Year's End Brings Honors for CoC Community

Interim Dean Jim Foley (R) presents staff member Don Schoner with an award for Outstanding Support and Service at the College's 18th Annual Awards Celebration (see item under General News). Schoner is administrative coordinator at GVU. Alan Glass of the Graduate Programs Office also received an Outstanding Support and Service Staff Award. Congratulations to Don and Alan!

Research News

Financial Dashboard for March 2009

2009 YTD New Awards

<table>
<thead>
<tr>
<th>Sponsor</th>
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<th>Co-PIs</th>
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<td>U.S. Dept. of</td>
<td>$54,000</td>
<td>Karsten</td>
<td>Matt Wolf</td>
<td>Collaborative Research:</td>
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Proposed Contracts for the Month

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<th>COC</th>
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<td>$7,351,921</td>
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<td>9%</td>
<td>8%</td>
<td>8%</td>
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</table>

Newly Awarded Contracts

Event Spotlight

May 1
Undergraduate Dean's Honors Reception
Klaus Atrium

May 4
Quarterly Staff Luncheon & Meeting
TSRB 132 & 133

Numbers & Stats

657
Number of undergrad applications received for fall 2009

555
Number of undergrad applications received for fall 2008

15%
Increase in undergrad applications from 2008 to 2009.

Industry Outreach

This month various groups at CoC are pursuing partnerships with the following companies:

Aflac
Intel
2009 UROC Symposium a Great Success
Congratulations to the following winners of the 2009 UROC Research Symposium, which was held April 15.

JUDGES' AWARDS
First Prize ($750)
Brian Stebar II - Scalable Video Conferencing
Adviser: Kishore Ramachandran
Second Prize ($300)
Kathryn Long - Learning as an Alternative to a Simulator in Real-Time Strategy Games
Adviser: Ashwin Ram
Third Prize ($100)
Dan Gifford - The Effects of Mobility on Mini-Qwerty Text Input
Adviser: Thad Starner

PEOPLE'S CHOICE AWARDS
First Place (Prize: $50)
Kathryn Long - Learning as an Alternative to a Simulator in Real-Time Strategy Games
Adviser: Ashwin Ram
Second Place
Brian Stebar II - Scalable Video Conferencing
Adviser: Kishore Ramachandran
Third Place
Peter Tsankov - Execution Hijacking
Adviser: Alex Orso

Paper on Botnet-Based Scam Hosting Wins Best Paper Award
"Dynamics of Online Scam Hosting Infrastructure," a paper by graduate student Maria Konte and Assistant Professor Nick Feamster (both in CS), as well as Jaeyeon Jung at Intel Research, won the Best Paper Award at the Passive and Active Measurement Conference (PAM). PAM focuses on research and practical applications of network measurement and analysis techniques. The paper, which studies the infrastructure that scammers use to host phishing and scam attacks on the Internet, was presented April 3 at the conference in Seoul, Korea, and can be read here.

Ph.D. Student Paper Wins Supercomputing Award
Ph.D. student Virat Agarwal (CSE) is the first author of a paper that won the International Supercomputing Conference (ISC) 2009 Award. The 24th ISC, to be held June 23-26 in Hamburg, Germany, is the premier supercomputing event in Europe. Agarwal's paper, "Faster FAST: Multicore Acceleration of Streaming Financial Data," focuses on accelerating streaming applications and is the result of research collaborations between Georgia Tech (Agarwal and CSE Professor David Bader) and IBM Research.

Software Group to Present Three Papers at SIGSOFT Symposium
Three papers by the Software Engineering group (SE@GT) have been accepted to the upcoming ACM SIGSOFT International Symposium on Software Testing and Analysis, which is the top conference in its specific area of software testing and analysis.
- "PENUMBRA: Automatically Identifying Failure-Relevant Inputs Using Dynamic Tainting," by James Clause and Alex Orso
- "Precise Interface Identification to Improve Testing and Analysis of Web Applications," by William Halfond, Saswat Anand and Alex Orso
The symposium is scheduled for July in Chicago.

IC Has Major Presence at SIGGRAPH 2009
Four papers authored or co-authored by interactive computing faculty and students have been accepted to the ACM SIGGRAPH 2009 conference, to be held Aug. 3-7 in New Orleans.

