From the Chairman

The Ann Arbor (Michigan) News recently reported that "after enrollment in computer science classes plummeted in the early part of the decade following the implosion of the dot-com bubble, students are starting to refill seats. Educators attribute this interest to booming demand for computer scientists and engineers in a weak economy and the ever-increasing need for computer security in the information age. Double-digit growth in jobs in computer-related fields is expected to continue (26.4% between 2006 and 2016 from about 7.5 million to 9.5 million jobs)." A recent nationwide survey indicated that software engineering (first) and IT consulting (seventh) are among the top ten jobs in the coming decade. Our CS curriculum here at the University of Memphis now covers software engineering, gaming, networks, and security. Plans are underway to enhance offerings in these areas.

Our Mentat program (where selected senior students act as mentors to freshmen and sophomores) is active and well received. The ACM student chapter activities and the recently held Fall Social have added to the extracurricular lives of our students.

It is my pleasure to note that our faculty research has found a new outlet in the TV media. We have declared this year as the Year of Alumni and have started increasing alumni relations with the Department. There are reports on these items elsewhere in this newsletter.

While excelling in teaching, research, and service to the community, our aim is to provide the most enjoyable learning environment for our students. I invite our alumni to contact us – we are always anxious to know of your accomplishments.

Happy Holiday Season and a Happy New Year (in advance)!  
Dr. Sajiun Shiva

Department News

CfIA Hosts Cyber Security Expo

Dr. Robert Kozma received a 2008 Dunavant Professorship from the College of Arts & Sciences. As part of the award, Dr. Kozma will receive $5000 per year for 3 years to support his research programs.

In addition, Dr. Kozma and Dr. Lan Wang are on a team of five U of M faculty members who recently received a grant from the FedEx Institute of Technology to study Complex Warfare Systems. This project takes advantage of new sensor technologies to create a decision support system for use in a warfare scenario.

Dr. SANTHOSH KUMAR received an Early Career Research Award from the College of Arts and Sciences. As PI of multidisciplinary, multi-university teams, he has recently won NSF and NIH grants worth over $2.5M. This year Dr. Kumar was awarded a new grant (2 years, $268k) from the FedEx Institute of Technology to make his AutoWIness (burkagIN) system field-deployable. Dr. Kumar was also invited to speak at the First IEEE Workshop on the Theory of Ad-Hoc and Sensor Networks (THASN08), held in conjunction with the IEEE MASS conference in Atlanta on September 29.

Dr. VinhPhan Thuy presented a talk titled "Management of Bioinformatics Data and Tools" at the Software Showcase organized by the Office of Technology Transfer, held in October at the FedEx Institute of Technology.

Faculty Achievements

Dr. Dipankar Dasgupta has published a new book, "Immunological Computation: Theory and Applications." The book is published by Auerbach Publications and is co-authored with Fernando Nino. It presents up-to-date immunity-based computational techniques.

Dr. Dasgupta was also a keynote speaker at the ECIS Symposium on Bio-inspired, Learning, and Intelligent Systems for Security (BILSS), held on August 5 in Edinburgh, Scotland. His talk was on "Computational Intelligence in Cyber Security."

Dr. Stan Franklin has published the proceedings of the First Conference on Artificial General Intelligence (AGI-08) as a book (Pet Wang, Ben Goertzel, and Stan Franklin, Artificial General Intelligence 2008, Amsterdam: IOS Press).


News in Brief

Dr. Kurt Pfeifer joined the Wireless Sensors and Mobile Ad Hoc Networks (WSiMe MANet) Lab as a postdoc. Dr. Pfeifer received his Ph.D. from the U. of Illinois at Urbana-Champaign in Electrical and Computer Engineering in 2006. He completed a two year postdoctoral fellowship at the U. of California at Santa Barbara prior to joining us.

The department and the CfIA sponsored an online referendum for the Student Government Association to amend their constitution and roll for names for the new student building. Results are at electega.memphis.edu.

The Applied CS major is seeing renewed interest from several areas. In Spring 2009, at least 6 new students will be joining the 15 or so majors already in the program.

On the News...

The Computer Science Department has been highlighted on FOX13 Memphis this semester, with coverage on activities from Dr. Dipankar Dasgupta’s Center for Information Assurance (CfIA) and Dr. Santosh Kumar’s Wireless Sensors and Mobile Ad Hoc Networks (WiSE MANet) Lab.

In an August newscast, Dr. Dasgupta and Tammy Alexander from the CfIA discussed the potential security risks of websites offering features such as banking services.

In an October story, Dr. Kumar discussed his AutoWIness project, which uses wireless mote technology to automatically alert law enforcement of stolen items. AutoWIness also provides the ability to track these items, making them easier to recover.

