



# CRA-Women

Summer/Fall 2015 Edition

NEWSLETTER

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## Editors:

**Carla Ellis**, Duke University  
**Amanda Stent**, Yahoo Labs



**CRA-W**

Computing Research  
 Association  
 Women

## Highlight on Alum Sarah Ita Levitan



**Sarah Ita Levitan is a 3rd year PhD student in the Department of Computer Science at Columbia University.** She is a member of the Spoken Language Processing group directed by Dr. Julia Hirschberg. Her research involves identifying spoken cues to deception and examining cultural and gender differences in communicating and perceiving lies. She received her bachelor's degree in computer science from Brooklyn College (CUNY). Before her senior year, she participated in the Distributed Research Experience for Undergraduates (DREU), studying acoustic and prosodic entrainment in Supreme Court oral arguments. Sarah Ita is currently funded through an NSF-GRFP fellowship and is an IGERT fellow.

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## Natalie Enright Jerger wins Borg Early Career Award



CRA-Women proudly announces Natalie Enright Jerger as this year's BECA winner. Natalie is an associate professor in the Department of Electrical and Computer Engineering at the University of Toronto. Her research interests include multi- and many-core computer architectures, on-chip networks, cache coherence protocols, memory systems and approximate computing. Natalie is passionate about mentoring students and is deeply committed to increasing the participation of women in computer science and engineering. Natalie's contributions to research have been recognized with several awards including the Ontario Ministry of Research and Innovation Early Researcher Award (2012), the Ontario Professional Engineers Young Engineer Medal (2014) and an Alfred P. Sloan Fellowship (2015).

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. The annual award is given 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.

# Interview with **Dilma Da Silva**

Interviewed by Amanda Stent, Yahoo Labs

**Dilma Da Silva is Department Head and holder of the Ford Motor Company Design Professorship II at the Department of Computer Science and Engineering at Texas A&M University.**

Previously, she was a Principal Engineer and manager at Qualcomm Research Silicon Valley, where she was project lead for mobile cloud; a Research Staff Member in the Advanced Operating System Group at IBM T.J. Watson Research Center; and Assistant Professor at the Department of Computer Science, University of Sao Paulo, Brazil. She is an ACM Distinguished Scientist (2011), treasurer of ACM SIGOPS (2011-2015), member of the CRA-W board, and Founding Leader of the Latinas in Computing group.

**Q: What made you choose a career in computer science?**

I was tempted to take the medical school route to make my parents very proud, but I ended up deciding to get a degree in math. In my first week in school I took CS 101 and I fell in love. Thirty-two years later, I am still totally enamored with computer science.

**Q: Explain a bit about your technical interests and how your research has evolved over time.**

I am interested in enabling applications to benefit from the full power of the hardware platform, without requiring application developers to pay attention to low-level issues. I pursue a “plumbing” infrastructure that works in the presence of disaster (datacenter failures, security attacks, bugs) to enable efficient usage of available resources. I have worked in operating systems, virtualization, runtime systems, distributed systems, high performance computing, and cloud computing. A common theme has been autonomic update of services, where the software updates itself to better serve current workload requirements. Over time, my appreciation for simple solutions that have a chance to be deployed in real environments has increased significantly. Clever but complex approaches do not hold my attention as much as they did when I was in graduate school.



*Dilma with her CRA-W DREU 2015 students*

**Q: What role has professional service played in your career?**

I appreciate career success as much as the next person, but technical and business achievements seem not to be sufficient to get me running to work with excitement every day. I am much happier if I feel I am making a difference to other people's lives and their own ability to make a difference to our world. Service to the computing community has also made my career more fun and provides me with a sense of community and belonging.

**Q: What contributions have you made through administrative roles?**

While in industry research, I enjoyed the challenge of connecting the objectives defined by company leadership to the research goals and career aspirations of people in my teams. My best contributions happened by identifying ways to convey our technical innovation through a story that could appeal to the decision makers in the company. I believe I also made organizations better by valuing collaboration with other teams and by helping people to move to positions best suited to them, even if that meant that critical expertise was leaving my team. I am now in the interesting phase of adjusting my established administrative practices to the world of academia.

**Q: What are some similarities and differences between life in industry and in academia?**

Both environments can enable wonderful, satisfying careers. In my experience, in industry it is easier to have concrete impact since projects are conceived to address real problems or opportunities and have measurable outcomes. Also, in industry you often have access to the technical expertise you need when you need it instead of having to build it up in students who are meant to leave when they become experts. On the other hand, I believe that in most industry research labs it is very challenging to carry out research that will yield fruit only in the long term. Even when such efforts are put in place, they are subject to changes in overall company strategy. In academia, professors are the CEOs of their own small innovation ventures. Professors have flexibility in defining their research agendas, but they still need to be successful in securing funding. In terms of student mentoring, in industry I received my interns when they were on their best behavior and motivated to do well in their summer jobs. Now I am exposed to the ups and downs of the routine student progress path.