- "Dextrous Manipulation From a Grasping Pose," by Karen Liu
- "Performance-Based Control Interface for Character Animation," by Satoru Ishigaki, Timothy White, Victor Zordan and Karen Liu
- "Deforming Meshes That Split and Merge," by Chris Wojtan, Nils Thuerey, Markus Gross and Greg Turk
- "Physically Guided Liquid Surface Modeling from Videos," by Huamin Wang, Miao Liao, Qing Zhang, Ruigang Yang and Greg Turk

CHIstory Video Wins Golden Mouse Award at CHI 2009
A video co-produced by IC graduate students Kurt Luther and Erika Poole won the Golden Mouse Award for the Best Entertaining Video at the CHI 2009 conference. "CHIstory" is set 100 years in the future and offers a playfully imaginary look back at the field of human-computer interaction (HCI). "CHIstory" was one of 25 videos accepted for the CHI 2009 Video Showcase by a jury of HCI experts.

Grad Student Wins Fellowship
Graduate student Anna Mansour (IC) has won a 2009-2010 Selected Professions Fellowship (for graduate students in Computer/Information Sciences) from the American Association for University Women (AAUW). Mansour and Associate Professor Ashwin Ram (IC) also co-authored a paper titled “MunchCrunch: A Game to Learn Healthy-Eating Heuristics” that was accepted to the 8th International Conference on Interaction Design and Children (IDC 2009), to be held in Como, Italy, June 3-5.

Spring 2008 Faculty Election Results
Four College of Computing faculty members were elected to leadership positions in the Georgia Tech Faculty Senate during recent elections. These results were approved by the Executive Board on April 15. The four are:

- Faculty Honors Committee: Gregory Abowd (IC)
- Undergraduate Curriculum Committee: Milena Mihail (CS)
- Graduate Committee: Alex Gray (IC) and Leo Mark (CS)

Software Engineering Grad Student Wins Conference Awards
William Halfond, a Ph.D. student in computer science focusing on software engineering, won a Best Presentation Award at the International Conference on Software Testing (ICST) in Denver, April 1-4. Halfond presented the paper, “Penetration Testing with Improved Input Vector Identification,” which he co-authored with Associate Professor Alessandro Orso (CS) and fellow grad student Shauvik Roy Choudhary. The conference is one of the premier conferences on software testing. The paper was based on research Halfond conducted as part of his dissertation work on improving penetration testing by using interface analysis. The analysis he developed resulted in a technique that can discover three to four times as many vulnerabilities as previous techniques. Halfond also won a Best Student Presentation on another paper he co-authored with Orso at the Foundations of Software Engineering conference in November 2008.

Postdoc Speaks on Case-Based Planning, Organizes Conference
Santi Otanon, a postdoctoral researcher working with Associate Professor Ashwin Ram (IC), gave two invited talks in March and is co-organizing a conference to be held in May. Otanon spoke about “Case-Based Planning for Real-Time Strategy Games” at the University of North Carolina, Charlotte, on March 20 and at Lehigh University in Pennsylvania on March 30. He also was invited by the Navy Research Lab in Washington, D.C., to give the same talk on Jan. 26. Otanon and Ian Watson from the University of Auckland, New Zealand, are organizing the Special Track in Case-Based-Reasoning for the conference of the Florida Artificial Intelligence Research Society (FLAIRS 2009), conference, May 19-21 on Sanibel Island in Florida.

Ph.D. Student Presents Research of Game Design Tools
Mark Nelson, a Ph.D. student in artificial intelligence, presented a paper he co-wrote with adviser Michael Mateas (former assistant professor in IC, now at University of California, Santa Cruz) at the Foundations of Digital Games (FDG 2009) conference, April 26-30. In the paper, “A Requirements Analysis for Videogame Design Support Tools,” the authors analyze what a design-support tool for game design would require in order to be useful in helping designers reason about game mechanics and gameplay.
Bader Keynote Speaker at Multicore Conference

David Bader (CSE) is giving the keynote address at the 2nd Annual Carleton Cell BE Programming Workshop (CCPW) in Ottawa, Canada, May 13-15. As multicore desktop computers become ubiquitous, programming techniques are increasingly important to achieving performance goals, he said. Expertise in multicore programming represents a significant gap that needs to be addressed. The CCPW features tutorial sessions, hands-on labs, keynote presentations, poster presentations and scientific talks intended to address that gap.

