From the Chairman

I am pleased that the enrollment in our Computer Science programs has followed the national upward trend. As of this fall, we have 178 undergraduates, 54 master's students, and 47 doctoral students. These represent increases of 41%, 6%, and 62%, respectively, over our Spring 2009 figures.

Employment opportunities for Computer Science graduates have also remained high. CNNMoney's 2011 list of "Best Jobs for Fast Growth" included several IT-related positions in the top 20, with software development ranked #1. Within our department, we have had students who started their own mobile app company, as well as others who accepted internships and full-time positions with local industry such as FedEx.

This fall has seen several new faces join the Department. I would like to personally welcome Dr. Scott Fleming and Dr. Timothy Hnat, our two new tenure-track Assistant Professors, as well as Mr. Ben Humphreys, our new system administrator, and Ms. Linda Carter, our new secretary.

Happy holidays to all!

Dr. Sajjan Shiva

Cyber Security Expo

The Center for Information Assurance hosted the fourth annual Cyber Security Expo (**cyberexpo.memphis.edu**) on October 7. This all-day event featured lectures by cyber security leaders from industry and academia. The theme of this year's event was Online Social Media Threats, with specific topics including identity theft, cloud security, critical infrastructure, mobile devices, social media threats, virtual supply chains, and organized cyber crime.

An excellent lineup of speakers was featured, with representatives from the University of Memphis; Oak Ridge National Lab; the FBI; Cisco; Jackson State Community College; Sonalyst, Inc.; FedEx; Mississippi State University; the National Security Agency; and Dell.

Department News

Computer Science Featured at Memphis Research and Innovation Expo

Several groups from the Computer Science Department were featured at the Memphis Research and Innovation Expo held at the FedEx Institute of Technology on October 6. This event highlighted work from premier local researchers such as the University of Memphis, St. Jude Children's Research Hospital, and the University of Tennessee Health Science Center. Speakers at the event included FedEx CIO Rob Carter and MIT professor Michael J. Piore. The Computer Science groups showcasing their work included:

Dr. Dipankar Dasgupta's Center for Information Assurance presented some of their projects on cyber security.

Dr. Lan Wang's Networking Research Lab presented two of their projects: NetViews and Named Data Networking (NDN). A system designed for studying Internet routing and forwarding dynamics, NetViews allows a network operator to monitor the accessibility of his/her network and verify that data is being forwarded on those routes correctly. NDN is a new architecture aimed at replacing the current IP addressing scheme of the Internet.

Dr. Qishi Wu's High-Performance Networking and Computing group presented the Scientific Workflow Automation and Management Platform (SWAMP), which contains a set of easy-to-use computing and networking toolkits for application scientists to conveniently assemble, execute, monitor, and control complex computing workflows in heterogeneous high-performance network environments.

New Faculty and Staff

The Department welcomed two new tenure-track Assistant Professors this fall:

Dr. Scott Fleming (below left) received his Ph.D. in Computer Science from Michigan State University, and was afterward a postdoctoral fellow at Oregon State University. He brings his expertise in software engineering, particularly the design of software engineering tools.

Dr. Timothy Hnat (below right) received his Ph.D. in Computer Science at the University of Virginia, where he worked on wireless sensor networks. In particular, he has focused on pattern recognition and event detection.

In addition, the Department welcomed **Mr. Ben Humphreys** as its new Local Technical Support Provider. Ben replaces longtime system administrator **Dr. Aregahegn Negatu**, who is now pursuing a career at St. Jude Children's Research Hospital. **Ms. Linda Carter** also joined the Department as the new Secretary.

