
13. Qu Junfeng and Arabnia H. R., "A Novel Short-Term Stock Price Predicting System", Proceedings of the 2005 International Conference on Information and Knowledge Engineering IKE'05, June, Las Vegas, pp. 25-31, 2005.
14. Thapliyal Himanshu, Srinivas M. B., and Arabnia H. R., "Implementation of A Fast Square In RSA Encryption/Decryption Architecture", Proceedings of the 2005 International Conference on Security and Management, SAM'05, June, Las Vegas, pp. 371-375, 2005.
15. Thapliyal Himanshu, Srinivas M. B., and Arabnia H. R., "Design And Analysis of A VLSI Based High Performance Low Power Parallel Square Architecture", Proceedings of the 2005 International Conference on Algorithmic Mathematics and Computer Science, AMCS'05, June, Las Vegas, pp. 72-76, 2005.
16. Thapliyal Himanshu and Arabnia H. R., "Verilog Coding Style for Efficient Synthesis In FPGA", Proceedings of the 2005 International Conference on Computer Design, CDES'05, June, Las Vegas, pp. 85-89, 2005.
17. Kotiyal Saurabh, Thapliyal Himanshu, Srinivas M. B., and Arabnia H. R., "VLSI Implementation of $O(n*n)$ Sorting Algorithms and Their Hardware Comparison", Proceedings of the 2005 International Conference on Scientific Computing, CSC'05, June, Las Vegas, pp. 74-78, 2005.
18. Thapliyal Himanshu, Srinivas M. B., and Arabnia H. R., "Design for A Fast And Low Power 2's Complement Multiplier", Proceedings of the 2005 International Conference on Computer Design, CDES'05, June, Las Vegas, pp. 165-168, 2005.
19. M. I. Marin and H. R. Arabnia, "Problems in Algebra and Mathematical Analysis". Publisher: Elliot & Fitzpatrick Inc., ISBN #: 0-945019-92-0; 360 pages, 2004.
20. Arabnia H. R., Guest Co-Editor (with G. A. Gravvanis), "Special Section on Parallel and Distributed Algorithms and Systems", International Journal of Future Generation Computer Systems (ISSN: 0167-739X), 2004.
21. Arabnia H. R., Guest Co-Editor (with G. A. Gravvanis and M. P. Bekakos), "Special Issue on Grid Computing", Journal of Neural Parallel and Scientific Computations, Vol. 12, No. 3, pp. 261-454 (ISSN: 1061-5369), 2004.
22. Arabnia H. R., Guest Co-Editor (with G. A. Gravvanis), Special Issue on Parallel and Distributed Algorithms, Journal of Parallel Algorithms and Applications, Vol. 19, No. 2-3 (ISSN: 1063-7192), pp. 77-193, 2004.
23. Arabnia H. R., Editor, Vol I, II, & III, Proceedings of the 2005 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'05: June, Las Vegas, USA), (Vol I, ISBN# 1-932415-58-0; Vol II, ISBN# 1-932415-59-9; Vol III, 1-932415-60-2), 430 + 468 + 430 pages, 2005.

24. Arabnia H. R., Co-Editor (with Rose Joshua), Vol I & II, Proceedings of the 2005 International Conference on Artificial Intelligence (ICAI'05: June, Las Vegas, USA), (Vol I, ISBN# 1-932415-66-1; Vol II, ISBN# 1-932415-67-X), 454 + 426 pages, 2005.
25. Arabnia H. R., Co-Editor (with Hassan Reza), Vol I & II, Proceedings of the 2005 International Conference on Software Engineering Research and Practice (SERP'05: June, Las Vegas, USA), (Vol I, ISBN# 1-932415-49-1; Vol II, ISBN# 1-932415-50-5), 474 + 386 pages, 2005.
26. Arabnia H. R., Co-Editor (with Rose Joshua), Proceedings of the 2005 International Conference on Internet Computing (ICOMP'05: June, Las Vegas, USA), ISBN# 1-932415-69-6, 479 pages, 2005.
27. Arabnia H. R., Co-Editor (with Laurence T. Yang, Yiming Li, S. N. Salloum, & J. G. Delgado-Frias), Proceedings of the 2005 International Conference on Computer Design (CDES'05: June, Las Vegas, USA), ISBN# 1-932415-54-8, 242 pages, 2005.
28. Arabnia H. R., Co-Editor (with Laurence T. Yang & Li-Chun Wang), Proceedings of the 2005 International Conference on Wireless Networks (ICWN'05: June, Las Vegas, USA), ISBN# 1-932415-55-6, 668 pages, 2005.
29. Arabnia H. R., Editor, Proceedings of the 2005 International Conference on Modeling, Simulation and Visualization Methods (MSV'05: June, Las Vegas, USA), ISBN# 1-932415-70-X, 272 pages, 2005.
30. Arabnia H. R., Co-Editor (with Rose Joshua), Proceedings of the 2005 International Conference on Foundations of Computer Science (FCS'05: June, Las Vegas, USA), ISBN# 1-932415-71-8, 174 pages, 2005.
31. Arabnia H. R., Editor, Proceedings of the 2005 International Conference on Imaging Science, Systems, and Technology: Computer Graphics (CISST'05: June, Las Vegas, USA), ISBN# 1-932415-64-5, 289 pages, 2005.
32. Arabnia H. R., Editor; Rose Joshua & Youngsong Mun, Associate Co-Editors; Proceedings of the 2005 International Symposium on Web Services and Applications (ISWS'05: June, Las Vegas, USA), ISBN# 1-932415-72-6, 156 pages, 2005.
33. Arabnia H. R., Associate Co-Editor (with M. Denko, S. Kurkovsky, D. Manivannan, T. Terada, A. Yasinsac, J. Youn); Co-Editors (L. T. Yang, J. Ma, M. Takizawa, T. K. Shih); Proceedings of the 2005 International Conference on Pervasive Systems and Computing (PSC'05: June, Las Vegas, USA), ISBN# 1-932415-52-1, 222 pages, 2005.
34. Arabnia H. R., Co-Editor (with Elena B. Kozerenko & Sebastian Shaumyan); Rose Joshua, Associate Editor; Proceedings of the 2005 International Conference on Machine Learning; Models, Technologies and Applications (MLMTA'05: June, Las Vegas, USA), ISBN# 1-932415-73-4, 154 pages, 2005.
35. Arabnia H. R., Co-Editor (with Brian d'Auriol); Proceedings of the 2005 International Conference on Communications in Computing (CIC'05: June, Las Vegas, USA), ISBN# 1-932415-56-4, 226 pages, 2005.
36. Arabnia H. R., Editor; Weichang Du, Christian Heinlein, & Hassan Reza, Associate Co-Editors; Proceedings of the 2005 International Conference on Programming Languages and Compilers (PLC'05: June, Las Vegas, USA), ISBN# 1-932415-75-0, 252 pages, 2005.

