Li-Shiuan Peh Wins CRA-W Anita Borg Early Career Award

CRA-W is pleased to announce the recipient of the 2007 Anita Borg Early Career Award. This year’s recipient is Li-Shiuan Peh, Assistant Professor of Electrical Engineering at Princeton University.

The award honors the late Anita Borg, who was an early member of CRA-W and an inspiration for her commitment in increasing the participation of women in computing research. This award is given annually by CRA-W to a woman in computer science and/or engineering who has made significant research contributions and who has contributed to her profession, especially in the outreach to women. This award recognizes work in areas of academia and industrial/government research labs that has had a positive and significant impact on advancing women in the computing research community and is targeted at women that are relatively early in their careers (for example, for the 2008 award, the nominee should have received their Ph.D. no earlier than September 2000).

Janice (Jan) Cuny Receives A. Nico Habermann Award 2007

The CRA board selected Janice E. Cuny to receive the 2007 A. Nico Habermann Award for her dedication, effectiveness, national scope, breadth of impact, vision, and leadership in broadening the participation of all under-represented groups in computing. Cuny, a Professor of Computer and Information Science at the University of Oregon, is currently a Program Director in CISE at the National Science Foundation.

Jan Cuny has been a prime mover within CRA-W on a number of projects over a
Alum News

Maria A. Kazandjieva [ mariakaz@stanford.edu ]
DMP 2006 (mentor: Margaret Martonosi),
Computer Architecture Discipline Specific Workshop 2006

I was one of three grand finalists in the undergrad division of the ACM Student Research Competition. My award is for the research I did at Princeton during my DMP project in summer 2006. My advisor, Margaret Martonosi, and I then continued our research remotely when I returned to Mt. Holyoke in the fall. After graduation in May 2007, I returned to Princeton to work as a technical staff member. I am now a graduate student at Stanford University. I received my award (second place) at the ACM Awards Banquet in June.

Evdokia Nikolova, [ nikolova@mit.edu ]

I am entering into my final year of the Ph.D. program at MIT. I am thrilled to have a title for my dissertation: "Planning under Uncertainty" and to be able to start tying all different threads of research I have been pursuing together like pieces of a puzzle, including my work on stochastic optimization and algorithmic mechanism design, which both combine algorithms, optimization and uncertainty. This fall, I am also helping organize a workshop for women who are in their final year of Ph.D. at MIT and will be pursuing faculty careers in academia. I look forward to sharing my experience from the CRAW workshops that I attended—the grad cohorts and the wonderful workshop at FCRC in San Diego this past June.

Sara Sprenkle [ sprenkles@wlu.edu ]
DMP 1998 (mentor: Lori Pollock), DLS 2001 (student panelist)

I started as a tenure-track assistant professor of computer science at Washington & Lee University this fall. I completed my Ph.D. on "Strategies for Automatically Exposing Faults in Web Applications" from the University of Delaware in August (2007). My thesis advisor Lori Pollock was also my advisor during my summer as a DMP student. Lori's support and mentoring guided me through academic and personal struggles, and, ultimately, helped me to my current position as a faculty member. I am finalizing an accepted paper that was co-authored by three other former DMP students—Holly Esquivel, Barbara Hazelwood, and Stacey Ecott—and our advisor, Lori Pollock. The paper is entitled "Automated Oracle Comparators for Testing Web Applications," and will appear in the Proceedings of The 18th IEEE International Symposium on Software Reliability Engineering, November 2007.

Tilke Judd [ tjuudd@mit.edu ]
Grad Cohort 2005, 2006 (participant)

In January, I completed my masters thesis and then presented a technical paper on the work entitled "Apparent Ridge for Line Drawing" at SIGGRAPH 2007, which was held in San Diego in August 2007. The paper is available at http://people.csail.mit.edu/tjudd/research.html. I interned at Google in Zurich over the summer and am continuing in the computer graphics Ph.D. program at MIT this year.

Tilke presenting her paper at ACM SIGGRAPH 2007.

Maria (r) with Margaret Martonosi (l) at ACM Awards Banquet.

