Computer Science Department Annual Report 2001-2002 Executive Summary

For the period July 1, 2001, through June 30, 2002, the Computer Science Department was staffed by twenty full time faculty. As of Fall term, according to figures of Institutional Research and Planning, there were 77 graduate students enrolled in degree programs, and 474 declared undergraduate majors. The number of students, primarily non-majors, taking service courses was 1327. As a group, the faculty authored or co-authored eighty-one research articles. They also gave fifteen presentations at professional meetings. Many faculty serve on editorial boards of distinguished journals. The faculty were PI, Co-PI, or contributor to twenty externally funded research projects. Professors Arpinar, Hybinette and Watterson were welcomed as new faculty members. Professors Arpinar and Watterson were hired as part of the state's Yamacraw initiative. This initiative has provided strong support this year for additional faculty positions, staff positions, and facilities within the department, as well as prompting new curriculum development.

Computer Science Department Annual Report 2001-2002

Summary

For the period July 1, 2001, through June 30, 2002, the resident faculty of the Computer Science Department were Professors Bhandarkar, Canfield, Gries, Kochut, Miller, Potter, Robinson, Sheth, Taha; Associate Professors Arabnia, Kraemer, Smith; Assistant Professors Arpinar, Bishop, Chandra, Everett, Hybinette, Lowenthal, Rasheed, Watterson; and Instructors Basnayake, Lether. Permanent professional persons associated with the department include three secretarial staff members (Ms. Power, Ms. Sewell, Ms. Williams), three technical support personnel (Mr. Powell, Mr. Misztal, Mr. Steward), and an Undergraduate Advisor (Ms. Menken).

Beginning in January, 2002, the department worked with Dean Wyatt Anderson to select the next Head of Department. Dr. Krys Kochut will become Head effective July 1, 2002, with Dr. Rodney Canfield stepping down after nine years of service. The department thanks all the senior faculty who graciously permitted their names to be placed in nomination for this responsibility, and we are also very appreciative of the job done by the Coordinating Committee – Professors Arabnia, Kraemer, and Lowenthal – in facilitating the internal search. Congratulations are also in order for Professor Lowenthal, who this year underwent review, successfully, for promotion to Associate Professor and Tenure.

As of Fall, 2001, there were 77 graduate students enrolled in graduate degree programs: 19 in the doctoral program, 56 in the MS, and 2 in the MAMS. During this year the department graduated its second doctoral student. Dr. Guangming Xing, supervised by Professor Rodney Canfield, graduated in Fall, 2001, and taught during Spring term at Albany State University (Albany, Georgia); beginning Fall, 2002, Guangming will be a tenure-track faculty member of the Computer Science Department at Western Kentucky University (Bowling Green, KY). Approximately 53 graduate students received financial support each semester, as follows: Graduate Laboratory Assistants, 45%; Graduate Teaching Assistants (in charge of a course), 7%; faculty teaching replacement, 1%; Research Assistants supported by external funding, 42%; University Wide Assistantships, 5%. From time to time one or two students receive assistantships in return for which they provide system support and technical assistance to the Graduate School and/or the CAPA system.

There are a number of successful research labs functioning within the department; we will highlight three of them in this summary. Professor Sheth completed his term as CEO of Taalee, in June 2001, at which time the company was acquired by Voquette, Inc. This commercial venture was based on research done in the LSDIS laboratory in the area of Semantic Web. Professor Suchi Bhandarkar heads up the Visual and Parallel Computing Laboratory. The goals of the VPCL are to undertake projects that advance the state of the art in the theory and applications of Visual Computing and Parallel Computing. Professor Eileen Kraemer's research focuses on computational steering - the monitoring, visualization, and control of long-running, complex systems. The algorithms, techniques, and systems developed are being applied to

problems in computational biology, network management, and parallel and distributed computing in general.

