Better Photos Through Computation

William Sessions is studying. And surfing the web. And having a conversation—with himself—all at the same time. No, he's not a self-replicating piece of code; Sessions is a biomedical engineering student enrolled in Irfan Essa’s (IC) class, Computational Photography at Georgia Tech. The class explores perceptual and technical aspects of pictures, and more precisely the capture and depiction of reality on a two-dimensional medium. Essa covers everything from historical photography techniques to the digital age, including images and photography on the Internet and storytelling through photography. The class will hold an exhibition of its work on Thursday, April 28, at 1:30 p.m. (location TBD).

Research News

Financial Dashboard for February 2011

<table>
<thead>
<tr>
<th>2011 YTD New Awards</th>
<th>Proposed Contracts for February 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>$21,689,709</td>
<td>Total: 6, $1,449,308</td>
</tr>
<tr>
<td></td>
<td>IC: 55%, CS: 3%, RIM: 39%, GTISC: 3%</td>
</tr>
</tbody>
</table>

Newly Awarded Contracts for February 2011

April 1
ARC4
TSRB Banquet Hall

April 3-6
2011 Richard Tapia Celebration of Diversity in Computing
San Francisco, CA

April 7
Spring Town Hall
Klaus 1116

April 11
UROC Symposium
CCB Commons

April 14
GVU Spring Research Showcase
Technology Square
Research Building

April 16
AP Bowl

April 17
NCWIT Aspiration Awards Ceremony
Klaus Atrium

April 21
ARC Colloquium: David Woodruff, IBM
Almaden Research Center
Klaus 111W

April 21
Thomas E. Noonan Distinguished Lecture: Michael I. Jordan
TSRB Auditorium

April 22
Spring Advisory Board Meeting
Atlanta, GA

April 25
Quarterly Staff Meeting
Klaus 1116

April 26
<table>
<thead>
<tr>
<th>Sponsor</th>
<th>Value</th>
<th>PI</th>
<th>Co-PIs</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Association for Children &amp; Families</td>
<td>$82,017</td>
<td>Gregory Abowd</td>
<td>None</td>
<td>Creation of a Statewide Autism Consortium (As Part of Building Capacity)</td>
</tr>
<tr>
<td>NSF</td>
<td>$425,000</td>
<td>Nick Feamster</td>
<td>Keith Edwards</td>
<td>Collaborative Research: Measurement Infrastructure for Home Networks</td>
</tr>
<tr>
<td>Kitware</td>
<td>$160,000</td>
<td>Irfan Essa</td>
<td>None</td>
<td>Vision with a Purpose: Inferring the Function of Objects in Video</td>
</tr>
<tr>
<td>Cray Inc</td>
<td>$25,000</td>
<td>David Bader</td>
<td>None</td>
<td>Cray Faculty Award</td>
</tr>
<tr>
<td>Google</td>
<td>$1,000,000</td>
<td>Nick Feamster, Wenke Lee</td>
<td>Mustaque Ahamad, Patrick Traynor, Henry Owen</td>
<td>Free &amp; Open Access to Info on Internet</td>
</tr>
<tr>
<td>Google</td>
<td>$20,000</td>
<td>Jiten Chhabra</td>
<td>Beth Mynatt</td>
<td>Impact of Prospective Nutritional Advice on Health Outcomes</td>
</tr>
<tr>
<td>Google</td>
<td>$62,000</td>
<td>Beth Mynatt</td>
<td>None</td>
<td>Online Health Info</td>
</tr>
<tr>
<td>Roundarch, Inc</td>
<td>$6,000</td>
<td>Melody Moore</td>
<td>Jackson</td>
<td>MSHCI Interactivity</td>
</tr>
</tbody>
</table>

**People@CoC**

CoC Faculty & Student Win Several 2011 Institute-Wide Awards

College faculty and students will cart home several Institute awards this spring. Ashwin Ram (IC) will pick up the 2011 Class of 1934 Outstanding Innovative Use of Education Technology, and Barbara Ericson (CoC) and Mark Guzdial (IC) jointly received the 2011 Faculty Outstanding Service Award. An associate professor, Ram earned the Class of 1934 award, which recognizes a faculty member who has developed and instituted innovative techniques to improve the learning environment and the learning process, for his work on OpenStudy. Ericson (director of CS outreach) and Guzdial (professor) received their joint award for work the two have done to promote computing education in the state through Georgia Computes!

Also, Henrik Christensen (IC) will receive the Outstanding Achievement in Research Innovation Award for his work in robotics; Christensen, KUKA Chair of Robotics, is director of the Robotics & Intelligent Machines (RIM) Center. Also, Hyesoong Kim (CS) and Karen Liu (IC) both won Sigma Xi Young Faculty Awards. Kim, an assistant professor, was recognized for her papers on developing a software system to help parallel programming. Also an assistant professor, Liu was recognized for her paper that describes a new approach to designing feedback controllers for physically simulated virtual humans.

