



# CRA-W Newsletter

## Summer-Fall 2008

### Inside This Issue

Alum News	2
Alums in the News	6
Interview with Carla Ellis	8
15 Years of Providing Distributed Research Experience	10
CRA-W Elects New Co-Chairs	12
Missouri S&T MRO-W Project	13
News of Affiliated Groups	14

### Upcoming Events and Deadlines

**October 17-18, 2008:** CRA-W Steering Committee mtg.

**November 5-6, 2008:** NCWIT meetings

**November 14-15, 2008:** CAPP Workshop

**December 15, 2008:** Grad Cohort application due

**January 15, 2009:** Discipline-specific Workshop proposals due

**February 15, 2009:** DMP applications due

**February 15, 2009:** Anita Borg Early Career Award nominations due

**March 27-28, 2009:** Grad Cohort

### Editor

Mary Jean Harrold  
Georgia Tech  
harrold@cc.gatech.edu

### Highlight on DMP Alum Eileen Kraemer



Eileen Kraemer is a Professor and the Head of the Computer Science Department at the University of Georgia. Her research interests are in visualization and interaction to support users engaged in complex tasks, such as the design and maintenance of concurrent software and the use of biological databases and analysis tools. She earned a BS in Biology from Hofstra University in Hempstead, NY, and then studied Computer Science, earning an MS from Polytechnic University in Brooklyn, NY and a PhD from Georgia Tech's College of Computing. Prior to joining the faculty at UGA, she was an Assistant Professor at Washington University in St. Louis. You can read more about her at <http://www.cs.uga.edu/~eileen>

#### Q: How did you become interested in visualization and interaction?

Prior to returning to grad school, I taught high school biology, chemistry, and physics. My experiences as a teacher taught me just how important it is to present people with the right abstraction, model, or example to convey a complex concept, and that allowing learners to construct or interact with their own model or abstraction is critical to helping learners understand new ideas and "make them their own." I began my grad studies at Georgia Tech with

*(Continued on page 7)*

### Chandra Krintz Awarded Anita Borg Early Career Award

CRA-W presented the 2008 Borg Early Career Award to Chandra Krintz, Associate Professor of Computer Science at the University of California, Santa Barbara (UCSB).

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 computing research community and is targeted at women who are relatively early in their careers (for example, for the 2009 award, the nominee should



Kathleen Fisher (l) presents the award to Chandra (r) at PLDI 2008.

*(Continued on page 13)*

## Alum News

**Kate Tsui** [[ktsui@cs.uml.edu](mailto:ktsui@cs.uml.edu)]

*Grad Cohort 2007*



UMass Lowell's WiCS hosting a snack stand.

I want to update everyone about the newly formed Women in Computer Science group at UMass Lowell (see April 2008 CRA-W Newsletter for information about WICS at UML). In our first year, the UMass Lowell Women in Computer Science group hosted several brown bag lunches and talks given by two senior women from Sun Microsystems. We also ran a fundraiser in March for the New England Regional Botball Tournament, a middle and high school student robot competition. The snack stand raised over \$700. We have created a \$100 book scholarship for a new full time female undergraduate student at UMass Lowell majoring in Computer Science. In the upcoming year, we will be more community oriented and provide a series of workshops based on the CRA-W Grad Cohort topics (e.g., confidence crisis, how to network, etc.) and mentoring to incoming Computer Science majors. If you are visiting the Boston area and would like to address our group, please email [wics@cs.uml.edu](mailto:wics@cs.uml.edu). For details about UMass Lowell WiCS, please visit <http://www.cs.uml.edu/wics>.

**Gunes Ercal-Ozkaya** [[gunes.ercal@gmail.com](mailto:gunes.ercal@gmail.com)]

*DMP 1999 (Mentor: Devika Subramanian) DMP 2000 (Mentor: Amy Greenwald)*

I have just received my Ph.D. from UCLA and will begin as Assistant Professor in the EECS department at the University of Kansas this fall. This summer I am a mentor in the RIPS program at IPAM.



**Esin Saka** [[esin.saka@louisville.edu](mailto:esin.saka@louisville.edu)]

*Grad Cohort 2006-2007; Grad Cohort 2008 (speaker)*

I am in my 3rd year of my Ph.D. I did an internship at Yahoo! Sponsored Search & Marketing in the summer of 2007. During the internship, my team won the first prize in the Yahoo! Sponsored Search Contest, and I got immortalized in the Panamanian Hall of Fame J. One of my papers was accepted and selected to be the featured



Esin Saka (r) with her advisor Olfa Nasraoui (l).

article of the February 2008 issue of the TKDE journal (IEEE Transactions on Knowledge and Data Engineering). In April 2008, I was awarded the IEEE Outstanding CECS Student Award at the University of Louisville (UofL). This summer, I accepted an internship offer at Microsoft Research and will be working with the Live Search team. I am very grateful to many people for the support and inspiration that they provide me and for being such strong role models. These people include the CRA-W Grad Cohort organizers, my advisor Prof. Olfa Nasraoui (the one on the left in the picture), Dr. Tessa Lau whom I met at the CRA-W Grad Cohort 2007, and of course my mom Nuran Saka. I was also very excited about sharing my experience and information to support diversity in computer science and engineering at UofL, through several outreach events: Girls Career Day (in 2006 and 2008), and INSPIRE 2008 (Increasing Student Preparedness and Interest in the Requisites for Engineering). I was also honored to have been selected as a Graduate student speaker at the CRA-W Grad Cohort 2008.

**Annie Anton** [[aianton@mindspring.com](mailto:aianton@mindspring.com)]

*CAPP 2004-2005; Career Mentoring Workshop 2007 (organizer); CRA-W board member 2007; DMP mentor 2005, 2007*

I've been promoted to full professor at North Carolina State University.



## Alum News

**Amy McGovern** [[amcgovern@ou.edu](mailto:amcgovern@ou.edu)]

*DMP 1994 (Mentor: Lori Pollock, University of Delaware)*



I am an assistant professor at the University of Oklahoma's School of Computer Science. I received my Ph.D. and M.S. from the U Mass, Amherst and my B.S. from CMU. I was recently awarded an NSF CAREER award: Developing Spatiotemporal Relational Models to Anticipate Tornado Formation. The goal of my CAREER research is to revolutionize the ability to anticipate tornadoes

by developing advanced techniques for statistical pattern discovery in spatially and temporally varying relational data. These models are applied to complete fields of meteorological quantities obtained through data assimilation and simulation. Doppler radar data is limited and, while modern data assimilation techniques allow the unobserved quantities to be estimated, the resulting four-dimensional fields are too complicated for the extraction of meaningful, repeatable patterns by either humans or current data mining techniques. By studying a full field of variables, the models can identify critical interactions among high level features. The models are developed and verified in close collaboration with domain experts.

The interdisciplinary research is used to improve retention and recruitment in CS. This draws on recent evidence that underrepresented groups are not drawn to computing careers because they do not appreciate how computing can be used to solve real world problems. Introducing authentic projects into both early CS and meteorology classes will improve the number of technically trained students in both majors.

