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E-Newsletter

offering degrees in computer science and engineering

Spring 2009 Highlights

Howdy!



We are proud to announce once again that spring brought many accolades to our faculty and students for their many outstanding efforts. Please see the sidebar announcing many of these well-deserved awards and recognitions for our faculty's excellence in research and teaching, and for our students' performance in competitions and research.

This edition of the E-Newsletter highlights the efforts of Dr. Jianer Chen and his research team as they provide a solution to a well known, open problem in computer science and information management, that of deadlock. Please read the main article for details.

Spring 2009 semester was also a time to honor our distinguished former students. This year's Distinguished Former Student Awards were presented to Thomas E. Reddin MS '65, a retired member of the Senior Executive Service of the U. S. Government, and Colonel Curtis Carver MS '93 & PhD '01, Vice Dean of Resources at the United States Military Academy at West Point. For more information about our awardees, please visit our Former Students [website](#).

Nominations for our 2010 Distinguished Former Student (DFS) Awards are now open and are due by 30 July 2009. The nomination packet should consist of a brief citation (not more than 80 words) describing the nominee's technical accomplishments and contributions to the computing profession, a current vita or resume, and up to three supporting letters. There is no limit to the number of nominations you may submit. We look forward to receiving your nominations!

www.cse.tamu.edu

Faculty Recognition

Awards

Richard Furuta — **2008-2009 Charles W. Crawford Service Award**

Ricardo Gutierrez-Osuna — **2008-2009 Faculty Fellow**

Ricardo Gutierrez-Osuna — **2008-2009 Tenneco Meritorious Teaching Award**

Jaakko Järvi — **NSF CAREER Award**

Andreas Klappenecker — **Best Paper Award at the Third International Conference on Quantum, Nano and Micro Technologies**

Dmitri Loguinov — **2008-2009 TEES Fellow**

Lawrence Rauchwerger — **Halliburton Professorship Award**

Nominations may be submitted via fax, email or mail to:

Ms. Leah Lewis
CSE DFS Award Committee
301 Harvey R. Bright Building
3112 TAMU
College Station, Texas 77843-3112
Fax: (979)845-1420
Email: CSAggies@cse.tamu.edu

I am also pleased to announce that in the fall we will welcome from USC Dr. Dylan Shell as an Assistant Professor to the department. His research interests lie in the area of Robotics. I encourage you to visit the Computer Science and Engineering [homepage](#) or contact me at the email address below to learn more about the department. I look forward to continuing to work with our excellent faculty, students, and friends during the upcoming 2009 fall semester.

Valerie E. Taylor
Department Head and Royce E. Wisenbaker Professor
Texas A&M University

Contact Dr. Taylor by [email](#)

How Do We Break Deadlocks?



In modern concurrent systems, we may encounter deadlocks, which refer to the situation wherein two or more competing processes are waiting for the other to finish, and thus neither ever does. The problem is well-known in the study of operating systems and database systems. In order to recover from a deadlock, some processes must be canceled so that other processes may proceed.

The theoretical formulation of the problem is named Feedback Vertex Set problem (FVS), which is a famous NP-complete problem. By the common belief in NP-Completeness Theory, the problem cannot be solved efficiently. On the other hand, is it possible to take advantage of the fact that in practice the number of processes to be aborted is small? This has been an outstanding open problem for the past 15 years.

A research group led by Dr. Jianer Chen (pictured) in the Department of Computer Science and Engineering at Texas A&M University, in collaboration with researchers at the University College Cork, Ireland, has settled this open problem recently by

Bjarne Stroustrup — **AFS Distinguished Achievement Award in Research, College and University level**

Jeffrey Vitter — **SIGMOD 2009 Test of Time Award**

Jennifer Welch — **AFS Distinguished Achievement Award in Teaching, College and University level**

Jennifer Welch — **Best Paper Award at the 23rd IEEE International Parallel and Distributed Processing Symposium**

Student Recognition

Christopher Bertsch, Mark Browning, Drew Fisher, David Mackey, Matt Mullins, Ankur Nandwani, Jason Ross, and Kyle Willmon — **1st Place, Southwest Regional Collegiate Cyber Defense Competition; 3rd Place, National Collegiate Cyber Defense Competition**

John Freeman — **3rd Place, Spring 2009 IAP Poster Competition**

Mike George — **National Defense Science and Engineering Graduate (NDSEG) Fellowship Award**

Chiao-Fang Hsu — **1st Place, Spring 2009 IAP Poster Competition**

developing a time algorithm for the FVS problem. The result has been very much welcomed and quickly published in a top conference (STOC) and journal (JACM). Reviewers of the paper pointed out that "The result is a major breakthrough in parameterized algorithms and complexity, solving the single most notable concrete open problem..."

Jianer Chen, who received a Ph.D. in Computer Science from New York University and a Ph.D. in Mathematics from Columbia University, has been a faculty member in the Department of Computer Science and Engineering at Texas A&M University since 1990. His research group has developed a number of the best current parameterized algorithms for a multitude of well-known NP-complete problems. These algorithms have found applications in computer systems, software systems, bioinformatics, and computer networks.

Save these dates

Sept 4: Fall Picnic

Sept 8-9: Texas Research Exchange Fest

Sept 15-16: Fall IAP Meeting

Oct 3: Computational Thinking 2009

Oct 9: Former Student Picnic

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Josiah Manson — **2nd Place, Spring 2009 IAP Poster Competition**

Josiah Manson — **NSF Graduate Fellowship Award**

Choonseog Park and Yoon H. Bai, **Best Paper Award at the 2009 IEEE Symposium on Computational Intelligence for Multimedia Signal and Vision Processing**

Srikanth Sastry — **Best Paper Award at the 23rd IEEE International Parallel and Distributed Processing Symposium**

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