Tilke presenting her paper at ACM SIGGRAPH 2007.
Alum News

Laura Dillon [dillon@cse.msu.edu]

After four years as chair of the Department of Computer Science and Engineering at Michigan State University, I have stepped down. I am spending this year on sabbatical split between Sweden and the eastern US. This fall, I am primarily visiting the Lund Center for Applied Software Research at Lund University, but I will take advantage of being in Europe to also visit and give talks at universities in several other countries. This spring, I will visit AT&T Labs in Florham Park, NJ, and also the Laboratory for Advanced Software Engineering Research at the University of Massachusetts, Amherst, MA. My husband, Ace Sarnelle, also on sabbatical this year from MSU, is pursuing research in the Department of Ecology at Lund University this fall and in the Institute of Ecosystems Studies in New York this spring. Our daughter, Nina, will spend three months with us in Europe. Our son, Toby, is in Michigan working as a software developer. Recently engaged, he and his fiancé, Kristine, are planning a June 2008 wedding.

Leslie Schwartzman [schwartz@math.uic.edu]
CMW 2002, CMW 2003, CMW 2005

My paper, “A Qualitative Analysis of Reflective and Defensive Student Responses in a Software Engineering and Design Course” was selected as one of the best in conference at the 2006 Koli Calling (Finland) computer science education research conference. I was then invited to extend it for journal publication. The extended paper, “Student Defensiveness as a Threshold to Reflective Learning in Software Design” appeared in Informatics in Education, 2007, v6 (1). The papers can be found online at their respective URLs:
http://www.it.uu.se/research/group/upcerg/Publications/proceedingsKoliCalling2006/research4.pdf
http://www.vtex.lt/informatics_in_education/pdf/INFE100.pdf

Alums in the News

Soha Hassoun Receives the ACM/SIGDA 2007 Distinguished Service Award

The ACM's Special Interest Group on Design Automation (SIGDA) awarded Tufts’ Associate Professor Soha Hassoun the ACM/SIGDA 2007 Distinguished Service Award for "outstanding contributions to the creation of the SIGDA/DAC Ph.D. Forum at DAC, on the occasion of its 10th edition".

Aimed at strengthening ties between academia and industry, the Ph.D. Forum at DAC, a competitive poster session, provides Ph.D. students an opportunity to present and discuss their dissertation research with people in the EDA community. Hassoun started the Forum in 1998, when she was newly appointed at Tufts.

"The creation of the Ph.D. Forum by Soha Hassoun was a major contribution to SIGDA's relationship to our members. It transformed our mundane 'member meeting' into a major scholarly and social event at DAC," said Steve Levi-tan, general chair of 44th DAC executive committee and previous chair of SIGDA. "The Ph.D. Forum celebrates the work of the best Ph.D. students in our field and, in so doing, gives visibility for SIGDA to the EDA community as a whole."

The Ph.D. Forum has grown steadily since it was established by Hassoun ten years ago, and is now one of the premier venues for students in design automation to get feedback on their research and for industry to see academic work in progress. Participation in the forum is competitive, with an acceptance rate of about 30 percent and 30-35 students presenting each year and up to 500 attendees in recent years.

Soha Hassoun [soha@cs.tufts.edu]
CAPP 2004 (participant), Grad Cohort 2006 and 2007 (speaker)
CRA-W Newsletter

Alums in the News

Fran Berman Co-chairs Blue Ribbon Task Force on Sustainable Digital Preservation and Access

Fran Berman, director of the San Diego Supercomputer Center at UC San Diego, has been selected to co-chair the Blue Ribbon Task Force on Sustainable Digital Preservation and Access; Brian Lavoie, a research scientist and economist in the Office of Research with the Online Computer Library Center, Inc., will co-chair with Berman. The National Science Foundation (NSF) and the Andrew W. Mellon Foundation are teaming to fund the Task Force. Also participating are the Library of Congress, the National Archives and Records Administration, the Council on Library and Information Resources, and the Joint Information Systems Committee of the United Kingdom.