**Suely Oliveria** [[oliveria@cs.uiowa.edu](mailto:oliveria@cs.uiowa.edu)]

*CAPP 2004*



I was promoted to full professor in Computer Science at the University of Iowa this Spring, effective in the new academic year. One of my biggest achievements so far has been publishing my book: *Writing Scientific Software: A guide to good style* (Cambridge University Press, 2006).

**Adriana Kovashka** [[aik02004@mymail.pomona.edu](mailto:aik02004@mymail.pomona.edu)]

*DMP 2007 (Mentor: Margaret Martonosi, Princeton)*

I graduated from Pomona College, CA, on May 18, with a BA in Computer Science and Media Studies (double major). I am now going on to graduate school in Computer Science (more specifically Artificial Intelligence) at the University of Texas at Austin.



**Ruth Shaw**

[[reshaw@unbsj.ca](mailto:reshaw@unbsj.ca)]

*CDMP 2002, 2006*

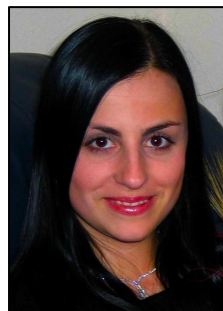
I have just been appointed as Dean of Science, Applied Science & Engineering at UNB Saint John. I will begin a three-year term beginning on July 1, 2008. Kathryn Hamer, Vice-President of the University of New Brunswick Saint John stated that "Dr. Shaw brings an outstanding record of teaching and research, administrative experience, and extensive service on both campus and university-wide committees. Her enthusiasm and energy will serve the Faculty and campus well at this time of transition to a new administration."



**Olga Tkachyshyn Pearce** [[olga@cs.tamu.edu](mailto:olga@cs.tamu.edu)]

*DMP 2003, 2004; Grad Cohort 2005, 2006, Grad Cohort 2007 (speaker); Programming Language Summer School 2007*

I am finishing my fourth year as a Ph.D. student at Texas A&M University. Last year I served as AWICS (Aggie Women in Computer Science) president. I spent the summer at the Lawrence Livermore National Lab, which is an exciting place to be, given my interest in high performance computing! I am enjoying the second year of my NSF fellowship - check out my research progress at <http://parasol.tamu.edu/~olga/>



## Alum News

**Lyndsy Kron-Stopa** [[lkron2@gmail.com](mailto:lkron2@gmail.com)]  
*Grad Cohort 2007-2008*



I have completed my Masters of Science degree in Computer Science at the University of Illinois at Urbana-Champaign. I have started a job at Microsoft as a Software Design Engineer working in the Microsoft Office Group on the Groove Product Development Team.

**Beth Simon** [[beth.simon@gmail.com](mailto:beth.simon@gmail.com)]  
*DMP student 1995 (Mentor: Fran Berman); CMW 2003; 2005-2007 DMP mentor*

I spent the past year on leave as a Science Teaching and Learning Fellow in the Carl Wieman Science Education Initiative at the University of British Columbia. The Carl Wieman Science Education Initiative (CWSEI) is a five-year, \$12M project at The University of British Columbia aimed at dramatically improving undergraduate science education.



The CWSEI helps departments take a four-step, scientific approach to teaching:

- Establish what students should learn
- Scientifically measure what students are actually learning
- Adapt instructional methods and curriculum and incorporate effective use of technology and pedagogical research to achieve desired learning outcomes
- Disseminate and adopt what works

I led the effort within the Computer Science Department. Some of the most interesting things I did include defining specific learning goals for the lower division required CS courses for majors and to assess the impact of using such learning goals in specific and directive ways in a course. I encourage faculty to read the CWSEI document on best pedagogical practices for using "clickers" for active learning in the classroom. I encourage students to read the CWSEI one page document called "Succeeding at Learning 101". Additionally, I had a great time remembering how to ski. I returned to UC San Diego this fall in my position as Lecturer with Potential for Security of Employment.

**Karen Panetta** [[karen@eecs.tufts.edu](mailto:karen@eecs.tufts.edu)]  
*DMP mentor 1997*



My Nerd girls was highlighted in Newsweek magazine promoting women in engineering and science. <http://www.newsweek.com/id/140457>. I was on the Today show July 18 with my nerd girls promoting women in engineering and science. The picture above was taken during our appearance on the Today Show.

**Jo-Anne Ting** [[joanneti@usc.edu](mailto:joanneti@usc.edu)]  
*Grad Cohort 2004; Grad Cohort 2005 (speaker)*



I'm currently in my fifth (and, hopefully, final) year of my Phd at the USC. I passed my qualifying exams/thesis proposal exam last fall and also participated in the Doctoral Symposium at Grace Hopper and gave a talk at the Women in Machine Learning (WiML) workshop. Early this year, I found out that I was nominated for a USC WiSE doctoral fellowship and was one of the four women in the

faculties of science and engineering at USC to win this fellowship for 2008-2009. I am also one of the co-organizers, along with Anna Koop and Luiza Antonie from the University of Alberta, for the 2008 WiML workshop, to be co-located with NIPS in Vancouver.

## Alum News

**Karen Works** [[kworks@wpi.edu](mailto:kworks@wpi.edu)]

*Grad Cohort 2008*

On the recommendation of my advisor, I applied to the CRA-W Grad Cohort program, not really understanding the true value of the workshop. I am an older graduate student and during my years of employment in the private sector, I attended many workshops where some have been helpful but others, to be frank, were a waste of time.



Karen with her winning poster.

At the CRA-W Grad Cohort workshop, I gained knowledge about skills and requirements of graduate school that I did not have previously. One of the most helpful workshops was a presentation on communication skills by Dr. Mary Jean Harrold from Georgia Tech. She taught us how to prepare for oral and poster presentations.

Along with all the other graduate students at WPI, I presented a poster at WPI's annual Graduate Research Achievement Day. This was my first poster presentation and I was very anxious about presenting. My long term goal is to become a professor of computer science. The ability to present well is a skill that I need to master.

I used the steps I learned from Dr. Harrold on how to prepare for a poster presentation. The more I prepared the less anxious I felt. The process I learned and applied resulted in my presentation taking second place in the Science Division of WPI's Graduate Research Achievement Day poster presentation. I can honestly say that I would have not won had I not been to the presentation on communication skills at the CRA-W Grad Cohort workshop.

I hope and pray that this year I will again be blessed with being accepted to the CRA-W Grad Cohort program. I am currently doing research and am in the process of writing my first paper. I would like to attend the CRA-W Grad Cohort program again, so I can learn about writing and submitting papers and apply those skills to improve my research.

**Barbara Boucher Owens** [[owensb@southwestern.edu](mailto:owensb@southwestern.edu)]

*CREU mentor 2002*

I was elected Chair of the ACM Special Interest Group in Computer Science Education (SIGCSE), taking office last July.



Recently, I have been invited to deliver two keynote addresses at conferences this summer and co-leading a working group at the ITiCSE conference in Madrid. The first keynote is in June 25 in Pretoria, South Africa at the request of the South African Government's NACI/SET4W National Advisory Council on Innovation (NACI) Science, Engineering and Technology for Women (SET4W) Symposium: "Changing perceptions of Women in SET." The second keynote is in July 7 in Auckland, New Zealand at the NACCQ Conference National Advisory Committee on Computing Qualifications (NACCQ) Conference New Zealand's Annual Computing Conference 2008: "Surfing the Waves Together." Both keynotes are based on the NSF-sponsored, and NCWIT and ACM-W supported Computer Educators Oral History Project on which I am the PI. This project highlights the careers of women in computing education and includes some men for comparison and contrast. Seventeen audio interviews with educators from five continents are posted on line at <http://ceohp.org>. Among the interviews is that of newly-elected ACM President Wendy Hall who will give a keynote at the ITiCSE conference.