Finally, recent Ph.D. graduate Chris Wotjan earned the Sigma Xi Award for Best Ph.D. Thesis Award for his work, *Animating Physical Phenomena with Embedded Surface Meshes.* Wotjan's advisor was Greg Turk (IC).

The 2011 Faculty-Staff Honors Luncheon will be held Tuesday, April 19, in the Student Center Ballroom, while the Sigma Xi Awards Banquet will be held Thursday, April 14.

Four Faculty Receive Tenure and/or Promoted in 2011

The College submitted four faculty names for tenure and/or promotion this year, and all four were approved. Announced by Dean Zvi Galil on March 25, the names include:

- Alex Gray (CSE): promoted to associate professor with tenure.
- Nick Feamster (CS): promoted to associate professor with tenure.
- Guy Lebanon (CSE): promoted to associate professor with tenure.
- Ashok Goel (IC): promoted to full professor.
Advisor Cathy Dunnahoo Named Shining Star

Cathy Dunnahoo (CoC), Academic Advisor II, was named the Q2 Shining Star. Her nominator wrote that she "is always willing to offer guidance to faculty, staff and students alike. Nominated for her outstanding initiative, exemplary performance, personal attributes and customer service, Cathy takes the extra steps necessary to serve those who seek her guidance, even in busy times. She embodies a 'CIRCLE' of values—Commitment, Integrity, Responsiveness, Community, Loyalty and Excellence—and is, indeed, a Shining Star." The Compiler asked Dunnahoo a few questions about herself and the job she does so well.

- Where are you from? A small town in Alabama that no one has heard of.
- How long have you worked at CoC? 16 years in CoC and 29 years at Tech this summer (I started as a baby).
- What's your favorite part of your job? Working with students—we have the best!
- What's your secret to keeping a great work attitude? Everyone's job contributes to the whole; take pride in it and always do your best.

Team M.U.M. is now accepting nominations for the Q3 Shining Star; this quarter any faculty member (i.e., professors, post docs, academic professional and researchers) or student in a Computing major can nominate one eligible staff member. For more information or to nominate a Shining Star, visit the College intranet (must access from within CoC network or via VPN).

Zegura, Best, Grinter Co-Organizing ICTD 2012 @ Georgia Tech

Ellen Zegura (CS) and Michael Best (IC) are serving as general conference co-chairs for the fifth IEEE/ACM International Conference on Information and Communication Technologies and Development (ICTD 2012), to be held at Georgia Tech, March 12-16, 2012. ICTD provides an international forum for scholarly researchers exploring the role of information and communication technologies (ICTs) in social, political and economic development. The conference program and accepted papers will reflect and deepen the multidisciplinary nature of ICTD research, with anticipated representation from anthropology, computer science, communication, design, economics, electrical engineering, geography, information science, political science, public health, sociology and so on. Beki Grinter (IC) is serving as a program committee chair. ICTD 2012 has just issued a call for papers; submission deadline is July 22.

Vazirani Continues Digital Equilibrium Search at CalTech

Vijay Vazirani (CS) delivered a talk, "Extending General Equilibrium Theory to the Digital Economy," at CalTech on March 25, as part of the university's Rigorous Systems Research Group seminar series. The talk discussed how a new pricing model needs to be developed for digital goods. General equilibrium theory, which Vazirani called the "undisputed crown jewel of mathematical economics" over the past century, does not apply to digital goods; once produced, a digital good can be reproduced at (essentially) zero cost, thus making its supply infinite. Vazirani's talk was based on a joint paper with Kamal Jain of Microsoft Research.

Chetty Wins Best Paper Award at CHI 2011

Ph.D candidate Marshini Chetty, advised by Beki Grinter (IC), will receive a Best Paper Award at CHI 2011, to be held May 7-12 in Vancouver, Canada. Chetty's paper, "Why is My Internet Slow?: Making Network Speeds Visible," describes a field trial of a home broadband management tool. The paper's findings could help Internet policy makers, Internet service providers and designers understand home user needs for checking and managing broadband speed.

Nersessian to Receive Inaugural Suppes Prize in Philosophy of Science

Nancy Nersessian (IC) has been named by the American Philosophical Society (APS) as the recipient of the first Patrick Suppes Prize in Philosophy of Science. This prestigious prize recognizes outstanding work in philosophy, psychology or neuroscience, and history of science. Nersessian received the award for her work in philosophy of science. Her research focuses on creativity, innovation and conceptual change in science and interdisciplinary engineering research.