Berman and Lavoie will convene a group of prominent international experts from the academic, public, and private sectors to develop actionable recommendations on economic sustainability of digital information for the science and engineering, cultural heritage, academic, public, and private sectors. The Task Force is expected to meet over the next two years to prepare its final report, which will present its comprehensive analysis of current issues, and actionable recommendations for the future to catalyze the development of sustainable resource strategies for the reliable preservation of digital information.

“‘It is impossible to imagine success in the Information Age without the availability of our most valuable digital information when we want it now and in the future,” said Berman. “It’s critical for our society to have a long-term strategic plan for sustaining digital data and we are excited about the potential for the Task Force to help form that plan.”

Elaine Weyuker Receives ACM/SIGSOFT Outstanding Research Award

The ACM’s Special Interest Group on Software Engineering (SIGSOFT) awarded AT&T Research Fellow Elaine Weyuker the ACM/SIGSOFT Outstanding Research Award. The award is presented annually to an individual who has made significant and lasting research contributions to the theory or practice of software engineering. Weyuker received the award for her “significant contributions in the areas of software testing and measurement.” Her work in testing and measurement has had a lasting impact on software quality, and has provided a foundation on which many other theories, techniques, and tools have been developed. The award was presented at the ACM/IEEE International Conference on Software Engineering (ICSE) in May 2007.

Weyuker made an invited presentation on her work, entitled “Software Engineering Research - From Cradle to Grave,” at The 6th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE) in Dubrovnik, Croatia in September 2007. In her talk, she discussed the design of predictive models to determine where faults are likely to be in the next release of a large software system. The primary focus of the talk, however, was the process that was followed when doing this type of software engineering research:

Following the project from problem inception (cradle) to productization (grave), describing each intermediate stage to try to give a picture of why such research takes so long, and also why it is necessary to perform each of the steps.

Weyuker is or has been involved in many activities to diversify computing. She is currently the chair of ACM’s Committee on Women in Computing (ACM-W) and a member of the Coalition to Diversify Computing’s Executive Committee.

Fran Berman [fb@sdsc.edu]
CMW 2003 (speaker) CAPP 2004 Distinguished Professor,
Grad Cohort 2004 (speaker)

Elaine Weyuker [Weyuker@research.att.com]
CRA-W member 1991-1994
Mail Lists Connect Women in Computing

Faith Ellen

The CRA-W sponsors five moderated electronic mailing lists for women with Ph.D. degrees (or who are close to completing them) in computer science, computer engineering, and information technology.

PhdjobhuntHers

This list is for women who are seeking or starting Ph.D. level jobs in academia (faculty and postdocs), industry, or government laboratories. It is a forum for women at this point in their careers to ask questions, share information, and talk to one another. The issues discussed are not necessarily specific to women. Moderator: Rachel Pottinger, University of British Columbia.

JrProfessHers

This list is for untenured women faculty in universities and colleges to share experiences with and get advice from other women in the same situation. Some of the topics are specific to women, while others are more general. Moderator: Rachel Pottinger, University of British Columbia.

ProfessHers

This list is for women faculty members to informally discuss issues related to their jobs and success in their careers, especially for those that are affected by being a woman or for which the perspectives of other women faculty are desired. Topics include aspects of graduate and undergraduate teaching, advising students, research, funding, interactions with colleagues, professional service, time management, promotion, and administrative work. Moderator: Rebecca Wright, Rutgers University

ResearcHers

This list is for women researchers in industry, industrial and government research labs and academia, but not students or managers. It focuses on issues of women and research. There is some overlap of the topics for the ProfessHers and ResearchHers lists. The intent is that ProfessHers covers issues of a more strictly academic nature, while ResearchHers focuses more on issues arising from women’s careers as researchers. Eligible women are encouraged to join both lists. Moderator: Susan Landau, Sun Microsystems.

Sisters-mentoring

This list provides mentoring to Ph.D. students and faculty members (particularly junior faculty) to assist them in being more successful in academic research careers. Relevant topics include issues involved in getting a Ph.D. and in being successful in a university research career. Appropriate questions are limited to those for which it is important that the responders be women. Unlike the other lists, questions are sent out to the list and then members respond to the sender (not to the list). The sender then collects the replies and distributes them in one email summary. The traffic is very limited, so senior women stay on this list and provide important input. Sisters-mentoring differs from ProfessHers by the limitations on topics and the inclusion of Ph.D. students and postdocs. Moderator: Nancy Leveson, MIT.