During the academic year, Professor Liming Cai, from Ohio University (Athens, Ohio) was a visitor in the department. Dr. Cai received his Ph.D. at Texas A&M University in 1994, and is taking a leave of absence for the year from his tenured Associate Professor position at The Ohio University. He is an expert in computational complexity theory who has begun to investigate applications to bio-informatics. Dr. Cai is expected to collaborate with the departmental theory group as well as with researchers from a number of other departments who are participating in UGA's interdisciplinary functional genomics initiative. Dr. Cai gave courses in algorithms at both the beginning and advanced levels, as well as a course that is part of the Master's of Internet Technology degree program. Dr. Cai has an NSF-funded grant in local search via parameterization. During his visit, he initiated research with Professor Russell Malmberg (Plant Biology), and we are pleased to announce that Professor Cai will join the department as Associate Professor beginning Fall, 2002.

As of Fall, 2001, there were 474 declared undergraduate CS majors, 34 less than this time one year ago. This represents 3.4% of the College undergraduate student population; our twenty resident faculty for the past year comprise roughly 2% of the College Faculty. Many of these declared undergraduate majors students have not yet taken a course with a CSCI prefix. The flow of students through our major courses is discussed further under "Enrollment Management." Despite the drop in total number of undergraduates, a record 34 bachelor's degrees were awarded. This increased graduation rate suggests that the enrollment management plan is working as intended.

In addition to graduate students and majors, the department taught several courses of a service nature:

CSCI 1100 (Introduction to Personal Computing)

CSCI 1210 (Introduction to Computational Science)

CSCI 1301 (Introduction to Computing and Programming)

CSCI 2040 (Gender and Computing: Information Systems Design)

A total of 1488 seats were offered in these courses (and they generally fill quickly to capacity), a decrease of 24 from the previous year and increase of 77 from two years before.

2001-2002 Awards/Honors:

Major	Significant	Minor
1	3	14

Dr. Liming Cai received his B.S. and M.S. in Computer Science from Tsinghua University in Beijing China. Dr. Cai received his Ph.D. in Computer Science from Texas A&M University in 1994. He is an expert in computational complexity theory who has begun to investigate applications to bio-informatics. Dr. Cai is expected to collaborate with the departmental theory group as well as with researchers from a number of other departments who are participating in UGA's interdisciplinary functional genomics initiative. Dr. Cai has an NSF-funded grant in local search via parameterization. We are pleased to announce that Professor Cai will join the department as Associate Professor beginning Fall, 2002.

Strategic Planning

The departmental Long Term Planning committee is comprised of Professors Canfield, Kochut, Kraemer, and Lowenthal. After careful review and consideration they formulated a strategic plan for the five years 1999-2004 which has been influential in guiding developments over the past two years. The complete plan was included in the department's 1999-2000 Annual Report. So much progress has been made already that an update to the strategic plan is envisioned to be completed during the 2001-2002 academic year.

Assessment

On advice from a university review committee, the department discontinued its existing assessment plan, and has begun the process of shaping and approving a new one. One of our greatest concerns is with the delicate question of balancing demand for our courses with faculty and laboratory resources. The enrollment management plan was begun Fall, 1998, students having been notified the previous Winter Quarter. We are still evaluating the first two years of this policy. Philosophically, it is not the sole purpose of this policy just to ``hold down the number of majors." The latter is a concern, given current facilities and faculty numbers, but there is a further concern of equal, or greater, significance. Our experience of the past few years indicated clearly that students who performed marginally in the lower level courses had an extremely difficult time getting a "C" or better in the more advanced courses, such as Algorithms, Compilers, and Operating Systems. These students were taking several courses two, and sometimes, more times. This created a log-jam, and since the older students had priority on registration, many younger and well qualified students were leaving the major in frustration. Combined with serious concerns about professional integrity (given the high levels of responsibility our graduates are taking in critical applications), we adopted a policy whereby students who entered courses numbered 2670 (Theory) and higher could be expected to complete each major course on one try with a "C" or better.

We are teaching a first course in programming (CSCI 1301) to 638 students per year. Probably 40% of these are intended majors, the rest taking it as a service course. Of these, some 200 per year take the follow-up gateway classes, CSCI 2610 and CSCI 1302. Approximately 60 students per year are earning the B's in these latter courses, and proceeding on to the rest of the major.