37. Arabnia H. R., Co-Editor (with Laurence T. Yang, Juergen Becker, Masaharu Imai, & Zoran Salcic), Proceedings of the 2005 International Conference on Embedded Systems and Applications (ESA'05: June, Las Vegas, USA), ISBN# 1-932415-53-X, 272 pages, 2005.
38. Arabnia H. R., Co-Editor (with Jun Ni); Proceedings of the 2005 International Conference on Grid Computing and Applications (GCA'05: June, Las Vegas, USA), ISBN# 1-932415-57-2, 198 pages, 2005.
39. Arabnia H. R., Editor, Proceedings of the 2005 International Conference on e-Business, Enterprise Information Systems, e-Government, and Outsourcing (EEE'05: June, Las Vegas, USA), ISBN# 1-932415-76-9, 194 pages, 2005.
40. Arabnia, H. R., Editor; Liwen He & Youngsong Mun, Associate Co-Editors; Proceedings of the 2005 International Conference on Security and Management (SAM'05: June, Las Vegas, USA), ISBN# 1-932415-82-3, 464 pages, 2005.
41. Arabnia, H. R., Editor, Proceedings of the 2005 International Conference on Computers for People with Special Needs (CPSN'05: June, Las Vegas, USA), ISBN# 1-932415-78-5, 104 pages, 2005.
42. Arabnia H. R., Co-Editor (with Anthony Scime); Ray R. Hashemi & Roman W. Swiniarski, Associate Co-Editors; Proceedings of the 2005 International Conference on Data Mining (DMIN'05: June, Las Vegas, USA), ISBN# 1-932415-79-3, 250 pages, 2005.
43. Arabnia H. R., Editor, Proceedings of the 2005 International Conference on Human-Computer Interaction (HCI'05: June, Las Vegas, USA), ISBN# 1-932415-80-7, 108 pages, 2005.
44. Arabnia H. R., Editor (+ 3 Associate Co-Editors), Proceedings of the 2005 International Conference on Computer Vision (VISION'05: June, Las Vegas, USA), ISBN# 1-932415-65-3, 248 pages, 2005.
45. Arabnia H. R., Co-Editor (with George A. Gravvanis), Proceedings of the 2005 International Conference on Scientific Computing (CSC'05: June, Las Vegas, USA), ISBN# 1-932415-62-9, 180 pages, 2005.
46. Arabnia H. R., Co-Editor (with Rose Joshua), Proceedings of the 2005 International Conference on Information and Knowledge Engineering (IKE'05: June, Las Vegas, USA), ISBN# 1-932415-81-5, 306 pages, 2005.
47. Arabnia H. R., Associate Editor; Faramarz Valafar & Homayoun Valafar, Co-Editors; Proceedings of the 2005 International Conference on Mathematics and Engineering Techniques in Medicine and Biological Sciences (METMBS'05: June, Las Vegas, USA), ISBN# 1-932415-83-1, 308 pages, 2005.
48. Arabnia H. R., Co-Editor (with Iyad A. Ajwa); Proceedings of the 2005 International Conference on Algorithmic Mathematics and Computer Science (AMCS'05: June, Las Vegas, USA), ISBN# 1-932415-63-7, 112 pages, 2005.
49. Arabnia H. R., Editor, Proceedings of the 2005 International Conference on Frontiers in Education: Computer Science and Computer Engineering (FECS'05: June, Las Vegas, USA), ISBN# 1-932415-84-X, 188 pages, 2005.

