

# Wellesley College

## Computer Science Department



Don't miss the  
**Cirque du CS!**

Sunday, February 27, 2011

## Winter 2011 Newsletter

To read online this newsletter and previous issues, visit:  
<http://cs.wellesley.edu/~cs/Newsletters/newsletters.html>

### New Hess Fellows



Eni Mustafaraj

We are pleased to announce that **Eni Mustafaraj** is our new *Norma Wilentz Hess Visiting Assistant Professor*. She joins us after having spent last year as a Visiting Scholar and Instructor in the Wellesley CS department.

Eni has a PhD from the Polytechnic University of Marburg, with research interests in natural language processing, information retrieval, web search, machine learning, and case-based reasoning, and will be teaching a new course, **CS 249 Web Mashups**, this spring.



Tyler W Moore

We are also welcoming **Tyler Moore** as a Hess Fellow, beginning in Fall '11. Tyler is currently a Postdoctoral Fellow at Harvard University, and is serving as a Visiting Scholar here for the current school year. Tyler completed his PhD in Computer Science at the University of Cambridge, St John's College.

His research focuses on the economics of information security, the study of electronic crime, and the development of policy for strengthening security. Additional research interests include decentralized network (e.g., peer-to-peer, ad-hoc and sensor network) security, critical infrastructure protection and digital forensics.

### New Courses for Spring 2011

#### **EXTD 160 Introduction to Engineering**

Engineering is about combining ideas from mathematics, physics, computer science, and many other fields to design objects and systems that serve human needs. This project-based course introduces the big ideas of engineering and prepares students for taking additional engineering courses.

Topics include: the design and construction of mechanisms using rapid prototyping tools such as laser cutters, 3D printers, and computer-aided design software (Solid Works); modeling and controlling physical systems using the MATLAB and Simulink programming environments; and feedback and control using digital electronics.

#### **CS 249 Web Mashups**

On the Web, your friends are on Facebook, the music you like on Pandora, the instructional videos on YouTube, the places to visit on Google Maps. Is there a way to bring these contents in one single website? Yes, and it is called a web mashup, a new kind of website created by combining data and services from different websites.

These websites (such as Google Maps) allow access through an API (application programming interface), and one can combine their contents in innovative and inspiring ways. Students in this course will build as a final project a web mashup that provides an informational, societal, or entertainment value not available in existing websites, by learning the latest, cross-platform technologies such as HTML5, jQuery, Ajax, and Google App Engine.

## Faculty News

**Stella Kakavouli** has returned after a year off on medical leave. Welcome back, Stella!

**Takis Metaxas** was promoted to Full Professor in May, 2010 - Congratulations! Takis had a very busy year – he and **Eni Mustafaraj** received the Best Paper Prize at the Web Science 2010 Conference in Raleigh, NC, April, 2010, for their paper “From Obscurity to Prominence in Minutes: Political Speech and Real-Time,” on how the social web can affect elections. In July, 2010, he presented “How to create a Smart Mob: Understanding a Social Network Capital,” at the e-Democracy Conference in Freiburg, Germany, in July, 2010. Takis also won the Apgar Award for teaching excellence for CS114 last year, and was on the faculty of the Albright Institute. Takis will be on sabbatical at Harvard next year.

**Orit Shaer's** research proposal on "Enhancing Genomic Exploration through Reality-Based Interaction" has been awarded funding from the NSF IIS division. Orit will present a paper “Enhancing Genomic Learning through Tabletop Interaction” (written with **Megan Strait '10, Consuelo Valdes '11, Taili Feng '13, Heidi Wang '12** and Michael Lintz from Olin College) in May at the ACM CHI 2011 conference. In April, Orit will also present a paper about “Art App-reciation: Fostering Engagement and Reflection in Museums through a Social Mobile Application” (written with Jim Olson from the Davis Museum, **MaCherie Edwards '11, and Consuelo Valdes '11**) at the Museums and the Web conference.