Overall Health

The record of the faculty in instruction and research is excellent; likewise the accomplishments of our graduates. Within the context of the current economic and technological environment in the state of Georgia, the upper administration of the University and University System have made significant strives to provide greater access of CS Department courses for UGA students. We have made it our goal to achieve this without significant change to teaching loads or class sizes, so that the quality of both departmental research and instruction can continue to improve. There were three outstanding additions to staff this year. Our recent success at faculty recruitment indicate that the professional environment for computer science at UGA is good; however, the resignation of one faculty member is a reminder that we are in a period of intense competition for faculty recruitment within the profession. The allocation of 1800 additional

square feet of space to the department in Barrow Hall was critical to enabling faculty recruitment this year. The department looks forward to future opportunities for growth, in later years that will allow us to strengthen expertise in economically and academically important subareas of Computer Science.

Appendices

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

COMPUTER SCIENCE DEPARTMENT ANNUAL REPORT, 2001-2002

PROFESSIONAL HONORS AND RECOGNITIONS

H. R. Arabnia

General Chair, The 2002 International Multiconference in Computer Science, June 24-27, 2002, Las Vegas, Nevada.

Chair, Program Committee, The 2002 International Conference on Parallel and Distributed Processing Techniques and Applications, PDPTA'02, June 24-27, 2002, Las Vegas.

Member, Program Committee, The 2002 International Conference on Communications in Computing, CIC'02, June 24-27, 2002, Las Vegas.

Co-Chair, Program Committee, The 2002 International Conference on Imaging Science, Systems, and Technology, CISST'02, June 24-27, 2002, Las Vegas.

Member, Program Committee, The 2002 International Conference on Engineering of Reconfigurable Systems and Algorithms, ERSA'02, June 24-27, 2002, Las Vegas.

Member, Program Committee, The 2002 International Conference on Internet Computing, IC'02, June 24-27, 2002, Las Vegas.

Co-Chair, Program Committee, The 2002 International Conference on Artificial Intelligence, IC-AI'02, June 24-27, 2002, Las Vegas.

Member, Program Committee, The 2002 International Conference on Machine Learning and Applications, ICMLA'02, June 24-27, 2002, Las Vegas.

Co-Chair, Program Committee, The 2002 International Conference on Information and Knowledge Engineering, IKE'02, June 24-27, 2002, Las Vegas.

Member, Program Committee, The 2002 International Conference on Mathematics and Engineering Techniques in Medicine and Biological Sciences, METMBS'02, June 24-27, 2002, Las Vegas.

Co-Chair, Program Committee, The 2002 International Conference on Security and Management, SAM'02, June 24-27, 2002, Las Vegas.

Co-Chair, Program Committee, The 2002 International Conference on Software Engineering Research and Practice, SERP'02, June 24-27, 2002, Las Vegas.

Member, Program Committee, The 2002 International Conference on VLSI, VLSI'02, June 24-27, 2002, Las Vegas.

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

Associate Editor, International Journal of Parallel and Distributed Systems and Networks (IASTED), IJPDSN, published by ACTA Press since 1999 (1996-Present).

Member of American Association for the Advancement of Science (1999 - Present)

Member of World Occam and Transputer User Group (WoTUG), 1986 - present.

Member of the Editorial Board of the International Journal of Parallel and Distributed Systems and Networks (IJPDSN) (1996 - present).

Chair, North American Transputer Users Group, NATUG Association (1996 -present).

Member of Advisory Board of Virtual Medical Worlds - an on-line magazine by Euromed (European Commission in Telemedicine), http://www.hoise.com/project/VMW (1997-Present).

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

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

Member, Program Committee, FUSION 2001 Conference, Montreal, Canada, August 2001.

Member, International Program Committee, The 2001 International Conference on Parallel and Distributed Computing, Applications, and Techniques (PDCAT'2001), Taipei, Taiwan, July 2001.

Member, Program Committee, Commercial Applications for High-Performance Computing (part of SPIE's ITComm'2001, International Symposium and Exhibit on the Convergence of Information Technology and Communication Technologies), Denver, Colorado, USA, August 2001.

Member, International Program Committee, The 2001 International Conference on Parallel Computing, Naples, Italy, Sept. 2001.

Member, International Program Committee, The 4th CAID&CACD'2001 International Conference, Jinan, Shandong, P. R. China, Oct. 2001.

Member, Advisory Committee, 2001 International Conference on Parallel and Distributed Computing and Systems (PDCS'2001), Anaheim, California, USA, August 2001.