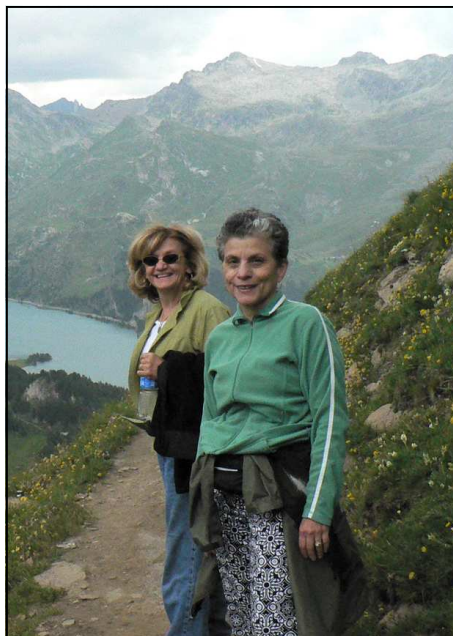
The working group of ten at the ACM/SIGCSE sponsored 13th annual conference on Innovation and Technology in Computer Science Education June 27-July 2 will analyze the body of interviews searching for themes and commonalities in the careers of those interviewed in hopes to use these as inspirational stories for younger women. Among the interviews is that of newly-elected ACM President Wendy Hall who will give a keynote at the ITiCSE conference.

I will also be giving a full-day workshop at the NACCQ Conference on the programming language Alice, which was designed to encourage young women in computing.

## Alums in the News

## Barbara G. Ryder Heads Computer Science Department at Virginia Tech\*

Barbara G. Ryder, professor of computer science at Rutgers, The State University of New Jersey, will become the computer science department head at Virginia Tech, starting in fall 2008. She is the first woman to serve as a department head in the history of the nationally ranked College of Engineering.



Barbara (r) hiking with Mary Lou Soffa (l) in Switzerland in 2006.

“We are extremely pleased Dr. Ryder has accepted the position here at Virginia Tech. She emerged as the top candidate for this position out of a very strong pool, and we at Virginia Tech feel very fortunate to be able to recruit her to our campus. Our computer science department continues to gain in its stature, due to its pre-eminent work in high-end computing, computational biology and bioinformatics, software engineering, and human-computer interaction. Dr. Ryder’s experience will be a great asset to finding additional opportunities to increase the strength and breadth of its interdisciplinary research,” said Richard C. Benson, dean of the College of Engineering.

Ryder received her Ph.D. degree in computer science at Rutgers in 1982. She previously worked in the 1970s at AT&T Bell Laboratories in Murray Hill, N.J. Ryder’s research focuses on static and dynamic program analyses to improve the software quality of industrial-strength object-oriented systems, for use in practical software tools.

“I am excited to join Virginia Tech as head of the Department of Computer Science and a member of the leadership team in the College of Engineering. The faculty in our department are young, vigorous, collegial, and accomplished. I look forward to working with them to strengthen excellence in research and teaching. In addition, increasing the

diversity of students and faculty in the STEM fields (science, technology, engineering and mathematics), is an important goal for the nation, Virginia Tech, and me personally,” said Ryder.

Ryder became a Fellow of the Association for Computing Machinery (ACM), the premier computer science professional society, in 1998. She was selected as a Computing Research Association Committee on the Status of Women’s *Distinguished Professor* in 2004 and received the association’s Special Interest Group on Programming Languages (SIGPLAN) *Distinguished Service Award* in 2001. She also was voted *Professor of the Year for Excellence in Teaching* by the Rutgers Computer Science Graduate Student Society in 2003, received a *Leader in Diversity Award* at Rutgers in 2006, and a *Graduate Teaching Award* from Rutgers Graduate School in 2007.

Ryder has been an active leader in the Association for Computing Machinery (ACM Council Member 2000-2008; Chair, Federated Computing Research Conference 2003; Chair, ACM SIGPLAN 1995-1997). She has served as a member of the Board of Directors of the Computer Research Association (1998-2001). She is an editorial board member of the *Institute of Electrical and Electronics Engineers’ Transactions on Software Engineering, and Software, Practice and Experience*.

Ryder has also served on many program and conference committees, especially those sponsored by ACM SIGPLAN and the association’s Special Interest Group on Software Engineering. She has been a panelist in the *CRA Workshops on Academic Careers for Women, and the New Software Engineering Faculty Symposia* held at the International Conference on Software Engineering.

Barbara Ryder [[ryder@cs.vt.edu](mailto:ryder@cs.vt.edu)]  
*Career Mentoring Workshop (speaker) 1993, 1994, 1996, 1999, 2003; DMP mentor 2000; CAPP (speaker) 2004, 2005; Grad Cohort 2008 (speaker)*

\* This article was reprinted from the Web page of the Department of Computer Science at Virginia Tech with the permission of Barbara Ryder.

*(Continued from page 1: Kraemer)*

the intention of pursuing a Ph.D. in systems, and initially focused my studies on operating systems, distributed systems, and parallel processing. At the same time I started at Tech, John Stasko joined the department as a new assistant professor. I began to work with him on the visualization of parallel and distributed systems, which led to the development of POLKA (a system that supports the visualization of concurrency), and the Animation Choreographer, which calculates various allowable orderings of events in a parallel or distributed system and then drives a visualization that adheres to the selected ordering. These visualizations would be useful for those who design, maintain, or tune the performance of parallel or distributed software, and that different orderings would be useful for different tasks.

As an assistant professor at Washington University in St. Louis, I extended these ideas to include consistent steering (online modification) of parallel and distributed systems, using ideas borrowed from Richard Fujimoto's work with optimistic simulation, another interest of mine.

### **Q: How can your work be applied in practice?**

In bioinformatics, I work with the EuPathDB group, located at UGA and at the University of Pennsylvania. EuPathDB ([www.eupathdb.org](http://www.eupathdb.org)) is a portal for accessing data associated with eukaryotic pathogens that cause diseases such as malaria, cryptosporidiosis, and toxoplasmosis. I work with the user interface group to run user studies to refine the web site so that users can more easily perform complex tasks such as issuing a series of queries and then combining the results in complex ways.

In my work with software engineering diagrams for concurrency, I work with Laurie Dillon and Kurt Stirewalt at Michigan State. Along with our graduate students, we've designed some refinements of UML, which we term saUML (synchronization adorned UML), that we've recently shown provide significant benefits for students in the comprehension of synchronization and concurrency. We've also been working to develop a task model for the maintenance of concurrent software, and hope to use this as a guide for the development of tools that better support the maintenance task for concurrent software.

### **Q: When did you become Department Head?**

I became Head on July 1 of this year.

### **Q: What's the most difficult aspect of your career right now?**

Being Department Head presents new challenges: dealing with budget cuts, handling promotion and tenure cases, and trying to allocate resources to maximize the benefit to my department. Also, I'm trying to figure out how to be a good Head and still maintain my research program.