50. I. B. Arpinar, R. Zhang, B. Aleman-Meza, and A. Maduko, "Ontology-Driven Web Services Composition Platform", *Journal of Information Systems and e-Business Management, Special issue on Service oriented enterprise IT applications and Web Services*, in print.
51. B. Aleman-Meza, C. Halaschek, and I. B. Arpinar, "Collective Knowledge Composition in a Peer-to-Peer Network: A survey for Peer-to-Peer applications", *Encyclopedia of Database Technologies and Applications*, Eds., L.C. Rivero, J.H. Doorn and V.E. Ferraggine, Idea-Group Inc. April 2005.
52. I. B. Arpinar, A. Sheth, C. Ramakrishnan, E. L. Usery, M. Azami and M. Kwan, Geospatial Ontology Development and Semantic Analytics, *Handbook of Geographic Information Science*, J. P. Wilson and A. S. Fotheringham, Eds, Blackwell Publishing (in print, 2005, 21 pages).
53. J. Arnold, H.-B. Schüttler, D.A. Logan, D. Battogtokh, J. Griffith, I. B. Arpinar, S. Bhandarkar, S. Datta, K. J. Kochut, E. Kraemer, J. A. Miller, A. Sheth, G. Strobel, T. Taha, B. Aleman-Meza, J. Doss, L. Harris, and A. Nyong, "Metabolomics", *Handbook of Industrial Mycology*. Marcel Dekker, NY, NY, 2004 Chapter 22, pp. 597 – 633.
54. C. Halaschek, B. Aleman-Meza, I. B. Arpinar, and A. Sheth, "Discovering and Ranking Semantic Associations over a Large RDF Metabase", (Demonstration Paper) *In Proceedings of 30th International Conference on Very Large Data Bases (VLDB2004)*, August 30 - September 03, 2004, Toronto, Canada, pp. 1317 – 1320.
55. B. Aleman-Meza, C. Halaschek-Wiener, I. Budak Arpinar, C. Ramakrishnan and A. Sheth, "Ranking Complex Relationships on the Semantic Web", *IEEE Internet Computing*, May-June 2005, pp. 18-26.
56. I. B. Arpinar, B. Aleman-Meza, R. Zhang, and A. Maduko, "Ontology-Driven Web Services Composition", *In Proceedings of IEEE Conference on E-Commerce Technology (CEC 2004)*, San Diego, California, July 6-9, 2004, pp. 146 – 152.
57. Siddhartha Chattopadhyay, Suchendra M. Bhandarkar and Kang Li, "BAP Sparsing: A Novel Approach to MPEG-4 Body Animation Parameter Compression", in *IEEE Computer Society International Conference on Multimedia Communications systems (ICMCS'05)*, Montreal, Canada, to appear.
58. S.M. Bhandarkar and F. Chen, "Similarity Analysis of Video Sequences Using an Artificial Neural Network", *International Journal of Applied Intelligence*, in press.
59. S.M. Bhandarkar and S.R. Chandrasekaran, "Parallel Parsing of MPEG Video on a Shared-Memory Symmetric Multiprocessor", *Parallel Computing*, Vol. 30, No. 11, 2004, pp. 1233 – 1276.
60. S.M. Bhandarkar, T. Jiang, N. Li and K. Verma, "Automated Analysis of DNA Hybridization Images for High-Throughput Genomics", *Journal of Machine Vision and Applications*, Vol. 15, No. 3, 2004, pp. 121 – 138.
61. S.M. Bhandarkar, J. Huang and J. Arnold, "Information Theoretic Approaches to Genome Reconstruction", in *Handbook of Computational Molecular Biology*, (S. Aluru and D. Bader, Eds.), CRC Press, Boca Raton, FL, 2005, in press.
62. S.M. Bhandarkar, A.S. Chowdhury, E.W. Tollner, J.C. Yu and E.W. Ritter, "Surface Reconstruction for Computer Vision-based Craniofacial Surgery", *Proceedings IEEE*

International Workshop on Applications of Computer Vision (WACV 2005), Breckenridge, CO, January 5-7, 2005, pp. 257 – 262.

63. S.M. Bhandarkar and X. Luo, “An Efficient Background Updating Scheme for Real-time Traffic Monitoring”, *Proceedings 7th IEEE International Conference on Intelligent Transportation Systems (ITSC 2004)*, Washington, DC, October 3-6, 2004, pp. 303 – 308.
64. Y. Song, J. Zhao, K. Liu, R. Malmberg, and L. Cai, “RNA structural homology search with a succinct grammar model”, *Proceedings of Tsinghua International Bioinformatics Workshop, Journal of Computer Science and Technology, Special Issue on Bioinformatics*, to appear (2004).
65. Y. Song, J. Zhao, R. Malmberg, K. Liu, C. Liu, and L. Cai, “RNA structural homology search with a succient grammar model”, *Journal of Computer Science and Technology*, 2005 to appear.
66. C. Liu, Y. Song, R. Malmberg and L. Cai, "Profiling and searching for RNA pseudoknot structures in genomes", *International Journal of Bioinformatics Research and Applications*, to appear.
67. C. Liu, Y. Song, R. Malmberg, and L. Cai, “Profiling and Searching for RNA Pseudoknot Structures in Genomes”, *Proceedings of 2005 International Workshop on Bioinformatics Research and Applications*, to appear.
68. E.R. Canfield, (with E. A. Bender, L. B. Richmond, and H. S. Wilf), “A discontinuity in the distribution of fixed point sums”, *Electronic J. of Combinatorics*, to appear.
69. E.R. Canfield, “Integer partitions and the Sperner property”, *Theoretical Computer Science*, to appear.
70. E.R. Canfield (with Herbert S. Wilf and Carla Savage), “Regularly spaced subsums of integer partitions”, *Acta Arithmetica*, 115 (2004) 205-216.
71. L. Deligiannidis, W.D. Potter, B.J. Wimpey, H. Uchiyama, R. Deng, S. Radhakrishnan, and D. Barnhard, “HelpStar Technology for Semi-Autonomous Wheelchairs”, *Proceedings of the 2005 International Conference on Computers for People with Special Needs, CPSN’05*, Las Vegas, NV, June, 2005, to appear.
72. H. Uchiyama, L. Deligiannidis, W.D. Potter, B.J. Wimpey, D. Barnhard, R. Deng, and S. Radhakrishnan, “A Semi-Autonomous Wheelchair with HelpStar”, *Proceedings of the 18th International Conference on Industrial & Engineering Applications of Artificial Intelligence and Expert Systems, IEA/AIE’05*, Bari, Italy, June, 2005, to appear.
73. Shelby Funk and Sanjoy Baruah, “Restricting EDF migration on uniform heterogeneous multiprocessors”, *Technique et Science Informatiques*, Hermes publisher, submitted January 2005.
74. Shelby Funk and Sanjoy Baruah, “Task assignment on uniform heterogeneous multiprocessors”, *The 17th EuroMicro Conference on Real-Time Systems*, Palma de Mallorca, Balearic Islands, Spain, July 6-8, 2005, to appear.
75. Shelby Funk, Sanjoy Baruah and Joël Goossens, “Heuristics for Restricting EDF Migration on Uniform Multiprocessors”, *Work in Progress Proceedings of the 25th Real-Time Systems Symposium*, Lisbon, Portugal, December 2004.