CS and CSE Researchers Collaborate on Conference Paper

A paper co-authored by assistant professors Nick Feamster (CS) and Alex Gray (CSE), graduate student Shuang Hao (CS) and two other computer scientists has been accepted at the 18th USENIX Security Symposium, Aug. 10-14 in Montreal, Canada. The paper, “Detecting Spammers with SNARE: Spatio-Temporal Network-Level Automated Reputation Engine,” investigates ways to infer the reputation of an email sender based solely on network-level features, without looking at the contents of a message. The paper can be viewed online.

General News

Progress Report on Dean Search

Gary May (chair of ECE and of the CoC dean search committee) reported at the April 14 CoC Town Hall that 12 candidates had been selected from a large and diverse applicant pool for interviews. Of those 12 candidates, about half will be invited for campus visits and meetings with college and institute stakeholders. Finally, the names of the three to five strongest contenders will be presented to Provost Gary Schuster, who will make the final decision. May said he was “pretty pleased” with both the candidate pool and the way the search process was going. Updates, including a list of questions being asked of each interviewing candidate, can be found on the dean search web page.

Rising Applications, College Goals A Focus of Town Hall Meeting

Interim Dean Jim Foley had good news to share at the CoC Town Hall in April. Applications to undergraduate, master's and doctoral programs for 2009-10 are up significantly over last year, and applicants are presenting higher GPAs and test scores on average. Foley also reported that the college is making progress toward several goals that had been established for the 2008-09 year. For example, efforts continue to establish a joint School of Biomedical Informatics with Emory, to create educational opportunities with the College of Management, to enhance the College's professional education programs and to increase participation in international programs. Those who missed the meeting can watch the video online.

Computing Honors Its Own at 18th Annual Awards Ceremony

The College of Computing hosted its 18th Annual Awards Ceremony on April 21 and honored dozens of students, faculty and staff members for their achievements and contributions to the college. More than 50 undergraduates were recognized for graduating this semester with Highest Honor, High Honor or Honor. Another eight received undergraduate awards, while several graduates were honored with awards or fellowships. Faculty won research and teaching awards, and two staff members were recognized for their outstanding service. This year Kishore Ramachandran (CS) was recognized with the Peter Freeman Award for his initiative in establishing the Samsung Tech Advanced Research Center (STAR) and as one of the initiators of the College's Korea University dual degree program. The Dean's Award was presented to Janet Kolodner (IC) for her leadership in revamping the reappointment, promotion and tenure processes. In addition, 10 faculty and staff members were celebrated for their 10 years of service at Georgia Tech.

TSO Offers Distributed Desktop Support

TSO now has onsite desktop support personnel in the College of Computing (CCB), Klaus Advanced Computing Building (KACB) and Technology Square Research Building (TSRB). TSO began to distribute its help desk personnel in October 2008, when Eden Chandler moved to TSRB. In April, Jimmy Kriigel moved to KACB to provide enhanced desktop support to Klaus faculty and staff. TSO has received positive feedback on these moves and on the addition of Douglas Conley to the support staff at the main Help Desk in CCB. TSO plans to continue this model of support in which personnel are available on site as well as via phone and email. Contact information for each of the three locations is:

TSRB: Eden Chandler (TSRB 347, 404-725-0240)
KACB: Jimmy Kriigel (KACB 3125, 404-731-9655)
CCB: Brian Crowell and Doug Conley (CCB 148, 404-894-7065)
CoC 'Improvement Committees’ to Report, May 4
On May 4 at the quarterly staff meeting, six committees will issue reports on how to improve important aspects of College business: travel, ”onboarding” (orientation for new employees), leadership development, performance management, communications and morale. The groups were formed after a staff survey conducted last fall indicated a need to address each of these areas. Together the six committees comprise some 30 staff members who have been working on this initiative since January.