### **Q: What do you enjoy most about your career right now?**

I always enjoy teaching and working with graduate students. Learning to manage the department, to make plans for the department's future, and to carry out those plans is an exciting challenge.

### **Q: How has your interaction with CRA-W impacted your career?**

CRA-W programs have been there to help me at every step along the way. As a student, I attended the CRA-W Workshop on Academic Careers for Women (twice!), found inspiration in the people I met, and benefited from knowing the community of women in CS. As a new Assistant Professor, I again participated in the Workshop on Academic Careers, and gave talks on my experiences in "Finding a Job" and "First Year Surprises." More recently, I had the opportunity to participate in the CAPP (Cohort of Associate Professors Program), where I received good advice on building negotiation and management skills, and some coaching on making the Associate to Full Professor transition. I was able to put some of those skills to work immediately, and all were helpful. I hope that I'm able to give back as much to the community as CRA-W and its programs have given to me. Thanks, CRA-W!

Eileen Kraemer [[eileen@cs.uga.edu](mailto:eileen@cs.uga.edu)]

*Career Mentoring Workshop 1993; DMP mentor 2000; CAPP 2004*

## Interview with Carla Ellis



Carla (r) with former Ph.D. student  
Angela Dalton (l)

Carla Ellis recently retired as Professor at Duke University. Over her 30-year research career, she worked on systems for architectures ranging from large multi-processors to

small, battery-powered mobile devices. In particular, she was a pioneer in the topic of energy management for computers. She continues to serve as Editor-in-Chief of ACM's *Transactions on Computer Systems*, a board member of CRA-W and of the Computing Research Association (CRA), co-chair of NCWIT's Academic Alliance, and on several technical program committees.

We catch up with Carla to hear her perspective on her past career and plans for her future.

**Q: From that list of on-going activities, it doesn't sound much like "retirement" – besides not being in the classroom, what has changed for you?**

Two very important things have changed. First, I've moved. I'm living exactly where I want to be – in the Pacific Northwest. I fell in love with this area while working on my PhD at the University of Washington in Seattle. Ever since leaving for the sake of employment, I knew that I wanted to eventually return here. I can work on my prior commitments remotely, with a view of the ocean. Hey, I even like the rainy weather! Second, I am free to pursue my new interests without the competing daily demands of a real job. My current two passions are (1) advocating for green computing and the role of computing in creating a sustainable society and (2) encouraging the participation of women in computing. When I'm offered a new opportunity (and being retired suggests to some that I have lots of spare time), I may say "yes" to something if it can further one of those two goals.

**Q: What do you mean when you talk about "sustainability" in the context of computing?**

For the past 10 years, I've worked on increasing the energy efficiency of computers. The first step toward sustainability is to design computing infrastructure to "do less harm" in terms of energy demand and wasted re-

sources. This is critical whether the focus is on a battery-powered smartphone or a monster-sized data center. My own early focus was on increasing the battery lifetime of mobile devices. Over time, my research has addressed the energy use of a wide range of components, from memory to displays to networking. Solving this problem will require contributions from many areas of computer science from low-level hardware design to application development.

The second step is to "do some good" by applying computing expertise in understanding the climate crisis and in building a sustainable economy beyond the computing sector. I'm thinking of examples like improved collaboration software to increase the effectiveness of telecommuting and reduce fuel use for transportation or smart home monitoring and control to improve the energy efficiency of buildings. Since I'm building a new house, I'm particularly interested in smart home technology.

My new mission is to convince more computer science researchers to become engaged in these issues and to think about how their own expertise can contribute to sustainability.

**Q: The systems research area is not known as being friendly to women. How did you get into systems?**

I started grad school in computer science at UW in 1973 with no clear idea about what I wanted to do. I didn't choose a research area and then a professor in that area, but instead chose my PhD advisor based on the person on the faculty I felt I could work with the best. Focusing on the working relationship with my potential advisor worked out great for me.

My advisor, Jean-Loup Baer, just happened to work in computer architecture and parallel processing. In the late 70s, I wasn't aware of the different areas being any more or less welcoming to women. I embraced parallel computing as a topic and Jean-Loup was flexible in supporting my thesis as it evolved along a more software-oriented direction. So, I guess you could call it an accident that I ended up in systems.

**Q: How do you see the systems field changing?**

Technically, the systems field is always changing, driven by new applications on one side (e.g. social networking) and new architectures on the other (e.g. smartphones). However, an interesting change has been that increasing performance (translation: speed) is no longer the only ac-

(Continued from page 8: Interview with Carla Ellis)

cepted goal as energy savings, reliability, maintainability, and usability rise in importance. My sense is that these other environments and metrics may attract more women into systems.

The participation of women in systems has a complicated story. On one hand, the systems area is one of the sub-disciplines of CS&E with the lowest representation of women. On the other hand, the systems community has been engaged in the issue for a long time. It was at the premier systems conference in 1987 that the Systems community was born when all the women attendees came together for a meal which has become a tradition of that conference ever since. Last year, with the enthusiastic support of the conference organizing committee (and CRA-W funding), we held a workshop for women prior to the conference that attracted 75 women who then stayed through the conference. The SIGOPS community was excited about the event and appears to be committed to offering the workshop in the future. I'm proud of the response of the systems community to our efforts to make the culture more inclusive.

**Q: How did you get involved with CRA-W?**

I must say that working with CRA-W has been one of the most rewarding and fun roles of my career. It came about because of networking. Early in my career, my professional contacts were mostly all from the systems community. However, in 1995, I was elected as chair of ACM SIGOPS and I started attending the meetings of all the ACM SIG chairs. This allowed me to meet leaders from other sub-disciplines, including CRA-W board members Mary Lou Soffa (then SIGPLAN chair) and Janie Irwin (ACM Council and Vice President). Thus, what began as service to my own research community opened the doors to a broader network and an invitation to join CRA-W.

**Q: You have spent your entire career in academia. What have you found to be the best and worst aspects of being a professor?**

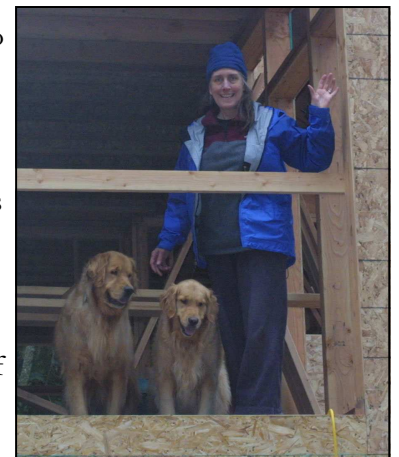
The greatest joy of being a professor at Duke has been watching my students develop and succeed in what they have chosen to do. My own PhD and Masters graduates are a continuing source of pride for me. It is rewarding to watch a student transform from a course-taker into an independent researcher and the expert on their topic. Each thesis project involves both the challenge of technical discovery as well as the growth of an individual with different needs from an advisor.

Academia prides itself on being a meritocracy. Certainly, we strive for excellence in ourselves and hold others to high standards. Professors are constantly doing evaluation – we grade courses, assess prospective students, scrutinize faculty applicants, review submitted papers and grant proposals, and write letters for tenure and promotion. It is frustrating to be involved in evaluation discussions with colleagues that take a negative tone and adopt narrow views of what “quality” is based on implicit biases and institutional tradition.

