

## COMPUTER SCIENCE

### **2007 Student Research Colloquium participation:**

One presentation, 3 students, 1 faculty sponsor

The presentation was titled "Information Retrieval on Peer-to-Peer Databases." Swetha Kukkala, Vamsi Kondari and Sri Aparna Khambhampati were the student researchers and Alina Bejan, the faculty sponsor.

The project investigated the use of XML as the underlying data model for peer-to-peer file sharing applications.

The group identified classes of queries that are supported by current XML peer-to-peer database systems and proposed a modified query algebra that would allow more expressive queries to be performed on such systems.

### **Students present at international conferences**

- Baoying Wang and Qi Qong presented "A PC-Based Parallel Programming System" with Associate Professor Jie Hu at the International Society for Computers and Their Applications (ISCA) 19th International Conference on Parallel and Distributed Computing Systems. The conference was held Sept. 20 – 22, 2006, in San Francisco.
- Liqiang Zhang and Jing Cheng presented "Implementations of Asynchronous Self-Organizing Maps on Open MP and MPI Parallel Computers" with Associate Professor Jie Hu at the ISCA 20th International Conference on Parallel and Distributed Computing Systems. The conference was held Sept. 24 – 26, 2007, in Las Vegas.

### **University honors CSCI graduate**

St. Cloud State University named Ryan Weber its 2007 Graduate of the Decade, an award that had not been bestowed since 2004.

Weber is cofounder of Freeze.com, which is now W3i, one of the fastest growing companies in the nation. As W3i's chief marketer, Weber leads a team of online media purchasers, marketing managers and product managers.

In reflecting on the award, Weber wrote, "I can remember Bryant Julstrom (faculty member) as an exceptional professor from whom I absorbed a wealth of knowledge. I consider him the brightest computer science mind I've ever come across as well as an excellent communicator and solid professor.

"Ramnath Sarnath (chair of Computer Science) was both an excellent professor as well as a true professional. He proactively requested a meeting to discuss how I could work with the department to bring top internships to experience my company. Several of these interns were later offered full-time employment."

Now residing in Sartell, Minn., Weber graduated in 2003 with a bachelor of science in computer science.

To learn more about W3i, go online to [www.w3i.com](http://www.w3i.com).

### **ABET re-accredits major through 2013**

The Computing Sciences Accreditation Board (CSAB), a member society of ABET, visited in fall 2007. This resulted in the computer science major's re-accreditation through 2013.

Professor Ramnath Sarnath, chair of the department said the department was pleased ABET affirmed their efforts.

"We work hard to present our students with the best possible opportunities, and we're always trying to improve the effectiveness of the learning experience we provide to our students," he said.

Accreditation is the process of external quality review used by higher education to scrutinize colleges, universities and higher education programs for quality assurance and quality improvement. It is seen as an incentive to remain abreast and responsive to the needs of the high-technology constituency.

Prospective employers look at whether a student graduated from an accredited program, and many grants and scholarships are contingent upon accreditation.

ABET helped establish CSAB in 1985. It is now one of ABET's largest member societies with more than 250 accredited programs.

According to its Web site, ABET currently accredits some 2,700 programs at more than 550 colleges and universities nationwide. ABET has been recognized by the Council for Higher Education Accreditation (CHEA) since 1997.

**Andrew Anda**, Associate Professor. Ph.D. 1995, University of Minnesota.

computational information retrieval, engineering of numerical software, high performance numerical computation, theoretical and applied matrix computation

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**Theresa Fisher**, Associate Professor. M.S. 1985, North Dakota State University.

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**Jayantha Herath**, Professor. Ph.D. 1988, Keio University, Japan.

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**Jie Hu**, Associate Professor. Ph.D. 1996, Tuhoku University, Japan.

asynchronous iteration, computer security, parallel computing, self-organize map

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#### Publications

Hu, J. Convergence of Asynchronous Probability Based Self-organizing Neural Networks. Proceedings of the ISCA 19th International Conference on Parallel and Distributed Computing System (PDCS – 2006), 193 – 196, September 20 – 22, 2006, San Francisco

Hu, J., B. Wang and Q. Qong. A PC-based Parallel Programming System. Proceedings of the ISCA 19th International Conference on Parallel and Distributed Computing System (PDCS – 2006), pp 57 – 62, September 20 – 22, 2006, San Francisco.

**Pranava Jha**, Professor. Ph.D. 1990, Iowa State University.

algorithms, automata theory, graph theory

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#### Presentations

Jha, P. Bounds on the Bisection Width of the Kronecker Product of Cycles at the sixth Slovenian International Conference on Graph Theory, June 24 – 30, 2007, Lake Bled, Slovenia. He also visited (upon invitation for research) July 1 – 4, 2007, Montanuniversität Leoben, Austria.

**Bryant Julstrom**, Professor. Ph.D. 1987, University of Iowa.

combinatorial optimization, evolutionary computation, genetic algorithms

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#### Publications

Chapter titled "A Permutation Coding, with Heuristics, for the Unconstrained Facility Location Problem" to be published in "Recent Advances in Evolutionary Computation for Combinatorial Optimization" in the Studies in Computational Intelligence series by Springer. Editors are Carlos Cotta and Jano van Hemert.

**Ramnath Sarnath**, Professor. Ph.D. 1994, SUNY-Buffalo.

algorithms, computational geometry, data structures, object oriented software design, very large scale integrated (chips) physical design

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**Annette Schoenberger**, Professor. Ph.D. 1987, Iowa State University of Science and Technology.

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