76. Abhishek Agarwal and Maria Hybinette, "Merging Parallel Simulation Programs", 19th ACM/IEEE/SCS Workshop on Principles of Advanced and Distributed Simulation (PADS-2005), Monterey, CA, June 2005, to appear.
77. Abhishek Chugh and Maria Hybinette, "Towards Adaptive Caching for Parallel and Discrete Event Simulation", 2004 Winter Simulation Conference (WSC-2004), Washington, DC, December 2004, Vol 1 pp. 328 – 336.
78. Vinay Sachdev, Maria Hybinette, and Eileen Kraemer, "Controlling Over-Optimism in time Warp via CPU-based Flow Control", 2004 Winter Simulation Conference (WSC-2004), Washington, DC, December 2004, Vol 1, pp. 304 – 402.
79. X. Yi and K. Kochut, "JCPNet Tool and Automated Analysis of Distributed Systems," the *43rd ACM Southeast Conference*, March, 2005, Atlanta, GA. (to appear).
80. X. Yi and Krys J. Kochut, "A CP-nets-based Design and Verification Framework for Web Services Composition", *Proceedings of 2004 IEEE International Conference on Web Services*, San Diego, California, USA, pp. 756-760, 2004.
81. X. Yi and K. Kochut, "Process Composition of Web Services with Complex Conversation Protocols: a Colored Petri Nets Based Approach," *Proceedings of the Design, Analysis, and Simulation of Distributed Systems 2004*, Washington, D.C., 2004, pp. 141-148.
82. Susanne Warrenfeltz, Stephen Pavlik, Susmita Datta, Eileen T Kraemer, Benedict Benigno, John F McDonald, "Gene expression profiling of epithelial ovarian tumors correlated with malignant potential", *Molecular Cancer* 2004 3:27 (October 7, 2004).
83. Philippa Rhodes, Sujith Thomas, Matthew Ross, Eileen Kraemer, Ashley Hamilton-Taylor, Bina Reed, Elizabeth Davis, Kenneth Hailston, and Keith Main, "VisEval: An Experimental System for the Study of Program Visualization Quality", *SoftVis'05*, accepted as poster presentation.
84. Shiming Dong and Eileen Kraemer, "Calculation, Visualization, and Manipulation of MASTs (Maximum Agreement Subtrees)", *Computational Systems Bioinformatics 2004* (CSB 2004), pp 405-414.
85. Zhenyu Zhong, Kun Huang, and Kang Li, "Throttling Outgoing SPAM for Webmail Services", *The Conference on Email and Anti-Spam (CEAS 2005)*, Mountain View, CA, July 21-23, 2005, to appear.
86. Bryan Veal, Kang Li, and David K. Lowenthal, "New Methods for Passive Estimation of Round-Trip Times Using TCP Timestamps", *6th Workshop on Passive and Active Measurement (PAM)*, pp. 121 – 134, March 2005.
87. Doug McCreary, Kang Li, Scott A. Watterson, and David K. Lowenthal, "TCP-RC: A Receiver-Centered TCP Protocol for Delay-Sensitive Applications", *12th SPIE Multimedia Computing and Networking Conference (MMCN)*, pp. 126 – 130, January 2005.
88. Bryan Veal, Kang Li, and David K. Lowenthal, "New Methods for Passive Estimation of Round-trip times Using TCP Timestamps", *Proceedings of the 6th Workshop on Passive and Active Measurement (PAM 2005)*, Boston, MA, to appear.

89. Doug McCreary, Kang Li, Scott A. Watterson, and David K. Lowenthal, "TCP-RC: A Receiver-Centered TCP Protocol for Delay-Sensitive Applications", *Proceedings of 12th SPIE Multimedia Computing and Networking Conference (MMCN 2005)*, San Jose, CA, to appear.
90. Rui Dai, and Kang Li, "Shall We Stop All Unsolicited Email Messages", in *Proceedings of the First Conference on Email and Anti-Spam (CEAS 2004)*, pp 192-199, Mountain View, CA, July 30-31, 2004.
91. Kang Li, Calton Pu, and Mustaque Ahamad, "Resisting SPAM Delivery by TCP Damping", in *Proceedings of the First Conference on Email and Anti-Spam (CEAS 2004)*, pp 208-215, Mountain View, CA, July 30-31, 2004.
92. Francis Chang, Wu-chang Feng, Wu-chi Feng and Kang Li, "Efficient Cache for Network Packet Classifications", a chapter in *Network Processor Design: Issues and Practices*, Volume 3, to be published by Morgan Kaufmann, ISBN: 0121981576, 2004.
93. Amit Karwande, Xin Yuan, and David K. Lowenthal, "CC-MPI: A Compiled Communication Capable MPI Prototype for Ethernet Switched Clusters", *Journal of Parallel and Distributed Computing*, to appear.
94. Haijin Yan, David K. Lowenthal, and Kang Li, "ACE: An Active, Client-Directed Techniques for Reducing WNIC Energy During Web Browsing", *15th ACM Workshop on Networks and Operating System Support for Digital Audio and Video (NOSSDAV)*, pp. 27–32, June 2005.
95. Vincent W. Freeh, David K. Lowenthal, Robert Springer, Feng Pan, and Nandani Kappiah, "Exploring the Energy-Time Tradeoff in MPI Programs", *19th IEEE/ACM International Parallel and Distributed Processing Symposium (IPDPS)*, April 2005.
96. Haijin Yan and David K. Lowenthal, "Towards Cooperation Fairness in Mobile Ad Hoc Networks", *6th IEEE Wireless Computing and Networking Conference (WCNC)*, March 2005.
97. Michael Gundlach, Sarah Doster, Haijin Yan, David K. Lowenthal, Scott A. Watterson, and Surendar Chandra, "Dynamic, Power-Aware Scheduling for Mobile Clients Using a Transparent Proxy", *33rd International Conference on Parallel Processing (ICPP)*, pp. 557-565, August 2004.
98. Vincent W. Freeh, Feng Pan, David K. Lowenthal, and Nandani Kappiah, "Using Multiple Energy Gears in MPI Programs on a Power-Scalable Cluster", *10th ACM Symposium on Principles and Practice of Parallel Programming (PPOPP)*, 2005, to appear.
99. Haijin Yan, David Lowenthal and Kang Li, "Improving Passive Estimation of TCP Round-Trip Times using TCP Timestamps", In *Proceedings of 2004 International Workshop on IP Operation and Management*, Beijing, China, Oct, 2004, pp. 72 – 77.
100. Kaarthik Sivashanmugam, John A. Miller, Amit P. Sheth and Kunal Verma, "Framework for Semantic Web Process Composition," *International Journal of Electronic Commerce (IJEC)*, Special Issue on Semantic Web Services and Their Role in Enterprise Application Integration and E-Commerce, Vol. 9, No. 2 (Winter 2004-5) pp. 71 – 106.