**Q: Coming back to your retirement, what are you doing or planning to do that isn't related to “work” or computer science?**

As I said, my husband and I are building a house. While it doesn't always go smoothly, the process has been much more fun than I ever anticipated. I've learned about green building, in general, and what works for our climate and our site, in particular. Once we move in, I'll be landscaping with all native plants. My husband, Rick, will take over the new garage to build a wooden 2-person sea kayak for paddling in the bay.

And then there are the dogs. I have two Golden Retrievers and they each have their own out-of-the-yard activities. Sunny is a therapy dog. Every week, we visit an assisted living home where the residents just love him. He brightens their day and all he has to do is to get petted. It's a tough job! This fall, Sunny and I will also be going into the public schools in a “Read to Rover” program where kids read aloud to dogs. My other dog, Dilly, takes classes in agility. This means she runs a course that goes through tunnels, across teeter-totters, and over other obstacles. She has a great time burning off energy and we enjoy socializing with our classmates, both dog and human. Of course, the whole family goes on walks along the beach when the tide is low.



Carla (r) with Sunny (l) and Dilly (m) in new house she and her husband are building.

Carla Ellis [[carla@cs.duke.edu](mailto:carla@cs.duke.edu)]

*CRA-W co-chair 2003-2006; DMP Mentor 1995, 1998, 1999, 2000, 2002, 2006; Career Mentoring Workshop (speaker) 2005; CAPP (speaker) 2004, 2006; Grad Cohort (speaker) 2005, 2007; SOSP DSW (organizer) 2007*

## 15 Years of Providing Distributed Research Experiences

Nancy Amato, Tracy Camp, Maria Gini, Alexandra Swanson

Recognizing the growing need to diversify the computer science and engineering fields, the Distributed Mentoring Program (DMP) has provided 15 years of effort to increase the diversity of graduate students in the computing disciplines. CRA-W established the DMP in 1994. From 1994 to 2006, the objective of the DMP was to increase the number of women entering graduate studies in the fields of computer science and engineering. Since 2007, the program has been jointly administrated by the CRA-W and the Coalition to Diversity Computing (CDC), and its objective has been expanded to encourage computer scientists and engineers from all underrepresented groups, male and female, to consider graduate school.

The Distributed Mentoring Program gives students the opportunity to gain research experience by matching undergraduates with faculty mentors in North America for a 10 week summer research experience at the faculty mentor's institution, which is typically different from the undergraduate's home institution. Through direct involvement in a research project, the students gain invaluable experience and exposure to academic research. The program also provides daily interaction with graduate students, which allows the DMP students to acquire a close-up look at the realities of graduate school. The DMP's tremendous research opportunity provides encouragement to the students to continue their studies, and also increases the students' competitiveness in both the professional and academic world. For example, many former DMP students have been awarded prestigious NSF Graduate Research Fellowships, including Kristin Kaster (DMP 1998-1999), Bonnie Kirkpatrick (DMP 2002-2003),

Carol Reilly (DMP 2003), Jessica Stumpf (DMP 1999), Olga Tkachyshyn Pearce (DMP 2003-2004), and Shawna Thomas (DMP 2001).

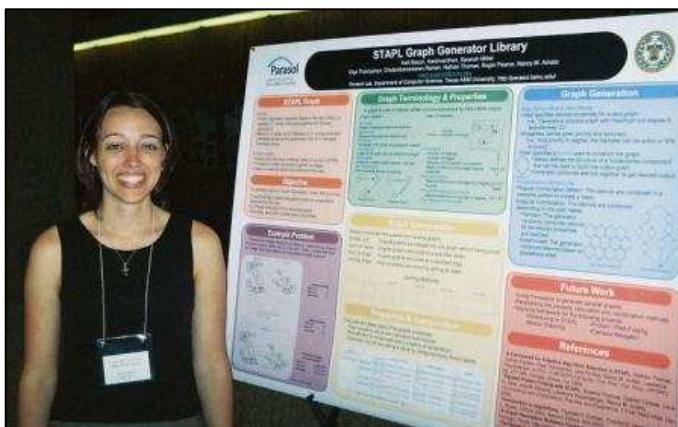
In any field, mentoring has been linked to career success, both academically and professionally. A study done on the DMP by the University of Wisconsin LEAD Center found that students participating in the DMP were twenty times more likely to attend graduate school than those in the control group. By providing a mentoring relationship and a research opportunity, the DMP helps to successfully increase the participation of women and underrepresented groups in high-level academia. Since the number of female and minority faculty in most computer science and computer engineering departments is extremely low, students have severely limited access to underrepresented role models and mentors. An important aspect of the DMP is to provide students underrepresented in computing with role models that are like them. For women and minorities who don't have access to mentors in their home institution, the DMP program provides key connections that allow women and minority faculty to meet and work with students from under-represented groups. Since 1994, the DMP has had over 400 participants from over 100 different academic institutions. The program has both faculty and student participants from all over the nation creating a broad and diverse group.

"Computing research and graduate school used to seem intimidating to me, but the DMP has eased my worries about the unknown. Thanks to the DMP, I can actually see myself in graduate school now!"

Monica Noring, junior at the Colorado School of Mines and DMP 2008 participant who did research on digital circuit analysis with Jennifer Dworak at Brown University.

Over the past 15 years, participation in the DMP has grown. The program began with around 20 student participants and has steadily increased over the years. The DMP now has over 40 student participants each year. The number of applicants has risen significantly as well. In the first few years of the program, approximately 40-70 student applications were submitted each year. That number has more than doubled 15 years later. As the number of participants in the program expands, so does the DMP's impact on increasing the representation of women and underrepresented groups in computer science and engineering. There is also great interest in the program by faculty mentors, with 70-80 applicants for 20-30 positions each year. As the DMP has matured, there are now

*(Continued on page 9)*



Kelli Bacon a new graduate student at the University of North Carolina, Chapel Hill. During her 2006 DMP experience, Kelli helped design a graph generator under the direction of Nancy Amato at Texas A&M University.

*(Continued from page 10: 15 Years of Providing Distributed Research Experiences)*

former DMP students participating in the program as faculty mentors themselves. For example, Tiffany Barnes, who is now an assistant professor at the University of North Carolina at Charlotte and has mentored numerous DMP students over the past few years, was herself a DMP student mentored by Carla Savage when she was an undergraduate at North Carolina State University. Other former DMP students that are now professors, many of whom have been DMP mentors themselves, include Christine Alvarado at Harvey Mudd College (DMP mentor Nancy Leveson), Jaime Payton at the University of North Carolina at Charlotte (DMP mentor Rose Gamble), Rachel Pottinger at the University of British Columbia (DMP mentor Xiaobai Sun), Kelly Shaw at Richmond University (DMP mentor Margaret Martonosi), Beth Simon at the University of California at San Diego (DMP mentor Fran Berman), Amie Souter at Drexel University (DMP mentor Lori Pollock), Sara Sprenkle at Washington & Lee University (DMP Mentor Lori Pollock), and Stephanie Weirich at the University of Pennsylvania (DMP mentor Devika Subramanian).