Christensen Receives Engelberger Award for Contributions to Robotics

Henrik Christensen (IC) received the 2011 Engelberger Robotics Award for Education, considered the world's top honor in the field of robotics, at a ceremony held by the Robotic...
Industries Association (RIA), March 22 in Chicago. Christensen earned the award for his leadership in the international robotics industry, and the award ceremony was held in conjunction with the 42nd International Symposium on Robotics and Automate 2011. Bestowed by RIA, the award is named after Joseph Engelberger, founder of Unimation Inc. and widely known as the "father of robotics." It carries an honorarium of $5,000.

Riedl to Present Papers at ICCC, SIGGRAPH

Mark Riedl (IC) will present two papers at the 2nd International Conference on Computational Creativity (ICCC) in Mexico City, April 27-29. The first paper, co-written with Brian O'Neill, is titled "Simulating the Everyday Creativity of Readers," and the second, co-written with Alexander Zook and Brian Magerko, is titled "Understanding Human Creativity for Computational Play." The purpose of the ICCC is to facilitate the exchange of ideas on the topic of computational creativity in a cross-disciplinary setting. Riedl also will present a paper, titled "Evaluating Enjoyment within Alternate Reality Games," at the SIGGRAPH Sandbox Game Conference, where only 12 percent of submitted papers are accepted.

Ram to Deliver Keynote at the 11th SCAI in Norway

Ashwin Ram (IC) will deliver a keynote address at the 11th Scandinavian Conference on Artificial Intelligence (SCAI), to be held May 24-26 in Trondheim, Norway. SCAI aims to display the state of the art within AI research, as well as provide a venue where AI-related industry and academia can meet, exchange ideas and connect. Ram's keynote is titled "User-Generated AI for Interactive Digital Entertainment."

Goodman Writes About African Cyber Security

Sy Goodman (CS) and Andrew Harris published an article, "The Coming African Tsunami of Information Insecurity," in the December 2010 issue of Communications of the ACM (subscription required for full text). The article addresses the little-talked-about subject of the vulnerability created by increasing the use of information and communication technologies without also increasing the laws and organizations needed to protect the security of these technologies. This vulnerability is exemplified in the African population, due to its criminally attractive large number of users, but condemningly small number of security-savvy users.

Goel Co-Chairs NSF Workshop on Computation & Design

Ashok Goel (IC) co-chaired an NSF workshop on "Computational Methods and Tools for Biologically Inspired Design," March 20 in Palo Alto, Calif. The workshop's goal was to plan a potential NSF program on computational methods and tools in biologically inspired design. Expected outputs include a report to NSF and an edited volume on the topic.

Stasko to Speak on Assessing Returns on Federal Research Funding

John Stasko (IC) will give a presentation at the Measuring the Impacts of Federal Investments in Research workshop in Washington, April 18-19. The workshop's goal is to identify analytical and data needs and opportunities in assessing the returns to federal research funding across a wide range of fields and government missions. Stasko also will participate on a panel devoted to "Emerging Metrics and Models for Assessing Research Impacts."

Workshop on Free and Open Internet Communications a Success

The Georgia Tech Information Security Center (GTISC) held an NSF-sponsored workshop on "Free and Open Communications on the Internet" (FOCI), Feb. 24-25 in the Klaus Building. The workshop featured open discussions and presentations on the current state of censorship, as well as the issues related to anti-censorship. The event's featured speaker was Roger Dingledine, leader of the Tor Project, who delivered the lecture, "Tor and the Censorship Arms Race: Lessons Learned." In attendance were free speech and human rights activists from all over the world.

Riedl Keynote Speaker at the 2011 AAAI Spring Symposium

Mark Riedl (IC) will give a keynote speech for the Association for the Advancement of Artificial Intelligence (AAAI) Spring Symposium, held at Stanford University from March 21-23. The topic Riedl will address is "Help Me Help You: Bridging the Gaps in Human-Agent Collaboration." He also will speak on procedural content generation in games at the East Coast Game Conference in North Carolina, April 13-14.

Mynatt Joins MSR Advisory Board

Beth Mynatt (IC) has joined the Microsoft Research Technical Advisory Board. This board advises all of Microsoft's U.S. research laboratories, including the labs in Redmond (Wash.), Silicon Valley (Calif.) and New England (Cambridge, Mass.). The other board members are Ed
Personnel Announcements

Brendan Streich has joined CoC as the Director of Communications effective 3/1/11. His email address is bstreich@cc, phone number is 4-7253 and is located in CCB 139. Welcome Brendan!

Brian Schrank has joined CoC as a Temporary Research Scientist I in IC & LCC effective 2/14/11. His email address is bschrank@gatech.edu. Welcome Brian!

Young Sung Son has joined CoC as a Visiting Research Scientist II in IC effective 3/14/11. Email address is Young.Son@cc.gatech.edu and is located in TSRB. Welcome Young Sung!