CS Open House

To celebrate the national Computer Science Education Week (Dec. 4-10), the Department held its second annual CS Open House on Dec. 2 in the Rose Theatre lobby. Over 100 area high-school students were in attendance. The event featured a series of interactive demonstrations to showcase computing to the younger generations:

Modeling human and artificial minds
Dr. Stan Franklin

Molecular computing: Can I listen to my genes?
Dr. Max Garzon

Smarthome: a house knows more than you think
Dr. Timothy Hnat

Tracking burglars with tiny sensors
Dr. Santosh Kumar

A human-vs.-computer strategy game
Dr. Vinhthuy Phan

Talking machines that understand me
Dr. Vasile Rus

Who ate my packets? Diagnosing Internet problems
Dr. Lan Wang

There was also a workshop on *Programming Lego Robots* given by **Mr. Kriangsiri Malasri**.

Faculty Achievements

Dr. Dipankar Dasgupta will be giving keynote talks at three events this December: the 10th Int. Conf. on Computer Information Systems and Industrial Management Applications (CISIM), the Joint Int. Conf. on Swarm, Evolutionary, and Memetic Computing (SEMCCO), and the IEEE Int. Conf. on Energy, Automation, and Signal (ICEAS). Dr. Dasgupta also gave two workshops in November: a IFEES/IUCEE Global Webinar on Intelligent Security Systems, and a workshop on Social Media and Privacy for U of M Adult and Commuter Student Services.

Dr. Scott Fleming won the best paper award at the 2011 IEEE Symposium on Visual Languages and Human-Centric Computing for his paper entitled "An Exploration of Design Opportunities for 'Gardening' End-User Programmers' Ideas," which he co-authored with colleagues Jill Cao and Margaret Burnett (Oregon State).

Dr. Stan Franklin has accepted an appointment to the founding editorial board of *Biologically Inspired Cognitive Architectures* (BICA), a newly established professional journal published by Elsevier. Dr. Franklin is also one of hte founding members of the IEEE Computational Intelligence Society, which has just approved the formation of a Task Force on Towards Human-like Intelligence (**http://www.mini.pw.edu.pl/~mandziuk/cis_tf_thli/**).

Dr. Max Garzon was invited to deliver a short course on "DNA Languages" at the U. of Rovira i Virgili, Tarragona, Spain, from October 28-31.

Dr. Santosh Kumar chaired the national meeting on "mHealth Evidence" (**http://obssr.od.nih.gov/scientific_areas/methodology/mhealth/mhealth-workshop.aspx**) held at the National Institutes of Health (NIH). Dr. Kumar also co-chaired the Technical Program Committees of ACM mHealthSys'11, MSN'11, and NetHealth'12; and gave invited talks at UPenn, UCLA, UCSD, University of Washington, and Washington University in St. Louis.

Meanwhile, Dr. Kumar's WiSe MANet Lab published papers at five premier conferences (ACM IPSN, ACM SenSys, ACM CHI, ACM UbiComp, and ACM Wireless Health) in 2011. Two of these papers were nominated for best paper awards (at IPSN'11 and WH'11).

Dr. Vasile Rus gave an invited talk at the AAAI Fall Symposium on Question Generation held in Arlington, VA, in November. More information abut Question Generation can be found at **www.questiongeneration.org**, the main website of the Question Generation research community hosted at the U of M by Dr. Rus.

Student and Alumni Highlights

CS Social 2011

The annual CS Social was held on November 4 at the University Center. Although UC regulations meant that we could not have our traditional potluck dinner, attendance was strong and everyone enjoyed the variety of acts on display!

The activities during this year's event included an Indian dance routine, a PlayStation 3 tennis tournament, and an Elvis impersonation by **Dr. Scott Fleming**.
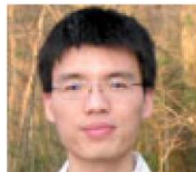
ACM Student Chapter Events

The ACM student chapter held a successful lecture series this semester featuring several interesting guest speakers.

On Sept. 28, **Cory Hymel** gave a talk on mobile enterprise development. Cory is a U of M Computer Science undergraduate student and the CEO of Prime Notion Technologies, Inc., a company based in Memphis that specializes in enterprise development and deployment of mobile software.