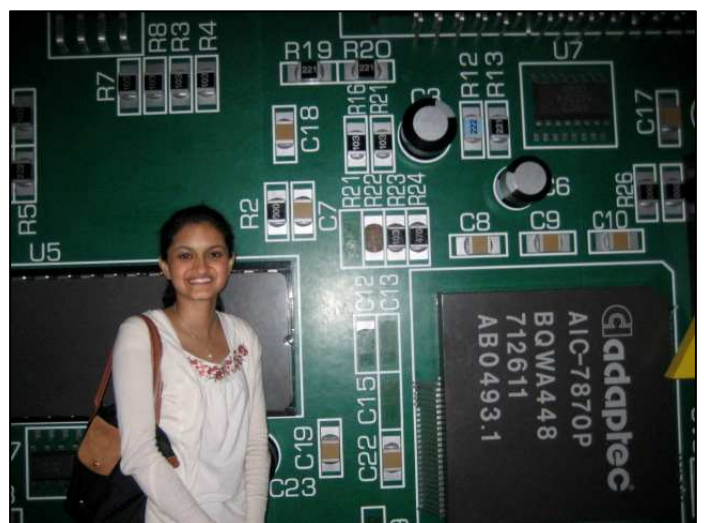
In addition to relocation travel and a stipend, the program provides support for DMP students to attend technical conferences, either during the summer with their mentor's research group or after the summer to present the results of their research. Many participants in the 2008 DMP had the opportunity to attend interesting conferences in the computer science field. Rachel Teo worked with Clare Bates Congdon at the University of Southern Maine on a project dealing with Genetic Algorithms. During the summer, Rachel attended the Genetic and Evolutionary Computation Conference (GECCO) in Atlanta, Georgia, where she had the experience of presenting a poster on her research. Yekaterina Kharitonova worked under the mentorship of Dr. Jessica Hodgins at Carnegie Mellon University on a project to enhance character animation using computer graphics and motion capture data. Yekaterina attended the 2008 SIGGRAPH conference in Los Angeles, California, a forum for state-of-the-art graphics research. During the 15 years of its operation, the DMP has made a significant impact on the field of computer science and engineering by providing mentoring and research opportunities to undergraduates from underrepresented groups. By encouraging undergraduates to pursue higher-level academic work, the DMP has helped address the root of the "shrinking pipeline" in computer science. The dedication and involvement of the faculty mentors has made the success of the DMP possible.

The DMP is currently co-directed by Nancy Amato, Texas

A&M University, Tracy Camp, Colorado School of Mines, and Maria Gini, University of Minnesota. As the program moves into its 16th year, its name will change from DMP to DREU (Distributed Research Experience for Undergraduates). The new name will better reflect what the program is about and will be consistent with CREU (Collaborative Research Experience for Undergraduates), the CRA-W and CDC program that funds research experiences for undergraduate students from underrepresented groups during the academic year at their own institutions.

Applications for the Summer 2009 Distributed Mentoring Program (DREU) are due February 15, 2009 for both students and faculty members. Student applicants should be undergraduates at a U.S. or Canadian college or university who are seriously considering graduate studies in CS&CE. First consideration will be given to juniors who have completed three years of college education by the summer of 2009; however, qualified freshman and sophomores, as well as seniors considering graduate school, are also encouraged to apply. For more information visit: <http://www.cra-w.org/dmp/>.

The Distributed Mentoring Program is possible due only to significant and continuous funding from the National Science Foundation which has supported the program since its inception in 1994. The program has received additional support over the years from AAIL, the Henry Luce Foundation (current), USENIX, and a private foundation..



Sneha Popley in front of a large motherboard at the University of Pennsylvania. Sneha is a junior computer science major at Texas Christian University. She participated in the 2008 DMP program and worked with Stephanie Weirich at Penn. Stephanie herself was a DMP participant who worked with Devika Subramanian at Rice University in 1996.

## CRA-W Gets New Co-Chairs

Beginning with the Fall 2008 CRA-W Steering Committee meeting, Carla Brodley and Kathleen Fisher will become the co-chairs of CRA-W.



Carla E. Brodley is a professor in the Department of Computer Science at Tufts University. She received her PhD in computer science from the University of Massachusetts, at Amherst in 1994. From 1994-2004, she was on the faculty of the School of Electrical Engineering at Purdue University, West Lafayette, Indiana. Professor Brodley's research interests include computer security, machine learning and knowledge discovery in databases. She has worked in the areas of intrusion detection, anomaly detection in networks, hardware support for security, classifier formation, unsupervised learning and applications of machine learning to remote sensing, computer security, and content-based image retrieval of medical images.

Kathleen Fisher is a Principal Technical Staff Member at AT&T Labs Research. She received her Ph.D. in computer science from Stanford University in 1996. Her research focuses on the design, implementation, and theoretical foundation of object-oriented programming languages as well as domain-specific programming languages for processing data. Dr. Fisher actively contributes to the field of programming languages, publishing papers the top venues. The main thrust of her recent work has been in domain-specific languages to facilitate programming with massive amounts of ad hoc data. In particular, Dr. Fisher initiated and leads the PADS project—a system that allows data analysts to write declarative descriptions of ad hoc data, including both physical layout information and semantic constraints. From such descriptions, the PADS system generates tools and applications for manipulating the data. She is Chair of SIGPLAN, on the steering committee of CRA-W, and an editor of the Journal of Functional Programming.



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CRA-W Co-chairs oversee all activities and events of CRA-W, and the responsibilities of the co-chairs has grown as CRA-W has grown. Co-chairs are selected by the CRA-W Steering Committee with advice from CRA-

W, every three years, and serve three-year terms. During the past three years, Lori A. Clarke and Lori L. Pollock have served as co-chairs of CRA-W, and have provided excellent leadership that has resulted in tremendous growth in CRA-W activities and events.



Lori A. Clarke is a member of the Computer Science faculty at the University of Massachusetts, Amherst. She is an ACM Fellow, a member of the IEEE Publication Board, and an elected member of the Computing Research Association's Board of Directors. She is a former IEEE Distinguished Visitor, ACM National

Lecturer, associate editor of ACM TOPLAS and IEEE TSE, member of the CCR NSF advisory board, ACM SIGSOFT secretary/treasurer, vice-chair and chair, as well as a 1990 recipient of the University of Massachusetts Chancellor's Medal, and a 1993 recipient of a University Faculty Fellowship. Professor Clarke has worked in the area of software testing and analysis for many years. She was one of the primary developers of symbolic execution, a technique used to reason about the behavior of software systems and to select test data.

Lori Pollock is a professor at the University of Delaware. She received her M.S and Ph.D. in Computer Science from the University of Pittsburgh. She was awarded the University of Delaware's Excellence in Teaching Award in 2001, and the University's E. A. Trabant Award for Women's Equity in 2004. She served on the executive committee and officer of ACM SIGPLAN for several terms. Professor Pollock's research focuses on program analysis for optimizing compilers, software testing, mobile code integrity, aspect-oriented programming, and parallel and distributed systems. She has served as program committee member of conferences in compilers, high performance computing, and software testing. She has also served as organizing chair and on the steering committee for several workshops.



CRA-W thanks Lori and Lori for their dedicated service.