101. Jorge Cardoso, John A. Miller, Jianwen Su and Jeff Pollock, "Academic and Industrial Research: Do Their Approaches Differ in Adding Semantics to Web Services?", *Semantic Web Services and Web Process Composition: First International Workshop*, Revised Selected Papers, Lecture Notes in Computer Science (LNCS), Vol. 3387, J. Cardoso and A. Sheth, Editors, (January 2005) pp. 14-21, Springer Verlag, Berlin-Heidelberg, Germany.
102. Preeda Rajasekaran, John A. Miller, Kunal Verma and Amit Sheth, "Enhancing Web Services Description and Discovery to Facilitate Composition," *Semantic Web Services and Web Process Composition: First International Workshop*, Revised Selected Papers, Lecture Notes in Computer Science (LNCS), Vol. 3387, J. Cardoso and A. Sheth, Editors, (January 2005) pp. 55-68, Springer Verlag, Berlin-Heidelberg, Germany.
103. Ranjit Mulye, John A. Miller, Kunal Verma, Karthik Gomadam and Amit P. Sheth, "A Semantic Template Based Designer for Semantic Web Processes", *Proceedings of the 3rd International Conference on Web Services (ICWS'-05)*, Orlando, Florida, July 12-15, 2005, to appear
104. R. Akkiraju, J. Farell, J.A. Miller, M. Nagarajan, A. Sheth and K. Verma, "Web Service Semantics – WSDL-S", *Proceedings of the W3C Workshop frameworks for Semantics in Web Service*, Innsbruck, Austria, June, 2005, to appear.
105. Paul A. Fishwick and John A. Miller, "Ontologies for Modeling and Simulation: Issues and Approaches," *Proceedings of the 2004 Winter Simulation Conference (WSC'04)*, Washington, DC (December 2004) pp. 259-264.
106. Rohit Aggarwal, Kunal Verma, John A. Miller and William Milnor, "Constraint Driven Web Service Composition in METEOR-S," *Proceedings of the 2004 IEEE International Conference on Services Computing (SCC 2004)*, Shanghai, China (September 2004) pp. 23-32.
107. Preeda Rajasekaran, John A. Miller, Kunal Verma and Amit P. Sheth, "Enhancing Web Services Description and Discovery to Facilitate Composition," *Proceedings of the 1st International Workshop on Semantic Web Services and Web Process Composition (SWSWPC'04)*, Part of the 2nd International Conference on Web Services (ICWS'04), San Diego, California (July 2004) pp. 34-47.
108. D. deJuan, V. Khosla, W.D. Potter, B. Dorminey, and D. Nute, "ImmGnosis: A Stateless Web-Based Expert System for Immigration Law," *Proceedings of the 2005 International Conference on Artificial Intelligence, ICAI'05*, Las Vegas, NV, June, 2005, to appear.
109. M. Twery, P.D. Knopp, S.A. Thomasma, H.M. Rauscher, D. Nute, W.D. Potter, F. Maier, J. Wang, M. Dass, H. Uchiyama, A. Glende, and R.E. Hoffman, "NED-2: A Decision Support System for Integrated Forest Ecosystem Management", *Computers and Electronics in Agriculture*, 2005 to appear.
110. D. Nute, W.D. Potter, Z. Cheng, M. Dass, A. Glende, F. Maier, C. Routh, H. Uchiyama, J. Wang, S. Witzig, M. Twery, P.D. Knopp, S.A. Thomasma, and H.M. Rauscher, "Adding New Agents and Models to the NED-2 Forest Management System", in *Computers and Electronics in Agriculture*, 2005, to appear.
111. N. Roy, W.D. Potter, D. Landau, "Designing Polymer Blends Using Neural Networks, Genetic Algorithms, and Markov Chains", in *Applied Intelligence: The International*

Journal of Artificial Intelligence, Neural Networks, and Complex Problem Solving Technologies, Vol. 20, pp. 215-229, 2004.