Member, Program Committee of the 2001 Conference on "Communicating Process Architectures (CPA)". September 16-19, 2001, UK.

Member, Technical Committee, Workshop on High Performance Scientific and Engineering Computing with Applications (HPSECA-01) - part of International Conference on Parallel Processing, Valencia, Spain, Sep. 2001.

Member, Program Committee, 16th Annual High Performance Computing Symposium (HPCS'2002), New Brunswick, Canada, June 17-19, 2002.

Program Committee member of the 4th International Symposium on High Performance Computing (ISHPC-IV), Kansai Science City, Japan, May 2002.

Member, Program Committee, IEEE International Workshop on Internet Computing and E-Commerce (ICEC'02) - part of IPDPS'02, Fort Lauderdale, Florida.

Member, Program Committee, the 2002 Information Resources Management Association (IRMA) International Conference. Seattle, Washington, May 2002.

Member, Program Committee, the 2002 International Conference on Computational Science (ICCS 2002), Co-Chairs: Jack Dongarra and Peter Sloot, April 2002, Amsterdam

Member, Program Committee, the 2002 Workshop on "Performance Modeling, Evaluation, and Optimization of Parallel and Distributed Systems (PMEO-PDS'02)" in conjunction with IPDPS'2002.

Member, Program Committee, 40th Annual ACM Southeast Conference (ACM-SE'02), Raleigh, North Carolina, April 2002.

Member, Program Committee, IEEE International High Performance Computing Conference (Chair: S. Sahni), Bangalore, India, December 2001.

I. Budak Arpinar

Member of IEEE Computer Society

Member of ACM

S. M. Bhandarkar

Associate Editor, International Journal of Applied Intelligence, November 99 - present.

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

Program Committee Member, Intl. Wkshp. Parallel and Distributed Computing in Image Processing, Video Processing, and Multimedia (PDIVM 2002), Ft. Lauderdale, FL, April 2002.

Program Committee Member, Intl. Wkshp. High Performance Computational Biology (HiCOMB 2002), Ft. Lauderdale, FL, April 2002.

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.

B. J. Bishop

Member IEEE and ACM

Publicity Co-Chair IEEE International Symposium on VLSI

E. R. Canfield

Member of the Association for Computing Machinery.

Electronic Journal of Combinatorics, Editor.

S. Chandra

Member of ACM (SIGOPS and SIGMOBILE)

Member of USENIX

Maria Hybinette

Member of Association for Computing Machinery

Member of Institute of Electrical and Electronics Engineers

D. R. Gries

Steering Group, AAAS Section on Information Computing, and Communication (T), 2000-present

Editorial Board: Acta Informatica, 1970-present; Information Processing Letters, 1973-present

K. J. Kochut

Member of The Computer Journal

Member of Transputer Communications Journal

Member of International Journal of Computer Simulation

Member of Journal of American Society for Information Sciences

Member of Data and Knowledge Engineering

Member of IEEE Transactions on Knowledge and Data Engineering

Member of Cole Publishing

E. T. Kraemer

Member, Program Committee, Workshop on Bio-Inspired Solutions to Parallel Processing Problems (BIOSP3), 2000, 2001, 2002.

Member, Nominating Committee, International Society for Computational Biology, 2000, 2001, 2002.

Finance Chair, 2002 IEEE Symposia on Human Centric Computing, Languages and Environments

D. K. Lowenthal

Program Committee Member, Workshop on Languages, Compilers, and Run-Time Systems for Scalable Computing

Program Committee Member, Workshop on High-Level Programming and Supportive Environments.

Member, ACM, 1992-present

Member SIGPLAN, 1992-present

Member, SIGOPS, 1992-present

J. A. Miller

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

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

W. D. Potter

Program Committee Member, International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems, (IEA/AIE'2002), June, 2002, Australia.

Program Committee Member, International Conference on Artificial Intelligence (IC-AI'2002), June, 2002, Las Vegas, Nevada.

Program Committee Member, International Multi-Conference on Systems, Cybernetics and Informatics (SCI'2001), Orlando, Florida, July, 2001.

K. M. Rasheed

Member of Institute of Electrical and Electronics Engineers (IEEE)

Member of IEEE Computer Society

Member of American Association for Artificial Intelligence (AAAI)

Workshop Co-organizer, Genetic and Evolutionary Computation Conference (GECCO'2002).