## Missouri S&T Female Undergraduate Students Create Indoor Air Quality Simulator

Daniel R. Tauritz, Missouri University of Science and Technology

As part of the Multidisciplinary Research Opportunities for Women (MRO-W) program, two female undergraduate students at Missouri University of Science and Technology (Missouri S&T) have created a prototype Indoor Air Quality Simulator with two distinct interfaces, one designed for consumers and one for researchers.

The project, called Indoor Air Quality Simulator with Interactive Consumer and Lab Interface, INDAQS for short, is aimed at empowering consumers to make informed decisions that impact their indoor air quality, as well as providing researchers a handy tool to improve their efficiency.

“Americans spend some 90% of their time indoors and health risks due to indoor air are ranked among the top five environmental health risks”, says Glenn Morrison, associate professor of civil, architectural and environmental engineering at Missouri S&T. “However, residential air quality is not regulated in most parts of the United States. High indoor pollutant levels are caused by emissions from indoor sources, low air circulation, and chemical reactions generating toxic byproducts. Exposure to indoor air pollutants can result in minor to severe health hazards such as allergies, sick building syndrome, respiratory disease, and cancer.”

INDAQS hopes to address this problem by creating and freely distributing an easy to use software tool that will let consumers input information about their home and then, after some computation, inform the consumer which, if any, air quality standards are violated, along with links to relevant information so that consumers can take a proactive role in improving their home’s indoor air quality.

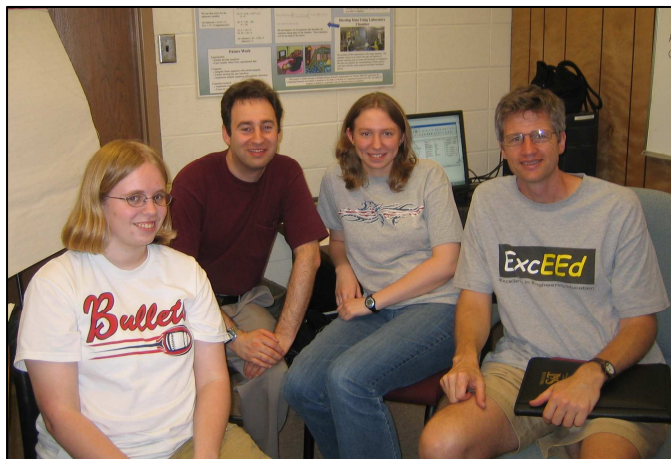
“The core of our software tool is the simulation engine the students designed and implemented which computes the concentration of various pollutants in the air based on the provided input data”, says Daniel Tauritz, associate professor of computer science at Missouri S&T. “Their engine employs a free software library called the GNU Scientific Library to solve systems of equations modeling particle concentrations in air.”

Missouri S&T computer science major Janet Guntly of Bridgeton, MO., and chemical engineering major Amber Loftis of Bartlesville, OK., are the first group of female students to work on the project. Faculty mentors Daniel Tauritz and Glenn Morrison plan to recruit a new group of students to continue this project.

“One of the greatest challenges in this project was finding recommended value ranges for all the different particles and chemicals typically present in homes”, says Amber. Janet adds, “making the consumer interface simple enough to use by your typical consumer without compromising the accuracy of the model was also a big challenge”.

Janet and Amber presented their work at the Missouri S&T Undergraduate Research Conference in Rolla, MO., at the Undergraduate Research Day at the Capitol in Jefferson City, MO., at the University of North Carolina at Chapel Hill, NC., and at the US Environmental Protection Agency, Durham, NC.

To learn more about the INDAQS project, visit the project’s website at <http://indaq.mst.edu/>.



Amber Loftis, Dr. Daniel Tauritz, Janet Guntly, and Dr. Glenn Morrison (from left to right) shown during one of their project meetings .

### About MRO-W

MRO-W provides positive research experiences for teams of undergraduates who will work during the academic year and following summer at their home institutions. Each team will consist of scientists from both the computing and non-computing fields as well as women undergraduate students from these respective fields. For example, a project in computational biology might consist of a computer science major, a biology major, a computer science professor, and a biology professor. For more information about MRO-W, see <http://www.cra.org/Activities/craw/mrow/>

(Continued from page 1: Chandra Krintz)

have received her Ph.D. no earlier than September 2000). See [craw\\_awards@cra.org](mailto:craw_awards@cra.org) for eligibility questions.

Chandra Krintz has been an Associate Professor of Computer Science at the University of California, Santa Barbara (UCSB) since 2007. She joined the UCSB faculty in 2001 as an Assistant Professor after receiving her M.S. and Ph.D. degrees in Computer Science from the University of California, San Diego. Chandra's research area is programming language implementation, and her work focuses on automatic and adaptive compiler, virtual runtime, and operating system techniques that improve performance (for high-end systems) and increase battery life (for mobile, resource-constrained devices). Chandra's research has been published in a number of ACM venues, including ASPLOS, CGO, ECOOP, LCTES, OOPSLA, PACT, PLDI, TACO, TPDS, has been funded by grants from the National Science Foundation (NSF), Intel, and Microsoft, and has been recognized with an NSF CAREER award (in 2006).

Chandra has also been recognized for teaching excellence with the senior-selected, 2008 co-award for outstanding Faculty Member in Computer Science. Moreover, Chandra has contributed significantly to the outreach, support, and encouragement of women in the field. In particular, Chandra has been instrumental in her department's diversity-aware curriculum efforts, plays an active role as (elected) vice-chair of the Executive Committee of the ACM Special Interest Group on Programming Languages (SIGPLAN) to oversee the organization of the SIGPLAN conferences and to improve diversity and participation of women in the community, and has implemented multiple, novel, curricular directions that facilitate retention of female computer science undergraduates and that expose young girls to the opportunities and potential of computer science. Specifically, Chandra has implemented courses in which computer science and engineering students use their computer skills to help others in the community (e.g., non-profit organizations) with technology and to introduce other young people to the potential of computer science (e.g., local high school students). Since 2007, Chandra has partnered with Microsoft Research and Girls Incorporated, a nationwide non-profit organization dedicated to inspiring young girls to be *strong, smart, and bold*. Chandra and her students teach Girls Inc. classes (for girls of ages 9-10) that introduce the girls to and engage them with the field of computer science, and that show them how much fun computer programming can be—with the help of a computer game from MSR and only a game controller.

## News of Affiliated Groups

### Coalition to Diversity Computing Ann Redelfs, CDC PR Chair

The Coalition to Diversify Computing (CDC) (see <http://www.cdc-computing.org/>) announced on July 1, 2008 that Pam Williams of the Logistics Management Institute is the new CDC chair, and Ron English, Rensselaer Polytechnic Institute, is the chair-elect. Williams replaces Nina Berry of Sandia National Laboratories.

CRA-W and the CDC have a jointly funded NSF Broadening Participation in Computing Alliance that was recently awarded an extension to continue their mentoring programs and discipline-specific workshops. One of the discipline-specific computing workshops was the Systems Mentoring Workshop held at University of Delaware on June 16-18, 2008, which included sophomores, juniors, and seniors from small colleges and research institutions to master's students at institutions with no Ph.D. program. The workshop focused on current systems research and offered mentoring sessions to help students prepare for and apply to graduate school. Out of 129 applicants for the workshop, 42 students participated.