Anonymous postings can be made to these lists by sending requests to the list moderators. The Anita Borg Institute co-sponsors and hosts the PhdjobhuntHers, JrProfessHers, ProfessHers, and ResearcHers mailing lists. For more in-

(Continued from page 1: Peh)

Questions about eligibility should be directed to craw_awards[at]cra.org. Li-Shiuan Peh has been an Assistant Professor of Electrical Engineering at Princeton University since 2002. She graduated with a Ph.D. in Computer Science from Stanford University in 2001, and a B.S. in Computer Science from the National University of Singapore in 1995. Her research focuses on low-power interconnection networks, on-chip networks and parallel computer architectures, and is funded by several grants from the National Science Foundation, the DARPA MARCO Gigascale Systems Research Center as well as Intel Corporation. She was awarded the Sloan Research Fellowship in 2006, and the NSF CAREER award in 2003. She has been involved in the organization and participation of several outreach activities as the faculty co-adviser of the Princeton Graduate Women in Science and Engineering (GWISE) since 2003, organizing activities both within and beyond Princeton such as an annual event for 100+ high school girls in New York City targeted at attracting women into Engineering since 2004, and a career workshop at Princeton for women undergraduates and graduates from universities in the tri-state area in 2006. She has also co-organized and participated at a NSF-funded CRA-W/CDC Computer Architecture Summer Workshop for minorities in computer architecture, and spoke at a distinguished women faculty lecture series at UT Austin.
by information which can be overwhelming. Highlighting a math element of the design a child is creating seems to help them talk about it. While using DigiQuilt, children have been able to notice differences between what they thought would happen and what actually happened in the process of creating a design with a particular fraction in mind. It is an important part of my work to design interactions that provide math lenses to help children notice math in their creations.

Q: When did you first get interested in learning environments?

I came to college intending to major in elementary education, so I guess I was interested in supporting learners long before I knew I was interested in CS. It was the second time I participated in DMP that I discovered Mitchell Resnick's "Lifelong Kindergarten" group at MIT. Their work made me realize that I could do research in CS that help children learn. That was inspiring.

Q: How will your work in learning environments influence future learning environments?

I anticipate my work will help children realize that math is all around them if they know how to look for it and that they will see and understand math in ways that make them comfortable and happy. We need to let them engage in conversations about math aspects in the world around them so children can be math storytellers and work through difficult math by talking about it and playing with it. If they have to keep all the struggles to themselves (or feel that math learning is a solitary effort), I don't think they will be able to take full advantage of all the possible learning opportunities.

Q: What's the hardest aspect of your career right now?

The hardest thing right now is "selling" my work. I’m struggling with the grant application process and figuring out how to get people really excited about what I do. It’s hard to share the big picture stuff in a way that makes sense and makes people want to fund my work. I guess that might be a bit of the "Minnesota modest" coming out, but there is also a challenge in aiming for a big picture and explaining how smaller projects fit into that picture.

Q: What do you enjoy best about your career right now?

I really enjoy teaching and working with undergrads. The students at the University of Minnesota, Morris are bright and hardworking.

Q: What keeps you sane, outside of work?

I am thrilled that there are opportunities in my town to take early childhood and family education classes. It gives me time with my 2-year-old daughter and with other parents. I also quilt and knit with groups of friends when I find time to do crafty things.

Q: You are currently teaching three classes and completing your dissertation, how do you keep all of this in balance?

I finished my dissertation in January (and got my degree in May), so that part of my life is over. Looking back, I'm not sure how I did manage, since Maura was a baby on top of all the rest. My husband was a big help and so patient. It was really tough and hard to find time to sleep, but it was worth it. Things have now settled into a more normal pace and improved. I try to maintain balance by setting limits for myself. It is easy to get swept up with teaching and let research slide (or let my job take over my whole life). I have limited my email use during the day to try to get more work done during regular working hours. It is scary how much time email can consume. I also now recognize that there are some things I just can't do, so I have to speak up when that is the case. Though some colleagues are protective of their pre-tenure faculty, you still have to look out for yourself to some degree.