Program Committee Member, Genetic and Evolutionary Computation Conference (GECCO'2002)

R. W. Robinson

Editorial Board, Journal of Combinatorial Mathematics and Combinatorial Computing, 1987present

Foundation Fellow, Institute of Combinatorics and its Applications

Member of American Mathematical Society

Member of Association for Computing Machinery

Member of European Association for Theoretical Computer Science

Member of Combinatorial Society of Australasia

A. P. Sheth

Editor, IEEE Multimedia, November 1998 - present.

Member of the Editorial Board, Information Systems - an Intl. Journal, 1993 - present

Member of the Editorial Advisory Board, International Journal of Engineering Intelligent Systems, 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.

Program Committee Member, 6th Intl Conference on Cooperative Information Systems (CoopIS 2001), Trento, Italy, September 5-7, 2001.

Program Committee Member, 5th Intl Workshop CIA-2001 on Cooperative Information Agents, Modena, Italy, September 6-8, 2001.

Program Committee Member, International Semantic Web Workshop: Infrastructure and Applications for the Semantic Web, Stanford, July 30-31, 2001.

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.

J. W. Smith

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

T. R. Taha

Member of the Association of Computing Machinery (ACM)

Member of the Society for Industrial and Applied Mathematics (SIAM)

Member of the SIAM SEAS

Member of the International Association for Mathematics and Computers in Simulation (IMACS)

Member of the SIAM Activity Group on Supercomputing

Member of the Middle East Advisory Panel on the Fulbright Senior Scholar Program for CIES (Council for International Exchange of Scholars), 1999 - present

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

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

Chairman and Conference Coordinator of the IMACS International Conference on "Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", Athens, Georgia, April 19-12, 2001

Scott Watterson

Member Association for Computing Machinery

Member ACM SIGMICRO

Member IEEE

ANNUAL REPORT, 2001-2002 COMPUTER SCIENCE DEPARTMENT

GRANTS AWARDED OR CURRENT

EXTERNALLY FUNDED GRANTS:

I. B. Arpinar (PI) "ONTOS: Ontology-driven Web Services Integration Platform", UGA Faculty Research grant, \$11,500, January 1, 2002 - December 31, 2002.

S. M. Bhandarkar (PI), Design and Prototype Development of a Computer Vision-based Lumber Production Planning System, US Department of Agriculture, \$190,000, Dec. 15, 2000 - Dec. 30, 2003. (In addition, \$30,000 matching funds from VP for Research.)

S. M. Bhandarkar (PI) and J. Arnold (Co-PI), Parallel Computing for Physical Mapping of Fungal Genomes, U.S. Dept. of Agriculture, \$200,000, Sept. 15, 1997 - May 31, 2002.

Andrew Paterson (PI), S. M. Bhandarkar, R. Dean, J. Kececioglu, L. Pratt, M. M. Pratt, S. Kresovich, and R. Wing (Co-PI's) Cross-linked Sorghum and Rice Physical Maps as a Foundation for Analyzing Genome Structure, Function and Variation in C4 Grasses, NSF, \$3,246,755 (CS portion \$164,932), Oct. 1, 1998 - Sept. 30, 2002.

University of Georgia Yamacraw Program (2001-2002), E. Rodney Canfield (PI), Jeffrey W. Smith and Hamid R. Arabnia, Georgia Governor's office, \$878,592, continued support for permanent/continued staff and faculty positions (includes startup funds for new faculty) for the Department of Computer Science.

Donation to support graduate education in the CS Dept., E. Rodney Canfield (PI), \$10,000, 2002-2003.

E. Kraemer (PI), NSF CAREER Award, "An Infrastructure in Support of Configurable, Consistent, Interactive Computational Steering", \$201,617, May 1998 - April 2003.

David Lowenthal (PI), Eileen Kraemer and Suchendra Bhandarkar (Co-Pi's), National Science Foundation Major Research Instrumentation Grant, "Instrumentation Grant for Research in Parallel and Distributed Computing", Experimental and Integrative Activities, March 2000-February 2003, \$114,000 (includes matching from the University of Georgia Research Foundation).