112. D.A. Casella and W.D. Potter, "New Lower Bounds for the Snake-In-The-Box Problem: Using Evolutionary Techniques to Hunt for Snakes", to appear in *Proceedings of the 18th International FLAIRS Conference*, Clearwater Beach, Florida, May, 2005.
113. Khaled Rasheed, Xiao Ni and Swaroop Vattam. "Methods for Using Reduced Models to Speed Up Genetic Algorithm Optimization: Informed Operators and Genetic Engineering", *KNOWLEDGE INCORPORATION IN EVOLUTIONARY COMPUTATION*, Springer-Verlag, to appear.
114. Jack Smith, Doyle Knight, Joachim Kohn, Khaled Rasheed and Norbert Weber, "Using Surrogate Modeling in the Prediction of Fibrinogen Adsorption onto Polymer Surfaces", *Journal of Chemical Information and Computer Sciences*, **44**:1088—1097, 2004.
115. Deepti Chafekar, Liang Shi, Khaled Rasheed and Jiang Xuan, "Constrained Multi-objective GA Optimization Using Reduced Models", *IEEE Transactions on Systems, Man and Cybernetics*, **35**(2), pp. 261 – 265, 2005.
116. Dongsheng Chi, Yingei Song and Khaled Rasheed, "MDGA: Motif Discovery Using a Genetic Algorithm", *The Genetic and Evolutionary Computation Conference (GECCO'2005)*, to appear.
117. Chongshan Zhang and Khaled Rasheed, "Improving GA Search Reliability Using Maximal Hyper-Rectangle Analysis", *The Genetic and Evolutionary Computation Conference (GECCO'2005)*, to appear.
118. Bo Qian and Khaled Rasheed, "Hurst Exponent and Financial Market Predictability", in the *IASTED Conference on Financial Engineering and Applications (FEA 2004)*, pp. 203 – 209, 2004.
119. Jack Smith, Doyle Knight, Joachim Kohn, Norbert Weber, Khaled Rasheed, Sascha Abramson, "Molecular-Scale Properties of Biomaterials Relevant to Protein Adsorption and Cell Growth Using Data Mining of Combinatorial Libraries of Polymers", in The 7th World Biomaterials Congress, 2004.
120. Doyle Knight, Jack Smith, Norbert Weber, Joachim Kohn, Khaled Rasheed, "Prediction of Fibrinogen Adsorption on Polymer Surfaces Using and Artificial Neural Network", in The 7th World Biomaterials Congress, 2004 (poster).
121. Ramyaa, Congzhou He, and Khaled Rasheed, "Using Machine Learning Techniques for Stylometry", to appear in *International Conference on Machine Learning; Models, Technologies and Applications (MLMTA'2004)*, pp. 897-903, 2004.
122. Ning Suo, Khaled Rasheed, Don Potter and Dennis Aron, "Machine Learning Techniques for the Evaluation of External Skeletal Fixation Structures", in *International Conference on Mathematics and Engineering Techniques in Medicine and Biological Sciences (METMBS '04)*, pp. 378 – 384, 2004.
123. Khaled Rasheed, Xiao Ni and Swaroop Vattam, "Comparison of Methods for Developing Dynamic Reduced Models for Design Optimization", *The Soft Computing Journal*, (online) 2003, (in print) 2004.

124. Deepti Chafekar, Liang Shi, Khaled Rasheed and Jiang Xuan, "Constrained Multi-objective GA Optimization Using Reduced Models", *IEEE Transactions on Systems, Man and Cybernetics*, to appear.
125. V. Kashyap, C. Ramakrishnan, C. Thomas and A. Sheth, "TaxaMiner: An Experimental Framework for Automated taxonomy Bootstrapping", *International Journal of Web and Grid Services*, Special Issue on Semantic Web and Mining Reasoning, September 2005, to appear.
126. S. Oundhakar, K. Verma, K. Sivashanugam, A. Sheth and J. Miller, "Discovery of Web Services in a Multi-Ontology and Federated Registry Environment", *International Journal of Web Services Research*, 1 (3), 2005, in print.
127. A. Sheth, C. Ramakrishnan, and C. Thomas, "Semantics for the Semantic Web: the Implicit, the Formal and the Powerful," *International Journal on Semantic Web and Information Systems*, 1 (1), 2005, pp. 1-18.
128. Kunal Verma, Kaarthik Sivashanmugam, Amit P. Sheth, Abhijit Patil, Swapna Oundhakar and John A. Miller, "METEOR-S WSDI: A Scalable Infrastructure of Registries for Semantic Publication and Discovery of Web Services," *Journal of Information Technology and Management (ITM)*, Special Issue on Universal Global Integration, Vol. 6, No. 1 (2005) pp. 17 – 39, Kluwer Academic Publishers.
129. 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, Information Technology and Management, 5 (3-4), July - October, 2004, pp. 319-338.
130. A. Sheth, W. York, C. Thomas, M. Nagarajan, J. Miller, K. Kochut, S. Saho, X. Yi, "Semantic Web technology in support of Bioinformatics for Glycan Expression," *W3C Workshop on Semantic Web for Life Sciences*, 27-28 October, Cambridge, Massachusetts, 2004.
131. S.S. Sahoo, A. Sheth, W. York, J. Miller, "Semantic Web Services for N-glycosylation Process", *International Symposium on Web Services*, Blacksburg, VA, May 25-27, 2005.
132. K. Anyanwu, A. Maduko, A. Sheth, "SemRank: Ranking Complex Relationship Search Results on the Semantic Web", in the *Proceedings of the 14th International World Wide Web Conference*, Chiba, Japan, May 2005.
133. B. Aleman-Meza, P. Burns, M. Eavenson, D. Palaniswami, A. Sheth, "An Ontological Approach to the Document Access Problem of Insider Threat", *Proceedings of the IEEE International Conference on Intelligence and Security Informatics (ISI-2005)*, May 19-20, 2005, Springer LCNS v3495, April 2005, pages 486 – 491.
134. B. Aleman-Meza, C. Halaschek-Wiener, S.S. Sahoo, A. Sheth, I.B. Arpinar, "Template Based Semantic Similarity for Security Applications", Springer LCNS v3495, April 2005, pp 621 – 622.
135. Amit P. Sheth, Kunal Verma, John A. Miller and Preeda Rajasekaran, "Enhancing Web Service Descriptions using WSDL-S", *Proceedings of EclipseCon 2005*, Burlingame, California, March 2005, to appear.
136. A. Sheth, B. Aleman-Meza, I.B. Arpinar, C. Bertram, Y. Warke, C. Ramakrishnan, C. Halaschek, K. Anyanwu, D. Avant, F.S. Arpinar, and K. Kochut, "Semantic Association

Identification and Knowledge Discovery for National Security Applications”, *Special Issue of Journal of Database Management on Database Technology for Enhancing National Security*, Eds: L. Zhou and W. Kim, 16(1), Jan-Mar 2005, pp. 33 – 53.