Q: You were twice selected and participated in the CRA-W’s DMP. What do you remember most about this experience?

I remember how little I felt I knew going into the program and how much I felt I learned each time. I learned that one of the hardest things about research was that nobody knew the answers (that's why it is research). Aside from the research, there was lots of travel and adventure both times I did DMP. It was a big step to leave Minnesota and live somewhere else for a summer. My mentors and the graduate students at the Univ. of Oregon and Duke took me under their wings - they made the summers very memorable. The second summer really sealed the deal. I didn't just want to go to graduate school - I wanted to get my Ph.D. and do cool things. I am almost certain I would not have attended graduate school if I had not participated in CRA-W DMP. I would not have known enough about what it was like to be a graduate student or do research. I think it would have been too scary for me.

Q: How does it feel to be back at your undergrad alma mater as an assistant professor?

It is great being back at UMM. I love it here and I love what my life has become. I have my dream career. Now the trick is making it stick and doing great things!

(Continued from page 1: Cuny)

over a long period of time, including: co-founder (with Mary Lou Soffa) of both the Grad Cohort and the Associate Professor Cohort programs; Distributed Mentor Program; Computing Research Experiences for Women; and Computing Research Experiences for Undergraduates. In addition, she was co-author (with Bill Aspray) of the highly regarded and widely read report, "Best Practices in the Recruitment and Retention of Women Graduate Students in Computer Science and Engineering"; co-organizer of one of the earliest CRA panels on diversity in computing (1996); and a member of the Executive Committee of the Coalition to Diversify Computing.

“This is a great time to be working on issues of underrepresentation in computing because the recent plunge in interest in computing majors, taken together with the predicted strong growth in IT jobs and the national concern about global competition, has focused attention on the issues. The causes of underrepresentation are complex and deep-seated, but I’m optimistic that we’ll be able to make significant progress,” said Cuny about her award and her work.

Currently, Cuny directs the Broadening Participation in Computing (BPC) program at NSF. From the beginning of this program, her vision directed a process that has been a model of inclusiveness for diversity-oriented programs at NSF and elsewhere.
CREU Expanded to Include Multidisciplinary Research Opportunities for Women
Sheila Castañeda

CRA-W’s Collaborative Research Experience for Undergraduates (CREU) is designed to provide the opportunity for undergraduate CS&E students to participate in team-based research experiences. One of the primary goals is to encourage young computer scientists and engineers from all underrepresented groups to consider graduate school. With declining enrollments in computer science and even more steeply declining enrollments by underrepresented groups, it is important to attract and retain women and minorities in computing research. CREU tries to address this issue as well as work toward encouraging young researchers to pursue an advanced degree in the field.

The students, all of whom are CS&E majors, work on research projects in collaborative teams of two to four students at their home institution under the guidance of a faculty member during the academic year. Students are selected on a competitive basis from proposals written jointly with their mentor. CREU provides a collaborative experience to help combat the stereotype of computer scientists as lone hackers toiling away in sterile cubicles, to increase students’ team building skills, and to decrease any sense of isolation they may feel in their majority-dominated classes. In addition, they learn valuable research skills and about the research environment.

The students work on a large variety of projects, varying widely from investigating technical networking, hardware and software issues to those dealing with social issues in computing. For more detailed information about the individual teams and their projects, a complete listing of the student names, projects, institutions, abstracts, final reports, and student web pages can be found at: http://www.cra.org/Activities/craw/creu/crewReports/2007.php.

This year, CREU is funding its 10th cohort of researchers. The program was called CREW when it was first established in 1998 because women were targeted to participate. In 2005, the name changed to CREU when the project partnered with the Coalition to Diversify Computing in order to target other underrepresented groups to participate. In the past 10 years, 375 students have participated in 128 research projects. Many of the student projects have resulted in papers, posters and presentations at local, regional and national conferences. Last year, 15 of 19 projects authored at least one paper or presentation. Several groups had multiple opportunities to publish and promote their research.