**Sohie Lee** attended the Grace Hopper Women in Computing conference this fall, and reported that it is a great opportunity for networking, mentoring, and increased visibility for the contributions of women in computing. The department hopes to be able to sponsor or solicit funds to support attendance by students at future conferences.

**Lyn Turbak, Orit Shaer, Eni Mustafaraj, and Scott Anderson** (with Mark Chang from Olin College) led summer and fall research in the Science Center to develop technology for the 2010 Tanner Conference. Projects include the Microsoft Touch-Sensitive Interactive Surface display with information on the conference, and Tandora, an online personalized scheduler just for the conference.

**Brian Tjaden** was awarded an endowed chair in Fall 2010. He is the Theresa Mall Mullarkey Associate Professor of Computer Science.

**Ellen Hildreth** will serve as chair of the department next year, giving **Randy Shull** a well-deserved respite from the administrative duties he has performed for the last few years.

## Student News

Our students have won prestigious honors, and have done rewarding work during the summer and fall of 2010.

In particular, the Mini-Focus in the Science Center at Wellesley College was abuzz with activity this summer: **Caroline Sun '11, Alexander Olivier '11, Heidi Wang '12, and Colette Whitaker '10** spent the summer in the Science Center working on the Tanner Initiative (Microsoft Surface and Tandora projects), led by **Lyn Turbak, Orit Shaer, Takis Metaxas, Eni Mustafaraj, and Scott Anderson**. **Jie Han '12** assisted in the Tandora effort in the fall, and also developed mashups to visualize data and information from projects (with **Eni Mustafaraj**, to be used in her new web mash-ups course).

A number of students also worked with **Eni Mustafaraj** and **Takis Metaxas** on research projects. **Jess Chung '11** worked on performing sentiment analysis with Twitter messages. **Rebecca Graber '11** studied assessing the political engagement on Facebook. **Catherine Lui '11** researched evaluating Google Trends data to predict elections. **Era Vuksani** studied how Google affects the elections and is affected by public opinion.

The **Human Computer Interface Lab** has been very busy - a surface machine is now in the Science Center so people can experiment with it! **Orit Shaer** directed work on a number of projects in the lab: **Megan Strait '10, Consuelo Valdes '11, Taili Feng '13, Heidi Wang '12** and Michael Lintz (Olin) worked on further developing and evaluating G-nome Surfer, a tabletop user interface for genomic exploration. **MaCherie Edwards '11, Consuelo Valdes '11, and Michelle Ferreirae '13** worked on developing and deploying an iPhone application for the Davis Museum and for the Botanical Gardens. **Megan Strait '10** and **Sarah Elfenbein '10** collaborated with researchers from the Harvard SDR lab in the development of a tabletop interface for learning about phylogenetic trees. More information about these projects and about opportunities for summer research in the HCI lab can be found at: <http://cs.wellesley.edu/~hclab/>.

**Alex Olivier '11** received the Wellesley College Pamela Daniels Fellowship for her proposed project, "Social Synapses," an art installation that will underline the importance of intellectual collaboration. To be installed in Wellesley's Science Center, it will be an interconnected network of neurons. Made of plastic, the neurons will light up, one after the other, in response to people walking past.

**Elizabeth Ferme '12** won the Wellesley College Katherine Malone Prize for Academic Excellence. She will spend her

junior year in the U.K., studying mathematics and computer science at University College London.

**Consuelo Valdes '11** won a Grace Hopper Scholarship for attending the Grace Hopper celebration of Women in Computing. She attended the conference and blogged about her experiences there at:

<http://consuelovaldes.wordpress.com/2010/10/12/things-i-learned-at-ghc/>

**Binjie Lu '11** spent the summer doing an REU at Iowa State University in Human Computer Interface, and presented her research at a symposium at the end of the project.