For links to the full newscasts, visit the CS News website at www.cs.memphis.edu/index.php?news
Student Highlights

CS Social 2008

The 5th Annual CS Social attracted nearly 100 people to the Pink Palace Museum, including 2-year-old Mia, APCs student Zach Pennington’s Little Euphias (pictured at right). Exotic foods and desserts from represented regions were handy for the tasting. Many in attendance were wearing and enjoying costumes of their own, or won as door and talent prizes for their music, dance, and/or showmanship.

It was a great show including truly scary episodes portraying departmental life and exposing hidden talents and faces from students, faculty, and their families. We are grateful to all presenters for taking the time out to have some fun and share their food and fanfare. We can’t wait to see the CS social next year. What will you come up with next?

ACM Student Chapter Events

This semester the ACM Student Chapter, led by President Rodrigo Silva, held two major events. The first was an informal Wii tournament, held on Friday, Sept. 26. Several dozen students attended the event over the course of the evening, and pizza and fun were had by all!

The second event was a talk by Alan Morris from Sun Microsystems, held on Friday, Nov. 7. Alan discussed several topics of interest to Computer Science students, including access to free student training, becoming a Sun-Certified Developer, and applying for entry-level jobs and internships.

Fall 2008 Graduates

M.S.

Vivek Varma Datla
Yi Gu
Vasudha Koya
Rahul Varma Madunuri
Silpa Potana
Hima Bindu Puppala
Venkatesh Karuppayampalli Rangasamy
Raluca Stoian
Sowmya Sree Veeravatnam
Natasha Vichaga
Shokhar Vemuri
Ramjee Yeremi
Wei Yin

B.S.

Roy Elton Crowder, III
Sar Haider
Timothy Henry
Luke Jonathan Kende
Brian Kennedy
Michael Lee

Upcoming Events

The Fifth Annual CS Research Day will be held in mid-Spring 2009. More details will be posted on the Computer Science website as the date approaches. However, it’s never too soon to start thinking about what you’d like to present!

The Computer Science Department will be hosting the 2009 Programming Challenge in Spring 2009. As in past years, this event will give area high-school students the opportunity to work in teams to develop a game, which they will then present at the U of M. Programming Challenge judges have included Computer Science faculty as well as local members of industry.

NetLab Student Activities

The Networking Research Lab (NetLab) led by Dr. Lan Wang welcomed a new overseer, Yaoping Liu, in Fall 2008. Yaoping has a B.S. degree from Dalian Maritime University in China and is pursuing a Ph.D. degree in Computer Science.

Our undergraduate research assistant, Ernest McCracken, presented his research “NetViews: Real Time Visualization of Internet Topologies Through Peered Vantage Points” at the university’s Works in Progress Symposium on Nov. 5. This Symposium is for undergraduate students to present their research projects to peers in their field. Ernest has also been accepted to present the same project at the Tennessee Collegiate Honors Council Annual Conference and invited to apply to the National Conference on Undergraduate Research (NCUR) this year.

NetLab members have recently published in two competitive conferences, Ubicomp and ACM Hotnets.

CS Colloquium

The CS Colloquium this semester included talks from distinguished visiting researchers as well as University of Memphis faculty.

Anne Benoit and Yves Robert, Ecole Normale Superieure de Lyon, France
"Scheduling for Cluster and Grids"

Evan Drumwright, University of Memphis
"Continuous Collision Detection for Rigid Bodies"

Lee M. Hively, Oak Ridge National Lab
"A Vision for Next-Generation Computing"

Max H. Garzon, University of Memphis
"Syntactic Biology: Recent Developments and New Directions"

Raghu Nandan Sengupta, Indian Institute of Technology, Kanpur
"Use of Asymmetric Loss Functions in Sequential Estimation Problems for Multiple Linear Regression"

Sajjan Shiva, University of Memphis
"Knowledge Management in Distributed Software Engineering Environments"

Victor Jin, University of Memphis
"Modeling In Vivo Protein-DNA Interactions from ChIP-based High Throughput Data"

Vinhthuy Phan, University of Memphis
"Algorithmic Gene Design"

Bretes Weide, Ohio State University
"Progress on the Verified Software Grand Challenge"

Yuanshun Dai, University of Tennessee, Knoxville
"Modeling and Self-Healing Mechanism in Large-Scale Networking Systems"

Department of Computer Science
University of Memphis
209 Dunn Hall
Memphis, TN 38152-3240
Phone 901.678.5465
Fax 901.678.1506
Email info@cs.memphis.edu
Web www.cs.memphis.edu