Benjamin Bishop (PI), Altera Corporation - Instruction support donation, \$22,560.

S. Chandra (Co-PI with D. Lowenthal, B. Bishop), State of Georgia Yamacraw Research Program, "An Integrated Scalable Client-Server System for Energy-aware Computing," \$139,838 July 2001 - June 2002.

Benjamin Bishop (PI), Mosis/USC IC fabrication services - MEP Research

Grant, (competitive award) ~\$24,955 approved August 2001.

David Lowenthal, Surendar Chandra, Benjamin Bishop (CO-PI), State of Georgia Yamacraw Research Program, "An Integrated Scalable Client-Server System for Energy-Aware Computing", Oct 2000 - Aug 2001, \$164,000.

Bernd Schuttler (PI), Co-PIs: David Lowenthal, R.W. Robinson, and Jem Corcoran, National Science Foundation Information Technology Research Program, "ITR/ACS: Stochastic Summation of High-Order Feynman Graph Expansions", September 2000-August 2003, \$487,000. (CS portion approximately \$236,195)

David Lowenthal (PI), National Science Foundation CAREER Award, "An Integrated Compiler/Run-Time System for Global Data Distribution", Computer and Communications Research, July 1, 1998 - June 30, 2003, \$200,000.

Potter, W.D., "SAGA-STP Aerial Spray Treatment Planner", USDA Forest Service, \$35,000. 8/2000 - 12/2002.

Potter, W.D., "SAGA-STP Aerial Spray Treatment Planner, Extension", USDA Forest Service, \$20,600, 7/2001 - 8/2002.

Khaled Rasheed (PI), Rutgers University - Subcontract from Darpa Grant. "Self Adaptive GA-Based Design Optimization using Reduced Models", \$60,000, 2000-2002.

Doyle Knight (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 (UGA's portion \$137,295), 2001-2004.

A. Sheth (PI), "Database and Information Systems Research for Semantic Web and Enterprises," National Science Foundation, January 2, 2002 - December 31, 2002, \$20,000.

A. Sheth (PI), "Database and Information Systems Research for Semantic Web and Enterprises," EU Thematic Network Onto Web, March 15, 2002 - March 14, 2003, \$5,000.

A. Sheth, J. A. Miller, and K. J. Kochut, "Extending Meteor with Workflow Reuse, Adaptation, and Collaboration", Naval Research Laboratory, January 1, 2000 - September 30, 2001, \$200,000.

A. Sheth, Clemens Bertram, Kshitij Shah, "Video Anywhere: A System to Search, Access and Manage Any Type of Video Assets Anywhere", Royalty research proceeds from invention, 2001-2002 \$5,000.

A. Sheth, Donations from various sources to support the research activities in the LSDIS Lab at UGA, current funding, \$90,000.

Thiab Taha (PI), NSF, "The Second IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", \$13,817, Sept. 1, 2000 - Jan. 31, 2002.

Thiab Taha, UGA, President's Venture Fund, "Support for the ACM Southeast Conference" (with J. Miller and J. Smith), \$1,000, November, 2001.

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GRANTS AWARDED OR CURRENT

EXTERNALLY FUNDED GRANTS:

I. B. Arpinar (PI) "ONTOS: Ontology-driven Web Services Integration Platform", UGA Faculty Research grant, \$11,500, January 1, 2002 – December 31, 2002.

S. M. Bhandarkar (PI), Design and Prototype Development of a Computer Vision-based Lumber Production Planning System, US Department of Agriculture, \$190,000, Dec. 15, 2000 - Dec. 30, 2003.

S. M. Bhandarkar (PI) and J. Arnold (Co-PI), Parallel Computing for Physical Mapping of Fungal Genomes, U.S. Dept. of Agriculture, \$200,000, Sept. 15, 1997 - Sept. 30, 2001.

Andrew Paterson (PI), S. M. Bhandarkar, R. Dean, J. Kececioglu, L. Pratt, M. M. Pratt, S. Kresovich, and R. Wing (Co-PI's) Cross-linked Sorghum and Rice Physical Maps as a Foundation for Analyzing Genome Structure, Function and Variation in C4 Grasses, NSF, \$3,246,755 (CS portion \$164,932), Oct. 1, 1998 - Sept. 30, 2001.