The CDC's 2009 Richard Tapia Celebration of Diversity in Computing conference, scheduled for April 1-4, 2009 in Portland, OR, USA, invites scholarship applications through October 15, 2008 at the conference Website, <http://www.tapiaconference.org>. The Tapia Celebration includes papers, panels, workshops, Birds-of-a-Feather sessions, posters, and a Doctoral Consortium. The CDC has secured several notable plenary speakers for the 2009 event, including:

- Dr. Hector Garcia-Molina, Leonard Bosack and Sandra Lerner Professor in the Departments of Computer Science and Electrical Engineering, Stanford University. Dr. Garcia-Molina will give the Ken Kennedy Distinguished Lecture at the Tapia Celebration.
- Dr. Ann Gates, Professor and Chair, Department of Computer Science, The University of Texas, El Paso.
- Dr. Charles Isbell, Associate Professor Laboratory for Interactive Artificial Intelligence Intelligent Systems Group, School of Interactive Computing College of Computing, Georgia Institute of Technology.
- Dr. Jane Margolis, Senior Researcher, Institute for Democracy, Education and Access at the UCLA Graduate School of Education and Information Studies, and author of "Stuck in the Shallow End: Education, Race, and Computing" (MIT Press, 2008).

## News of Affiliated Groups (cont'd)

**Connecting the World**  
**The ACM-W Ambassador Program**  
**Annemieke Craig, Deakin University, Australia**  
**Co-Chair of the ACM-W Ambassador Program**

The lack of participation by women in both IT education and subsequently the IT workforce has emerged as an issue in numerous countries around the world. The ACM-W has taken steps to build an international scope on women in IT via the Ambassador Program, a program that commenced in 2000. A computer scientist or information technology professional in a targeted country is encouraged to undertake the role of ACM-W Ambassador. There are currently Ambassadors for eleven countries (see Table 1).

Country	Present Ambassadors
Australia	Catherine Lang<CLang@groupwise.swin.edu.au>
Brazil	Claudia Bauzer Medeiros<cmbm@ic.unicamp.br>
Canada	Julita Vassileva <jiv@cs.usask.ca>
Germany	Maria Knobelsdorf <knobelsd@inf.fu-berlin.de>
New Zealand	Annika Hinze <annika.hinze@gmail.com>
Pakistan	Jehan Ara <jehan.ara@gmail.com>
South Africa	Cecille Marsh <cmarsh@wsu.ac.za>
Sweden	Nahid Shahmehri <nahsh@ida.liu.se>
Turkey	Reyyan Ayfer <ayfer@bilkent.edu.tr>
United Kingdom	Jan Peters <jan.peters@katalytik.co.uk>
United States	Mary Anne Egan <maegan@siena.edu>

**Table 1: Current ACM-W Ambassadors**

A similar problem in each of these countries exists, how to encourage more women to take up IT. It is apparent, however, that the situations faced in many parts of the world will necessitate different actions and strategies. For example, in South Africa, the USA, and Australia, the priority area is to correct perceptions of industry. In India, on the

other hand, the priority is access to all forms of education, including IT education. Projects of two ACM-W Ambassadors illustrate these priorities.

- M.Suriya (Ambassador for India 2000-2008) led a project 'to build a university based online-support system through special coaching for female higher secondary students at Cuddalore District in Tamilnadu' (see <http://acmwnews.blogspot.com/2008/05/virtual-science-learning-centre-in.html>).
- Catherine Lang (Ambassador for Australia) is focusing on changing perceptions via *Digital Divas* a computer club for girls concept and *Go Girl Go for IT*, a showcase career event which is hoped will attract an attendance of over 2000 girls (see <http://acmwnews.blogspot.com/2008/02/australian-ambassadors-report.html>).

The ACM-W ambassadors share much in common in their enthusiasm to promote IT with women in their countries providing support, contact and community in a diverse world.

If you are interested in learning more about the ACM-W Ambassador Program, please contact any of the ambassadors listed in Table 1.



Year 8 Digital Diva girls discussing 'Image Makers'

## News of Affiliated Groups (cont'd)

### 2009 Anita Borg Women Of Vision Nominations Open

Jerri Barrett

Each year, the Anita Borg Institute for Women and Technology, seeks the best and brightest women technologists for its Women of Vision Awards. These awards celebrate lifetimes of achievement for women technologists in the areas of Social Impact, Innovation and Leadership. Winners come from both industry and academia and are nominated by peers, managers, students, and even company interns.

In 2008, the Women of Vision Awards were presented to Helen Greiner, CEO of iRobot, for Innovation; Susan Landau, Distinguished Engineer at Sun Microsystems for Social Impact; and Justine Cassell, Professor at Northwestern University for Leadership. So why did they win?

Helen Greiner was one of the founders of iRobot. Most are familiar with iRobot's work with the Roomba. However, Helen has also worked to create many other robots that the average person never sees. Her vision is to create robots that do the tasks that are too dangerous or too unpleasant for humans to do. The robots her company has invented are saving 100's of lives every day in places like Iraq and Afghanistan by disabling explosive devices. Her innovations in the field of robotics impact millions of people every day.

Susan Landau has impacted society through her work in cryptography, wiretapping issues and the security risks of building surveillance into communications infrastructures. Her Washington Post article "A Gateway for Hackers: The Security Threat in the New Wiretapping Law," brought her national recognition – and changed US policy. In addition Susan has devoted her personal time to creating ResearchHers – a global email list for women researchers.

Justine Cassell is recognized as a leader in the field of Computer Science for her development of a new field of study, the Embodied Conversational Agent, also known as intelligent virtual agents. Justine has adapted this field of work to help young people. The virtual peer incorporates an embodied virtual child to target early literacy by encouraging, listening and responding to children's storytelling. She has extended the virtual peer to address the education issues of children with autism spectrum disorder.

We encourage everyone in the field of science and technology to look around them and nominate the outstanding women they know for these prestigious awards. The awards are open for nomination today at [www.anitaborg.org/initiatives/women-of-vision](http://www.anitaborg.org/initiatives/women-of-vision).

## Current CRA-W Members

### Co-Chairs

Lori A. Clarke, University of Massachusetts  
Lori L. Pollock, University of Delaware

Nancy Amato, Texas A&M University  
Cecilia Aragon, Lawrence Berkeley Natl. Lab  
Carla Brodley, Tufts University  
Tracy Camp, Colorado School of Mines  
Sheila Castañeda, Clarke College  
Joanne Cohoon, University of Virginia  
Dilma Da Silva, IBM Research  
Carla Ellis, Duke University  
Faith Ellen, University of Toronto  
Kathleen Fisher, AT&T Labs Research  
Joan Francioni, Winona State University  
Maria Gini, University of Minnesota  
Susanne E. Hambruch, Purdue University  
Mary Jean Harrold, Georgia Tech  
Mary Jane Irwin, Penn State University  
Susan Landau, Sun Microsystems Laboratory  
Tessa Lau, IBM Almaden Research Center  
Margaret Martonosi, Princeton University  
Renée J. Miller, University of Toronto  
Joann Ordille, Avaya Labs  
Mary Lou Soffa, University of Virginia  
Telle Whitney, Anita Borg Institute

## 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>