This year, again through the sponsorship of NSF, the CREU concept expanded into a new program entitled Multidisciplinary Research Opportunities for Women (MRO-W). MRO-W is funding eight research groups this year that are involved in a variety of multidisciplinary projects based in environmental engineering, aerospace, biology and economics that deal with a wide variety of topics including machine learning, the impact of Hurricane Katrina, forest dynamics, indoor air quality and mad cow disease. Each research group includes at least one CS&E student and at least one student from another discipline, along with mentors from those same areas. MRO-W has similar goals to those of CREU, with the added goal of encouraging students from other disciplines to increase their interest in CS&E while at the same time providing diverse research applications for the CS&E students. The research will take place during the 2007-2008 academic year through the following summer.

Both CREU and MRO-W are being assessed to determine their effect on students. Evaluators from Colorado State University and Tufts University are conducting surveys and interviews to study student and faculty participants’ experiences and how these experiences relate to conditions known to lead to successful undergraduate research experiences.

Proposals for next year’s CREU and MRO-W projects will be accepted in the spring. We invite you to participate and to encourage your colleagues – faculty members and student researchers – to consider participating in these programs that can make a huge difference in the lives of our underrepresented undergraduate students.
News of Affiliated Groups

Michigan Celebration of Women in Computing

Laura K. Dillon and Kimberly Glass Thompson

“The time is right for women in technology-based fields.” This was the message that 107 students, faculty, and industry professionals carried home from the inaugural Michigan Celebration of Women in Computing. The conference, held March 30 – 31 at the Kellogg Biological Station in Hickory Corners, Michigan, provided a forum for participants to explore computing careers in industry and academia, share student research, network, and discuss successful strategies for teaching technology.

Teresa M. Takai, Director of the Michigan Department of Information Technology, delivered a strong, positive message about women’s roles in shaping the future of technology during her opening keynote address. Attendees also learned that, contrary to common misconception, U.S. corporations often struggle to find highly skilled computer science and computer engineering talent. Connie Fako-Shoemake, Vice President of Public Sector, Americas, Central Region, IBM Corporation, discussed the aptitudes and personality characteristics essential for success in these careers. Tracy Teich, Information Systems Director, Enterprise Systems Operations, Dow Chemical Company, informed conference goers about the importance of IT to U.S. companies and our global economy.

Other highlights included a research poster session, talks by students, topical birds-of-feather discussions, presentations introducing computing pedagogy meant to appeal to diverse learners, panels of experts sharing their advice and experiences in industry and in academia, an industrial career fair, and a lively night of games and music.

Industry support for MICWIC 2007 made it possible for students to attend at low cost. Sponsors included the Dow Chemical Company, Crowe Chizek and Company LLC, Google, IBM, ACM-W, Eaton Automotive, TechSmith Corporation, and others. Company representatives offered insights and advice to attendees during breakout sessions and later met with students at the career fair.

The majority of attendees reported feeling inspired by the conference and were encouraged to seek out other young women to support.

To get involved with MICWIC 2009, please see http://www.cse.msu.edu/MICWIC

About CRA-W

CRA-W is an action-oriented committee of the Computing Research Association dedicated to increasing the access, retention, and advancement of women in computer science and engineering research and education, including undergraduate and graduate students, faculty, and industry and government research labs. See more about CRA-W and its activities at http://cra.org/Activities/craw/.

CRA-W receives support from the National Science Foundation, EOT-PACI, Google, The Henry Luce Foundation, Lucent Technologies, Microsoft Research, Usenix, General Motors-Canada, NSERC, Intel, IBM, Sun, and ACM Special Interests Groups. We thank them for their generous support.

CRA-W encourages individual contributions from alums of our programs and other CRA-W friends, to build a broad base of supporters and to develop long-term relationships that, over the years, will help diversify CRA-W’s funding sources. Because CRA-W programs have touched so many lives, this initiative is an outlet for alums and friends to make contributions toward reaching the next generation of women computer scientists and engineers. To donate to CRA-W, visit https://www.cra.org/forms/crawgiving