E. Kraemer (PI), NSF CAREER Award, "An Infrastructure in Support of Configurable, Consistent, Interactive Computational Steering", \$201,617, May 1998 - April 2002.

David Lowenthal (PI), Eileen Kraemer and Suchendra Bhandarkar (Co-Pi's), National Science Foundation Major Research Instrumentation Grant, "Instrumentation Grant for Research in Parallel and Distributed Computing", Experimental and Integrative Activities, March 2000-February 2003, \$114,000 (includes matching from the University of Georgia Research Foundation).

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Bernd Schuttler (PI), Co-PIs: David Lowenthal, R.W. Robinson, and Jem Corcoran, National Science Foundation Information Technology Research Program, "ITR/ACS: Stochastic Summation of High-Order Feynman Graph Expansions", September 2000-August 2003, \$487,000. (CS portion – approximately \$236,195)

David Lowenthal (PI), National Science Foundation CAREER Award, "An Integrated Compiler/Run-Time System for Global Data Distribution", Computer and Communications Research, July 1, 1998 - June 30, 2002, \$200,000.

Potter, W.D., "SAGA-STP Aerial Spray Treatment Planner", USDA Forest Service, \$35,000. 8/2000 – 12/2001.

Potter, W.D., "SAGA-STP Aerial Spray Treatment Planner, Extension", USDA Forest Service, \$20,600, 7/2001 – 8/2002.

Khaled Rasheed (PI), Rutgers University – Subcontract from Darpa Grant. "Self Adaptive GA-Based Design Optimization using Reduced Models", \$60,000, 2000-2002.

Doyle Knight (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 (UGA's portion \$137,295), 2001-2004.

A. Sheth (PI), "Database and Information Systems Research for Semantic Web and Enterprises," National Science Foundation, January 2, 2002 – December 31, 2002, \$20,000.

A. Sheth, J. A. Miller, and K. J. Kochut, "Extending Meteor with Workflow Reuse, Adaptation, and Collaboration", Naval Research Laboratory, January 1, 2000 – September 30, 2001, \$200,000.

Thiab Taha (PI), NSF, "The Second IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory", \$13,817, Sept. 1, 2000 – Jan. 31, 2002.

Thiab Taha, UGA, President's Venture Fund, "Support for the ACM Southeast Conference" (with J. Miller and J. Smith), \$2,000, November, 2001.

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FACULTY PUBLICATIONS AND PRESENTATIONS

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

H. R. Arabnia, Editor, Vol I, "The Proceedings of The 2002 International Conference on Parallel and Distributed Processing Techniques and Applications; PDPTA'02". ISBN: 1-892512-87-4 (520 pages) June 2002.

H. R. Arabnia, Editor, Vol II, "The Proceedings of The 2002 International Conference on Parallel and Distributed Processing Techniques and Applications; PDPTA'02". ISBN: 1-892512-88-2 (525 pages) June 2002.

H. R. Arabnia, Editor, Vol III, "The Proceedings of The 2002 International Conference on Parallel and Distributed Processing Techniques and Applications; PDPTA'02". ISBN: 1-892512-89-0 (530 pages) June 2002.

H. R. Arabnia, Editor, Vol IV, "The Proceedings of The 2002 International Conference on Parallel and Distributed Processing Techniques and Applications; PDPTA'02". ISBN: 1-892512-90-4 (506 pages) June 2002.

H. R. Arabnia, Co-Editor, Vol I, "The Proceedings of The 2002 International Conference on Imaging Science, Systems, and Technology; CISST'02". ISBN: 1-892512-93-9 (410 pages) June 2002.

H. R. Arabnia, Co-Editor, Vol II, "The Proceedings of The 2002 International Conference on Imaging Science, Systems, and Technology; CISST'02". ISBN: 1-892512-94-7 (360 pages) June 2002.

H. R. Arabnia, Co-Editor, Vol I, "The Proceedings of The 2002 International Conference on Artificial Intelligence; IC-AI'02". ISBN: 1-892512-25-4 (470 pages) June 2002.

H. R. Arabnia, Co-Editor, Vol II, "The Proceedings of The 2002 International Conference on Artificial Intelligence; IC-AI'02". ISBN: 1-892512-26-2 (410 pages) June 2002.

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