137. N. Oldham, C Thomas, A Sheth, K. Verma, “METEOR-S Web Service Annotation Framework with Machine Learning Classification,” in *Semantic Web Services and Web Process Composition*, Lecture Notes in Computer Science, Vol. 3387, Springer Verlag, January 2005, pp. 137 – 146.
138. J. Cardoso and A. Sheth, "Introduction to Semantic Web Services and Web Process Composition," in *Semantic Web Services and Web Process Composition*, Lecture Notes in Computer Science, Vol. 3387, Jan 2005, pp. 1-13.
139. M. Fisher and A. Sheth, "Semantic Enterprise Content Management," in *Practical Handbook of Internet Computing*, Munindar P. Singh, Ed., Chapman Hall & CRC Press, Baton Rouge, 2004, pp. 9-1:9-21.
140. A. Sheth, I. B. Arpinar, and Vipul Kashyap, “Relationships at the Heart of Semantic Web: Modeling, Discovering, and Exploiting Complex Semantic Relationships”, In *Enhancing the Power of the Internet: Studies in Fuzziness and Soft Computing*, Eds., M. Nikravesh, B. Azvin, R. Yager, and L. Zadeh, Eds., 406 pages, Springer-Verlag, 2004, pp. 63-94.
141. N. Ashish, C. Goble and A. Sheth, Eds. Guest Editors for the Special Section on "The Semantic Web and Science Data Interoperation," *Journal of Digital Library*, 2004 (in print).
142. Y. Kalfoglou, M. Schorlemmer, M. Uschold, A. Sheth, and S. Staab, Proceedings of the Dagstuhl Seminar 04391, Dagstuhl, Germany, September 19-24, 2004.
143. L.-J. Zhang, M. Li, A. Sheth, and K. Jeffery, 2004 IEEE International Conferences on Services Computing, Shanghai, China, September 15-18, 2004, 653 pages.
144. J. Cardoso and A. Sheth, Eds., *Semantic Web Services and Web Process Composition: First International Workshop, SWSWPC 2004*, LNCS Vol. 3387, Springer-Verlag, January 2005, pp. 1-146. (Revised Selected Papers of the online publication Proceedings of the First International Conference on Semantic Web Services and Web Process Composition, San Diego, CA, July 6, 2004, 121 pages.)
145. J. Cardoso, A. Sheth, J. Miller, J. Arnold, and K. Kochut, “Quality of Service for Workflows and Web Service Processes”, *Journal of Web Semantics*, Elsevier, 1 (3), 2004, pp. 281-308.
146. Z. Luo, A. Sheth, K. Kochut, and B. Arpinar, “Exception Handling for Conflict Resolution in Cross-Organizational Workflows,” *International Journal on Distributed and Parallel Databases* (to appear).
147. Amit Sheth, “Semantic Web Technology in Support of Bioinformatics for Glycan Expression,” W3C Workshop on Semantic Web for Life Sciences, October 28, 2004, Cambridge MA (web publication).
148. Amit Sheth, “From Semantic Search & Integration to Analytics”, KMWorld 2004, Santa Clara, CA, October 26-28, 2004.

149. Amit Sheth, "Semantic Technology in the Real World: Experiences and Lessons based on Commercialization of Academic Research & Industry Applications," Dagstuhl Seminar on Semantic Interoperability and Integration, Dagstuhl, Germany, September 21, 2004 (web publication).
150. N. Sriharee, T. Senivongse, K. Verma and A. Sheth, On Using WS-Policy, Ontology, and Rule Reasoning to Discover Web Services, Proceedings of the Intelligence in Communication Systems: IFIP International Conference, INTELLCOMM 2004, LCNS Volume 3283 / 2004, Bangkok, Thailand, November 23-26, 2004, pp. 246-255.
151. K. Sivashanmugam, K. Verma, and A. Sheth: Discovery of Web Services in a Federated Registry Environment. *The 2004 International Conference on Web Services (ICWS 2004)*, July 2004, pp. 270-278.
152. W. York, A. Sheth, K. Kochut, J. Miller, C. Thomas, K. gomadam, X. Yi, and M. Nagarajan, "Semantic Integration of Glycomics Data and Information," in Human Disease Glycomics/Proteome Initiative 1st Workshop: Functional Genomics in Disease, August 23-24, 2004, Osaka, Japan, pp. 38-39.
153. S. Wu, A. P. Sheth, J. A. Miller, "Task and Role Combined Access control Model for Workflow Applications", *Proceedings of the 16th International Conference on Data Engineering (ICDE'2000)*, San Diego, CA, to appear.
154. N. Oldham, C. Thomas, A. Sheth, K. Verma, "MWSAF with Machine Learning Classification", *First International Workshop on Semantic Web Services and Web Process Composition (SWSWPC 2004)*, San Diego, CA, July 6, 2004.
155. Taha, Thiab R. and Xu, Xiangming, "Parallel Split-Step Fourier Methods for the Coupled Nonlinear Schrödinger Type Equations", *Journal of Supercomputing*, Vol. 32, No. 1, April 2005, pp. 5-23.
156. Taha, Thiab R., Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-III", 2004.
157. Taha, Thiab R., Foreword for the special issue of the Journal Mathematics and Computers in Simulation on "Nonlinear Waves: Computation and Theory-IV", 2004.