**Diana Tantillo '12** had a summer internship at a film company, Isla Films, in Puerto Rico. She created storyboards for a script, and got to see a lot of the production process, editing process, and even post-production for three films.

**Audrey Kao '12** spent the summer as a full-time intern (and is continuing part-time this school year) at Vingo in Cambridge, MA, as a Support Team Consultant. She worked with engineering and QA teams to fix bugs in mobile technology (smartphones), and also did QA testing for websites and used SQL to manage users' licenses.

**Lauren Cahillane '12**, spent the summer as a UROP in the Opera of the Future group in the MIT Media Lab, whose new robot opera *Death and the Powers*, by Todd Machover, premiered in Monaco this September. She improved and added features to the UI of the program which choreographed the movement of the three 18' robotic walls which dominate the stage, and the expressive lights of the "operabots" which drove among them.

After working in Java to make this program more usable, she then entered the robot choreography into the system she had helped finish. Lauren was also able to work behind the scenes during set-up and strike for the opera's world premier in Monaco, learning a few tips in robot repair and replacing blown LEDs.

**Consuelo Valdes '11**, **Heidi Wang '12**, and **Taili Feng '13** are working on a tangible user interface called Morphess. The interface takes the form of a costume that allows the user to transform from an inconspicuous little dress to a powerful, brilliant, and fascinating dress. The final dress dominates the room with its magnificence as the skirt of the dress moves up and down and is illuminated with a beautiful pattern of lights. The dress also surprises with a Victorian collar that appears out of nowhere and sleeves reminiscent of Chinese long sleeve dancers.

The outfit was designed for the 2011 TEI (Tangible, Embedded and Embodied Interaction) Conference student

design challenge to be held in Funchal, Madeira, Portugal in January. Consuelo will be presenting their creation at a runway show at the conference.

## Colloquia and Talks

We have enjoyed many interesting and informative presentations during the Fall semester this year.

On September 29, **Douglas Densmore**, Assistant Professor, Boston University, Department of Electrical and Computer Engineering, gave a talk on "EDA to BDA," using electronic design automation tools for bio-design automation.

**Kristin Harkness '85**, VP Product Operations at kayak.com, spoke on October 1 about "Adventures in Software Engineering - one Wellesley CS alumna's 25 year programming career".

On October 13, **Ben Shneiderman**, Professor in Computer Science and founding director of the HCL Lab at the University of Maryland, gave a presentation on "Information Visualization for Knowledge Discovery". The talk was co-sponsored by CS, Art, IS, Media Arts & Sciences and the Wilson Fund. Following the presentation, Dr. Shneiderman signed copies of his newest book "Analyzing Social Media Networks with NodeXL".

**Lisa Basile '01** and **Lily Lee '03** from MIT's Lincoln Labs gave an informal round-table discussion on October 18 about post-Wellesley life, graduate school, job interviews and their experience working at a non-profit research lab.

**Marina Bers** spoke on October 21 on "Tangible Kindergarden," a robotics program for children. Dr. Bers is an Associate Professor at the Eliot-Pearson Department of Child Development and the Computer Science Department at Tufts University. Her research involves the design and study of innovative learning technologies to promote positive youth development.

On November 2, **Tamara Yu**, Associate Member of the Technical Staff in the Informational Technology Group at MIT's Lincoln Labs, gave a talk on "Ember: A Global Perspective on Extreme Malicious Behavior," a tool for visualizing malicious behavior of internet hosts.

## Events

**Chris Rowen**, Founder and Chief Technology Officer of Tensilica Inc. (and parent of **Elizabeth Rowen '11**) came on December 3 to discuss “Smart-phone design: What's inside and what does it mean for the low-energy mobile Internet”. He also touched on microprocessor instruction set design, digital signal processing, and entrepreneurship in the silicon economy.

On January 4, **Arial Katz '08**, who is working at Google, gave a presentation for faculty/staff at Wellesley on Google Apps for Education, which is being considered as an email system at Wellesley.