General News

IPaT, Chair Searches on Agenda for Spring Town Hall

The College will hold its Spring Town Hall on Thursday, April 7, at 11 a.m. in Klaus 1116. Dean Zvi Galil will speak and introduce Institute for People and Technology Executive Director Beth Mynatt (IC), who will give an overview of the institute's plans and activities, and professors Henrik Christensen (IC) and Dana Randall (CS), who are leading the searches for new chairs of the schools of Computer Science and Interactive Computing, respectively.

Invitation: GVU Spring Research Showcase, April 14

GVU will hold its Spring Research Showcase on Thursday, April 14, from 4-7 p.m. in TSRB. GVU faculty and students will present the latest research developments in areas such as: animation and graphics, artificial intelligence, augmented reality, brain computer interfaces and assistive technology, cognitive science and design computing, collaborative work, domestic computing, digital media, gaming, health and wellness, human-computer interaction, human-robot interaction, learning, music technology, social computing, tangible media, and wearable computing. Following the showcase, the Computing Alumni Organization and GVU will host a reception, at which GVU Acting Director Keith Edwards (IC) will discuss the center and its mission.

ICE to Hold Computer Science AP Bowl, April 16

The Institute for Computing Education (ICE) will host an AP (Advanced Placement) Bowl on April 16 from 1-3:30 p.m., with $3,000 in prizes to give away. The AP Bowl is a practice Advanced Placement Computer Science multiple choice exam. Students will have 75 minutes to complete a 40-question exam, and ICE will give prizes to the top five finishers. The rest of the prizes will be raffled off to the remaining students. ICE also will host an information session/tour for parents during the AP Bowl. High school students can register here, and pictures from last year’s AP Bowl can be seen here.

Women@CC to Participate in Tech Beautification Day, April 17

Women@CC held its annual CoCaesar’s Palace event on March 17 and wants to thank all those who attended and helped staff the event. Coming up this month is a resume workshop on April 7 to help students preparing to hit the job market. The organization also will attend Tech Beautification Day on April 17. Any members or active College of Computing students who would like to participate are welcome to join. For more information, please contact co-chairs Linda Hyunh or Alissa Hartenbaum.

UrbanRemix Awarded Commission To Perform in Times Square

GVU’s collaborative and locative sound project, UrbanRemix, was awarded the commission to do a series of workshops and performances in Times Square in April and May. UrbanRemix combines location-based cellphone technology, a database and a web application to allow people to record and store media such as sound, images and ultimately videos in their city and position them in a digital map. At the conclusion of the project, UrbanRemix will perform a remix of the collected sounds in a public space in Times Square and make the remix available for download and distribution. In addition, they will develop and support an online remix contest and ring-tone generator as alternative performance and distribution formats.

CoC In the News

To help Compiler readers stay informed of the latest College of Computing media coverage, we share the month's headlines from the CoC website. Below are links to all headlines from March 2011 (most recent headlines at the top).
● An Accused Cop Killer's Facebook Page
● Google Gives Georgia Tech $1M for Tools to Detect Big Brother
● Georgia Tech Gets $1 Million From Google
● Google Gives Georgia Tech $1M to Build Benchmark for Open Internet
● Can Japan Send in Robots to Fix Troubled Nuclear Reactors?
● Google Funds Tools to Expose Internet Shutdown, Censorship
● Google Spends $1 Million on Censorship, Throttling Detection
● Georgia Tech to Pursue 'Transparent Internet' With $1M Google Focused Research Award
● Robots Designed To Read Human Reactions
● The 10 Most Innovative Companies in Education
● Search & Rescue Robots to Japan
● Georgia Tech Student's Films Make a Difference
● Study: Patients Generally Accepting of Robotic Care
● Touched By A Robot, But Just What Are Its Intentions?
● Robots That Recognize When It Gains The Attention Of A Human
● Teaching Robots To Interact Better With Humans
● Zegura Elected to Computing Research Association Board of Directors
● Simon The Robot Learns To Act Like A Human, Can Tell When You're Not Paying Attention
● How Do People Respond To Being Touched By A Robot?
● Study: Robots Can Understand Humans
● Supreme Court Decision; Generation 1099; Whiz Kids
● Augmented Reality: KHARMA Open-Standard
● Our Robot Overlords Will Walk Like Us--And Among Us
● Turning Augmented Reality Into an Open Standard
● How Can Robots Get Our Attention?
● Teaching Robots to Move Like Humans
● 2011 GT Faculty Honors for Ram, Ericson & Guzdial
● Mystery of Georgia Guidestones
● New Games Link Tech & Reality
● College Conducting Chair Searches for Schools of CS, IC
● RIM@GT Offering Public Short Courses on Robotics
● Watson's Georgia Tech Creator Forecasts the Future