PRESENTATIONS AT MEETINGS

1. Arabnia, Hamid R. and Leonidas Deligiannidis, "MRSIM: A Simulator for the MultiRing", presented by H. R. Arabnia at *The 2005 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'05)*, Las Vegas, June 27, 2005.
2. Arabnia, H.R., "Committee Reports (Steering Committee)", Conference Opening, *The 2005 World Congress in Applied Computing*, June 20, 2005, Las Vegas.
3. Arabnia, H.R., "Committee Reports (Information Technology Task Forces)", Conference Opening, *The 2005 International Multiconference in Computer Science & Computer Engineering*, June 27, 2005, Las Vegas.
4. Bhandarkar, Suchendra M., "Fast and Robust Background Updating for Real-Time Traffic Surveillance and Monitoring", *IEEE International Workshop on Machine Vision for Intelligent Vehicles (MVIV 2005)*, San Diego, CA, June 21, 2005.
5. Bhandarkar, Suchendra M., "Image Analysis for Bioinformatics and Biomedicine", Oak Ridge National Laboratory, Oak Ridge, TN, May 20, 2005.
6. Bhandarkar, Suchendra M., "Statistical Methods in Chromosome Reconstruction", Research Triangle Institute, Durham, NC, April 29, 2005.
7. Bhandarkar, Suchendra M., "Surface Reconstruction for Computer Vision-based Craniofacial Surgery", *IEEE International Workshop on Applications of Computer Vision (WACV 2005)*, Breckenridge, CO., January 5-7, 2005.
8. Bhandarkar, Suchendra M., "An Efficient Background Updating Scheme for Real-time Traffic Monitoring", *7th IEEE International Conference on Intelligent Transportation Systems (ITSC 2004)*, Washington, DC, October 3-6, 2004.
9. Cai, Liming, "Efficient parameterized algorithms for biopolymer structure-sequence alignment", Oak Ridge National Laboratory, February 2005.
10. Hybinette, Maria, "Towards Adaptive Caching for Parallel and Discrete Event Simulation", *2004 Winter Simulation Conference (WSC-2004)*, December 2004, Washington, DC.
11. Kraemer, Eileen, "Controlling Over-Optimism in Time-Warp via CPU-based Flow Control", *2004 Winter Simulation Conference*, December 2004.
12. Kraemer, Eileen, "Ovarian Cancer: gene expression profiling and proteomic pattern analysis", Michigan State University, Lansing, MI, Computer Science and Engineering Departmental Seminar, October 25, 2004.
13. Kraemer, Eileen, "Quantifying Quality of Program Visualization", University of Arkansas, Little Rock, AR, Applied Science Graduate Program Seminar, September 24, 2004.
14. Li, Kang, "Resisting SPAM in the Internet", invited talk, Princeton University, Princeton, NJ, November 23, 2004.

15. Li, Kang, "Resisting SPAM Delivery by TCP Damping", *The First Conference on Email and Anti-Spam (CEAS 2004)*, Mountain View, CA, July 31, 2004.
16. Lowenthal, David, "Client-Centered Energy Savings for TCP Downloads", University of Pennsylvania, Philadelphia, PA, January 15, 2005.
17. Lowenthal, David, "Client-Centered Energy Savings for TCP Downloads", University of California-Davis, Davis, CA, January 20, 2005.
18. Lowenthal, David, "Client-Centered Energy Savings for TCP Downloads", Rutgers University, Newark, NJ, January 31, 2005.
19. Lowenthal, David, "Client-Centered Energy Savings for TCP Downloads", Indiana University, Bloomington, IN March 24, 2005.
20. Miller, John A., "Ontologies for Modeling and Simulation: Issues and Approaches", *Proceedings of the 2004 Winter Simulation Conference (WSC'04)*, Washington, DC, December 2004.
21. Miller, John A., "Enhancing Web Services Description and Discovery to Facilitate Composition", *Proceedings of the 1st International Workshop on Semantic Web Services and Web Process Composition (SWSWPC'04)*, Part of the 2nd International Conference on Web Services (ICWS'04), San Diego, CA, July 2004.
22. Miller, John A., "Academic and Industrial Research: Do Their Approaches Differ in Adding Semantics to Web Services?", *The 1st International Workshop on Semantic Web Services and Web Process Composition (SWSWPC'04)*, Part of the 2nd International Conference on Web Services (ICWS'04), San Diego, CA, July 2004.
23. Rasheed, Khaled, "Machine Learning Methods for Biomaterial Modeling", *The 7th New Jersey Symposium for Biomaterials*, October 2004.
24. Robinson, R.W., "Finding Hamilton Cycles in Random Cubic Graphs", Canadian Mathematical Society Summer 2005 Meeting, Session on Random Graphs and their Applications, Waterloo, Ontario, Canada, June 2005.
25. Sheth, Amit P., "Lifecycle of Semantic Web Processes", *The 17th Conference on Advanced Information Systems Engineering (CAiSE'05)*, Porto, Portugal, June 13-17, 2005.
26. Sheth, Amit P., "Semantic Web: Technology & Applications in Search, Digital Media/Content Management, Science and National/Homeland Security", Digimarc Corp., Portland, OR, May 3, 2005.
27. Sheth, Amit P., "Web Services to Semantic Web processes: Investigating Synergy between Practice and Research", Keynote Address, The First European Young Researchers Workshop on Service Oriented Computing, April 21, 2005, Leicester, UK.
28. Sheth, Amit P., "Semantic Technology in the Real World: Experiences and Lessons based on Enterprise Semantic Applications", Semantic Technology Conference 2005, San Francisco, CA, March 8, 2005.

29. Sheth, Amit P., "Semantic Web Technology in Support of Bioinformatics for Glycan Expression," *W3C Workshop on Semantic Web for Life Sciences*, Cambridge, MA, October 28, 2004.
30. Sheth, Amit P., "From Semantic Search & Integration to Analytics", *KMWorld 2004*, Santa Clara, CA, October 26-28, 2004.
31. Sheth, Amit P., "Semantics in the Semantic Web– the implicit, the formal and the powerful (with a few examples from Glycomics)," *Berkeley Initiative in Soft Computing (BISC) Seminar*, University of California-Berkeley, October 26, 2004.
32. Sheth, Amit P., "Semantic Technology in the Real World: Experiences and Lessons based on Commercialization of Academic Research & Industry Applications," *Dagstuhl Seminar on Semantic Interoperability and Integration*, Dagstuhl, Germany, September 21, 2004.
33. Sheth, Amit P., "Web Services to Semantic Web Process," Tsinghua University, Beijing, China, September 16, 2004.
34. Sheth, Amit P., "Semantic Web Technology in Action: From Search and Integration to Analytics," Shanghai Jiao Tong University, Shanghai, China, September 15, 2004.
35. Sheth, Amit P., "Service Oriented Architectures and Semantic Web Processes" (with Francisco Curbera and Kunal Verma), the *2004 IEEE International Conference on Web Services (ICWS 2004)*, San Diego, California, USA, July 7, 2004.
36. Taha, Thiab, "Parallel Numerical Methods for Solving Nonlinear Evolution Equations" *International Conference on Nonlinear Waves, Integrable Systems and Applications*, University of Colorado at Colorado Springs, CO, June 4-8, 2005.
37. Taha, Thiab, "Parallel Computing: Introduction and Applications", Institute of Bioinformatics (IOB), UGA, November 11, 2004.