### Senior Seminars

We had two talks by graduating seniors this fall semester. On December 2, **Cidney Hamilton '10** presented “Web Science and the Semantic Web Revisited,” and **Miranda Dobbs '10** presented “The Art and Science of Computer Graphics”.

### Tanner 2010

Our faculty and students were involved in the Tanner Conference, both as providers of technology, and in individual presentations and a panel.

**Amanda Dangle**, '12 (Bioinformatics, advisor: **Brian Tjaden**) presented “Curing Cancer: Players in the Battle Against Disease”.

**Lucy Archer '12** (Physics/CS minor: advisor: Glen Stark) presented “One Hundred and Twenty Hours at SOLEIL: Synchrotron Radiation, Undulators, and Fine Wine,” about her research using an all-reflection Fourier transform spectrometer.

Participating in the panel “Tanner Technology Initiative: Clients, Creativity, and Collaboration” were **Caroline Sun '11** (MAS), **Alexander Olivier '11** (CS), **Heidi Wang '12** (MAS), **Colette Whitaker '10** (CS) (advisor: **Lyn Turbak**).

### CS/MAS Senior Luncheon and Prizes

The annual Senior Luncheon for our CS/MAS majors took place on May 7, 2010. We again celebrated with our graduates at the Wang Center.



**Andrey Piplica '10** (CS), was the recipient of the Academic Excellence award, and **Lia Napolitano '10** (MAS), was the recipient of the Spirit award. The Academic Excellence award is selected by the CS faculty, based on a student's academic record. The Spirit award is chosen by nominations from the Wellesley community to the graduating senior who demonstrates high involvement and creates positive experiences in the CS/MAS community.

### Faculty/Student Ultimate Frisbee

Our annual (weather permitting, but it did this year!) Ultimate Frisbee game was also held on May 7, 2010. As usual, the Faculty team prevailed (with some key reinforcements from Faculty offspring). We all enjoyed lemonade, ice cream bars, and friendly competition.

### Beach Day

In August, **Lyn Turbak** and **Rita Purcell** planned a visit to **Crane Beach** with students and faculty. A beautiful day in the sun, sand, and water was had by all.

### Movie Outing

On October 15, **Sohie Lee**, **Eni Mustafaraj**, and **Rita Purcell** organized a movie night with students to see THE SOCIAL NETWORK. A great discussion of the movie, with ice cream, ended a fun night out.

### CS/MAS Holiday Get-Together

On December 10, we had our annual Holiday Get-Together at Slater House. We had a Japanese theme this year, and made our own sushi and origami. Our biggest bash ever – over 60 students attended!

# Upcoming

## Cirque du CS

It's coming! Make your plans now for **Sunday, February 27!**

Our program for events includes:

- 1:00 – 3:00PM Demos and Poster Sessions, E-corridor  
Popcorn/Cotton Candy/Fun activities
- 3:00 - 3:30PM Refreshments, Sage Lounge
- 3:30 – 5:00 PM Senior Presentations and dinner, Rm. 278
- 5:00 PM Dessert (Lyn's cookies!)

## Science Center Reconfiguration

Look for some big changes in the Science Center in 2011 (not the least of which is the café opening in the Focus area). We're also hoping for some new and exciting lab spaces and improvements!

## Keep in Touch!

Email Randy Shull at [rshull@wellesley.edu](mailto:rshull@wellesley.edu) or Ellen Hildreth at [ehildreth@wellesley.edu](mailto:ehildreth@wellesley.edu) if you want to know what is going on or tell us about your accomplishments or future plans.

If you would like to add or update your contact information on the CS alumnae webpage:

<http://cs.wellesley.edu/~cs/People/alumnae.html>,

please email Scott Anderson at [sanderso@wellesley.edu](mailto:sanderso@wellesley.edu).

And, join our Wellesley CS/MAS group at LinkedIn at:

<http://www.linkedin.com/e/gis/1067337>.