



## NEWSLETTER

Spring 2007

*Come to the 3<sup>rd</sup> Cirque du CS on Saturday, March 31, 2007!*



*Come to the Cirque du CS!*

We're gearing up for our 3<sup>rd</sup> annual **Cirque du CS** and hope that you can attend. We've invited the whole Wellesley community, especially CS and Media Arts & Sciences alums, students, faculty and their families and friends, to join us.

At the Cirque, dozens of our current students will be presenting demonstrations and posters of projects they've done in courses and independent studies, including robotics projects, games, and animations. There will be activities and food for people of all ages, including kids, so bring the whole family! The Cirque will also feature the debut of another new CS musical, *Wendy in Buggleland*, created by the Wellesley Association for Computing (WAC).

This year's Cirque will be held on **Saturday, March 31**, from 1-4pm in the E-wing of the 1<sup>st</sup> floor of the Science Center. We've moved the event from Sunday to Saturday to encourage more interaction between students, alums, and faculty after the event. Let us know if you would be interested in joining a group for dinner on Saturday night.

Visit <http://cs.wellesley.edu/cirque> for more details about this year's Cirque. We can always use more help: contact **Stella Kakavouli** ([skakavou@wellesley.edu](mailto:skakavou@wellesley.edu)) or **Jean Herbst** ([jherbst@wellesley.edu](mailto:jherbst@wellesley.edu)) if you'd like to volunteer.

*Daniel Bilar: Our First Hess Fellow*

The CS department has a new visiting fellowship position that is funded through a generous gift from Norma Wilentz Hess '41. In Fall, 2006, we were delighted to welcome our first Hess Fellow: **Daniel Bilar**. Daniel's areas of expertise include computer security and networks (not just computer networks, but a more general notion of network that includes social networks and ecological networks). Daniel's current research thrust is the detection and containment of highly evolved metamorphic malware. He also has a budding interest in quantum computing.



Daniel worked in variety of positions before moving to academia: as a Swiss private bank analyst, census taker, software engineer, and translator. He has degrees from Brown University (BA, Computer Science), Cornell University (MEng, Operations Research and Industrial Engineering) and Dartmouth College (PhD, Engineering Sciences). At Dartmouth, Daniel was one of seven founding members of the *Institute for Security and Technology Studies* at Dartmouth College. *ISTS* conducts counter-terrorism technology research, development, and assessment for the Department of Homeland Security and the Department of Justice. He was part of the group that devised new methods to protect our nation's communication, control and observation networks. Before coming to Wellesley, Daniel taught at Oberlin College and Colby College.

Daniel will be with us for two years. Last Fall, he co-taught *CS342 Computer Security* with Lyn Turbak. This Spring, he is teaching a *CS249 Topics* course on the *Science of Networks*. Next Fall, he will be teaching *CS242 Computer Networks*.

### Faculty Notes

**Takis Metaxas** now serves as our intrepid chair. He is also developing a new 300-level course on *Web Search and Mining* for next year. The Media Arts and Sciences program that he and **Jessica Irish** co-direct is growing steadily.

**Ellen Hildreth**, **Randy Shull**, and **Sohie Lee** continue to develop *CS112 Computation for the Sciences*, which is now being taught for the 3<sup>rd</sup> time.

**Brian Tjaden** is on an early sabbatical leave in which he is focusing on research, designing new computer tools and algorithms for analyzing DNA sequences. He is spending the year at Harvard University, working with biologists to characterize genes and other interesting features in recently sequenced genomes.

**Scott Anderson** recently presented a paper on his *CS199* course (*Simulation, Probability, and Statistics*) at the annual conference for the ACM's Special Interest Group in Computer Science Education (SIGSCE). This past January, Scott and **Lyn Turbak** (with lots of help from **Robbie Berg**) taught the tenth (!) incarnation of *Robotic Design Studio*. Visit <http://cs.wellesley.edu/~rds/museum.html> to view the students' projects.

**Jennifer Stephan** continues to teach CS110, CS240, and CS343. Last year, she served as an external reviewer for the CS program at Simmons College.

**Pattie Orr** has announced that she will be leaving Wellesley to become the Vice President of IT and Dean of University Libraries at Baylor University. We will all miss Pattie dearly and wish her the best for her new position.

Former faculty member **Sergio Alvarez** recently got tenure at Boston College. Way to go, Sergio! Former lab instructor **Elena Machkasova** visited us last summer. She is now a CS professor at the University of Minnesota, Morris.

### Student Internships/Jobs

Many of our students had CS-related jobs and internships during the summer of 2006. **Shaheli Guha '07** worked with two partners to create a web-based start-up company (<http://www.sssolutionsonline.com/>) that provides construction management services. After returning from a semester studying Artificial Intelligence at the University of Edinburgh, **Vasumathi Raman '07** spent the summer working with Prof. Regina Barzilay at MIT on a natural-language-processing project involving summarizing restaurant reviews from the web. As part of the Distributed Mentor Project (DMP), **Rebecca Shapiro '07** interned at the University of Illinois on a project to explain bugs in concurrent programs. **Heather Conner '07** worked on various web projects at France Telecom. **Hitomi Yoneya '07** did an internship at Lehman Brothers in Tokyo.