On Oct. 14, **Kelly Penwell** from the U of M Center for Entrepreneurship & Innovation described how the Center works with U of M students and residents of Shelby County to create start-up businesses.

On Nov. 2, **Somnath Mitra**, a senior Ph.D. student in computer science at the U of M, presented a talk on mobile development APIs and platforms.

On Nov. 18, representatives from **FedEx Services** gave a talk about their summer internship program, which can provide invaluable real-world work experience for Computer Science students.

Interested in getting involved with the ACM chapter? Please contact President Craig Herndon (**cthrndon@memphis.edu**), or faculty advisor Dr. Vinhthuy Phan (**vphan@memphis.edu**).

In August, two of **Dr. Stan Franklin**'s Ph.D. students, **Javier Snaider** and **Ryan McCall**, opened AGI 2011 (the Fourth Conference on Artificial General Intelligence, **agi-conf.org/2011**) on the Google campus with a half-day tutorial on the LIDA cognitive model, developed by the Cognitive Computing Research Group of the Computer Science Department. The tutorial was a huge success with ninety attendees, sixty of whom remained for the computational part of the tutorial.

Ph.D. student **Cristian Moldovan** and his advisor **Dr. Vasile Rus** co-authored a paper that received an Honorable Mention for the Best Paper Award at the 22nd Midwest Artificial Intelligence and Cognitive Science Conference.

One of **Dr. Vasile Rus**'s recent Ph.D. graduates, **Dr. Mihai Lintean**, has joined the Language and Information Processing (LIPs) research lab as a postdoctoral fellow. He will be applying his expertise on semantic similarity to the DeepTutor project (**www.deeptutor.org**).

Ph.D. student **Md. Mahbubur Rahman** from **Dr. Santosh Kumar**'s WiSe MANet lab presented the group's mConverse work for detecting conversation from respiration measurements at ACM Wireless Health'11 in San Diego. This work was nominated for a best paper award.

Dr. Karen Hovsepian joined the WiSe MANet lab as a postdoctoral fellow. Earlier, he was a postodoctoral fellow at Emory University in bioinformatics.

Where Are They Now?

Dr. Yi Gu completed her Ph.D. in Summer 2011. She is currently on the faculty of the Computer Science Department at the University of Tennessee, Martin.

Yunyue Lin will complete his Ph.D. in Fall 2011, and is currently employed as a senior programmer/analyst at Wal-Mart's headquarters.

Xukang Lu will complete his Ph.D. in Fall 2011, and is already working as a faculty member at Lemoyne-Owen College.

Fall 2011 Graduates

Ph.D.

Yunyue Lin
Xukang Lu
Xiaodong Zhou

M.S.

Stephen Michael Ash
Srinivas Reddy Kukunoor
Yaoqing Liu
David L. Mills
Swetha Maurya Popuri

M.S. Applied Computer Science

Brandon K. Jackson

B.S.

Sameh Awadeh
Jesse Gillespie
Elton Morman
Michael Smith

CS Colloquium

The CS Colloquium is held on most Friday afternoons during the semester. For abstracts and speaker bios, see **www.cs.memphis.edu/colloquium**

Sept. 30 - "Who Is Responsible for Security and Privacy in the Cloud?"
Dr. Dipankar Dasgupta, Department of Computer Science, University of Memphis

Oct. 14 - "Distributed Workflow Optimization and Management in Heterogeneous Network Environments: From Theory to Practice"
Dr. Yi Gu, Department of Computer Science, University of Tennessee, Martin

Oct. 21 - "Building a Foundation for the Design of Software Engineering Tools"
Dr. Scott Fleming, Department of Computer Science, University of Memphis

Oct. 28 - "A Practical Tool for Measuring Semantic Similarity between Texts"
Dr. Mihai Lintean, Department of Computer Science, University of Memphis

Nov. 11 - "Augmenting the Physical World with Sensors"
Dr. Timothy Hnat, Department of Computer Science, University of Memphis

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