Renovated CoC Data Center
Over the last year, TSO has been renovating the College's 4,700-square-foot, raised-floor data center located in CCB. Thanks to consolidated technology infrastructure and upgraded electrical and cooling capabilities, as well as cleaning and painting, CoC now has a more professionally run and organized data center. This work was done in an effort to provide researchers an appropriate space for computing infrastructure, and the space is now available for research activities. For information on using the CCB data center, please contact Randy Carpenter, Chad Huneycutt or Brian Poole.

Child Study Lab Needs Research Subjects
The new Child Study Laboratory at the joint GT-Emory Health Systems Institute (HSI) is actively recruiting children for a number of studies on child development, attention and communication. Potential participants can check the website for basic information about the lab conducts and what parents can expect when they visit.

Expanded Support for Research Activities
In keeping with the its strategic plan, TSO has expanded its support for research activities. At the beginning of 2008, TSO had only two staff members focused solely on research support. Randy Carpenter and Chad Huneycutt were responsible for supporting the more than 50 research labs throughout the College. Recognizing that more resources were needed to focus on research support, TSO partnered with GVU Director Beth Mynatt to hire Brian Poole to provide technology support to the GVU Center. Additionally, TSO is now partnering with CSE to hire another research technologist to provide support to researchers in that division. TSO also has focused Huneycutt's efforts on providing support to the Center for Experimental Research in Computer Systems (CERCS). TSO hopes to add at least two more research technologist positions in fiscal 2010 to continue improving research support.

CERCS Sponsors Cloud Computing Workshop and Meeting
The CERCS Cloud Computing Workshop and I/UCRC CERCS IAB Meeting took place in the Klaus building, April 23-24. Distinguished lectures and keynote addresses included talks by Dan Reed, director of scalable/multicore systems at Microsoft Research, on “Silicon Clouds: Raining Multicore Services;” and by Alan Ganek, chief technical officer and vice president of strategy and technology at the IBM Software Group, on “Dynamic Infrastructure Powers a Smarter Planet.”

Turner Employees Visit GVU Center
The GVU Center hosted its third annual Turner VIP Day on April 16. More than 130 executives from many Turner branches and channels came to see GVU’s latest research developments. Turner’s goal at this event was to develop further connections between Turner and GVU and to determine new areas of interest. Here are a few of the numerous compliments that GVU students and faculty received from the visitors: “Mind blowing creativity”; “There is a definitive WOW factor”; and “It gave me hope in Turner's vision and future that they are insightful enough to engage a research giant like GT.”

ICE 2009 Teacher Workshops and Summer Camps
The Institute for Computing Education (ICE) is offering another summer of workshops for high school teachers and camps for students (rising fourth through 12th graders). Four weeks of teacher workshops will begin June 22 on the Georgia Tech campus. On average, about 30 teachers from around Georgia attend these workshops. Starting the week of June 8, there also will be several one-week camps for kids from fourth grade through high school. The Center for Education Integrating Science, Mathematics, and Computing (CEISMC) helps with the registration and running of these camps. The kids get a taste of the Georgia Tech experience by getting their own buzz cards and eating at the Student Center for lunch. Computer science students are hired each summer to help run the workshops and provide participants with strong CS role models. ICE was founded in 2004 to increase the number of qualified computing teachers in Georgia (especially CS-AP teachers) and to increase the number and diversity of computing students in Georgia.

http://www.cc.gatech.edu/compiler/
**Women@CC Celebrate Another Good Year**

Women@CC held their last meeting of the year on April 13. In 2008-09, W@CC sponsored several fun events including the Spooktacular at the end of October to CoCaesar’s in March. W@CC also hosted the first Women’s Overnight to give prospective students a chance to learn about the College of Computing and experience a taste of college life. Several members attended the Grace Hopper Celebration of Women in Computing, toured Google and participated in the Relay for Life fundraise. W@CC leaders look forward to seeing more dynamic women join their ranks next year.

**The Compiler to Take a Summer Hiatus**

This will be the last full issue of The Compiler until Aug. 1. In July, the Office of Communications will issue an abridged issue that will include financial data for April and May. When it resumes in August, The Compiler will include financial data for June and FY09 as well as the full complement of College news, events and other information.