### Student Research Projects

This year, several seniors are working on Honors Theses or other research projects. Based on her experience

as a CS student sysadmin, **Rebecca Shapiro '07** is exploring ways in which an operating system can be structured to protect systems and users from an all-powerful root user. **Vasumathi Raman '07** is working on a knowledge representation problem in the blocks-world domain: using human-generated data in conjunction with machine learning algorithms to define the notion of one block being "on" another block. **Hitomi Yoneya '07** is investigating the affect that reputation has on cooperation in classic game-theory scenarios like the Prisoner's Dilemma (in which each participant has an incentive to cheat, but groups benefit if participants cooperate).

**Sarah Abraham '07** is investigating the tensions and synergies between two seemingly contradictory aspects of video games: the narrative (or story) aspect, which implies inevitability, and the interactivity aspect, which implies free will. **Eylul Dogruel '07** is transforming SCI 121B into a media arts exhibition space in which she explores how smells, ambient lighting, and peripheral vision affect the mood of the viewer. **Heather Conner '07** is working as an assistant in a book project about the future of the Internet by Prof. Jonathan Zittrain at Harvard's Berkman Center for Internet and Society. **Agnes Chang '07** is doing a UROP in the Human Dynamics Group at the MIT Media Lab, where she is working on a Star-Trek-like communicator device for businesses that allows employees to communicate and also collects aggregate data about some of their habits at work.

### The CS Alum Panel



The biggest event of the Fall semester was the **CS Alum Panel** on November 28, 2006. Seven alums talked about their experiences in industry and academia: **Emily Braunstein '01** (software engineer at Charles Stark Draper Labs), **Diana Fong '01** (desktop designer at Red Hat), **Kate Golder '02** (software consultant at Sorriso Technologies), **Lily Lee '93** (research scientist at MIT Lincoln Labs), **Betsy Masiello '03** (recent Rhodes scholar who is starting as a consultant for McKinsey and Company), **Jennifer Prasad '97** (web reporting manager at Monster.com), **Julie Weber '03** (CS Ph.D. candidate at University of Michigan), and

**Holly Yanco '91** (assistant professor of CS at UMass Lowell).

The panel was well-attended, and many students took advantage of the opportunity to talk with the panelists over an Indian dinner in Sage lounge. One outcome of the dinner discussion was a field trip by students to follow up on **Diana Fong's** gracious invitation to visit her at Red Hat.



#### *Other Department Events*

Our **CS Colloquium** series, organized by **Stella Kakavouli**, has featured several security-related talks this year. A few days before the November elections, Dr. Ben Adida gave a talk on *Transparent Secret-Ballot Elections* to a packed lecture hall. Dr. Adida, who is currently a postdoctoral fellow at Harvard's Center for Research on Computation and Society, talked about some of his cutting-edge research in electronic voting from his recent MIT Ph.D. A few days later, Prof. Azer Bestavros, chair of Boston University's CS Dept., gave a talk on *Exploiting the Transients of Adaptation for Reduction of Quality Attacks on Internet Resources*. In December, a special agent from Boston's FBI Cyber Squad (who prefers to remain unnamed in print) gave a talk on Cyber Crime and then spoke about his role in investigating several high-profile cases: the Zantop murders at Dartmouth, the Richard Reid (shoe bomber) case, and the Daniel Pearl abduction and murder. Another talk is planned for April: Prof. Susan Hohenberger from Johns Hopkins will give a talk on *Authentication for Pervasive Communications*.

The Wellesley Association of Computing (WAC) continues to be active, hosting events like **LAN parties** and the **Set! challenge**. Although they categorically deny it, the faculty suspect that some WAC members masterminded the visit by a band of ninja warriors to a CS Dept. meeting early in the Fall. Literally throwing down a gauntlet, the ninjas challenged the faculty to a **student-faculty Ultimate Frisbee game**.



Held on Severance Green on a beautiful Friday afternoon in mid-October, the game proved once again the superiority of the faculty's Frisbee skills – or at least the skills of **Ellen Hildreth's** high-school-age son **Marc**, who was almost single-handedly responsible for leading the faculty team to victory.

Also in October, our department sent a team to the Boston-area ACM Programming Contest, which was held at Fitchburg State College. This year's team members were **Sarah LaFrance '08**, **Anna Tang '09**, and **Lili Shi '10**. Although the team did not advance to the next round, they gained valuable experience that will be important for next year! Also, two of this year's contest problems inspired **Lyn Turbak** and **Mark Sheldon** to create a new problem on text-based Buggles (so-called Tuggles) for CS111.

In mid-December, we once again held our annual **Holiday Party**, this time in Tishman Commons in the Wang Center. All who attended had fun decorating gingerbread trees and houses, eating cookies and pizza, and getting beat at the game of Set! by **Kara Schimmelfing '07**.

As part of a generous bequest from Leonie Faroll '49, many updates and changes are being planned for the Science Center. Some of the proposed changes that will improve our department are an additional computer lab, some new research space, and a reorganization of the micro-focus computer lab. We look forward to report on these changes in future newsletters.

#### *Keep in Touch!*

Consider reaching out to our students and each other by putting your names/contact information on the alumnae page, <http://cs.wellesley.edu/~cs/People/alumnae.html>. Visit <http://cs.wellesley.edu>, to learn more about what's going on in the department. We haven't heard from many of you in a long time! Let us know what you're up to by emailing Takis Metaxas at [pmetaxas@wellesley.edu](mailto:pmetaxas@wellesley.edu)