Two aspects that drove my job changes were (1) how much I could learn in the new environment and (2) how much the core



*Dilma sitting on the red chair to recognize women's contributions to IT (<http://sitwithme.org/>)*

organization mission captured my imagination at a given stage of my career. I went to industry to be surrounded by people I could learn from by working with them, and it went very well. I moved to another company when I wanted to put myself in a position that required me to acquire new technical expertise. And I am back in academia because it may allow me to have a significant impact on developing the next wave of talent.

**Q: How do you maintain a career path open to both industry and academia?**

I was deliberate in my actions so as to keep the doors open on both sides. This meant that while in industry I invested my own time and resources to pursue academic collaborations and service opportunities that I knew would be of no value in terms of my performance reviews. I chose my activities in terms of long-term career goals and I was not seduced by short-term company-internal recognition. I also followed the work done by the academic research community, and this helped in my industry job (people knew that I had this awareness and came to me for a layout of the current landscape, increasing my sphere of influence). And this practice made my networking with academia happen naturally.

**Q: What advice do you have for a new manager?**

You work for your team as much as you work for the leaders above you, so make sure that your decision process includes the team perspective. I did not compromise the trust my team had in me even if to keep it I had to go against directives from above. I was a very hands-on manager, and assigned technical work for myself (out of the critical path if necessary) so that the team perceived me as part of the technical team. A couple of git pushes a month worked wonders for my reputation.

**Q: What advice do you have for doing a mid-career move?**

Make sure that you reach out to people you trust and admire and ask for time to discuss the move you are contemplating. In my experience people are very generous with their time if they understand what we expect from them. Be prepared for a tough integration into a new environment when you have some level of seniority, as expectations tend to be high and your ability to achieve may be constrained by the lack of established collaboration partners and sponsors.

**Q: What challenges have you had to overcome as a woman leader in the field?**

I am still surprised by situations in which I appear to be invisible, as if my (loud) voice is only speaking up in my head. I have not found a great response yet for subtle suggestions that I get more leadership opportunities than others because I am female and Latina. But those poor interactions have been relatively rare. On the positive side, I appreciate the leadership training and networking opportunities that I had because I am a woman.

**Q: How have you been involved in CRA-W? What has this involvement meant to you?**

I have been a member of the CRA-W board for many years and I am still in awe of how amazing the group is. It is a privilege to have a chance to work with women who are rock stars in their technical fields, know how to get things done, and are such interesting people. I have also been on the receiving end of CRA-W, as for many years I have co-organized Discipline-Specific Workshops at top operating systems conferences. And if my work energy level and passion ever go down, I know that volunteering at CRA-W Grad Cohort will get me right back where I should be.

**Q: Do you have any involvement in other volunteer organizations that support women in computing?**

I was a co-founder of the Latinas in Computing group, and I cherish my involvement with them. I am also a member of the CDC (Coalition for Diversifying Computing). I have participated in NCWIT events and currently I am working with them to improve our recruiting practices at Texas A&M.



*Dilma in Santorini, Greece*

## Interview with **Dilma Da Silva** (continued)

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

The level of independence and flexibility I have as a faculty member. As a department head I am more constrained in my activities than most faculty, but I am still my own boss in the realm of research, able to pursue scholarship as I see it to a great extent. Many administrative problems land in my lap daily, and I enjoy the problem solving involved. I also enjoy mentoring.

### **Q: What activities do you pursue outside of work?**

I am passionate about literature, and never too busy to read novels. I also make myself read one non-fiction book a month, because they often teach me something important. I knit, mostly socks and lace shawls, and rarely give my knitting away, so my collection is quite impressive. I also spin and weave at a beginner's level. My painting is void of skill but now that I live in a house with a large garage, I plan to have my own permanent exhibition. Most importantly, I code for fun, as it is hard to justify spending my "work time" coding at this stage of my career

(although I still do it). I also dedicate a lot of time to handling health crises around me, as many people my age do.

### **Q: What are your future plans?**

I started at my current job a year ago, so my next few years are focused on identifying ways to accelerate my department's path towards excellence. And I am ambitious: I want to build a great research group even though administration takes a lot of my time. I also plan to write a book about my family, which is likely to require more conflict management skills than my day job!

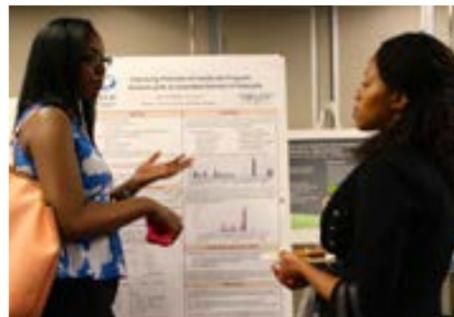
### **Q: Do you have any advice for women at any stage of their careers?**

Something that has worked for me is to take risks redefining the role or tasks assigned to me so that they better align with my beliefs, curiosities and growth plan. By making sure that I make the redefined role even more useful and exciting to other stakeholders than the original, I get the space I need to make it work for me.

## A Look Back at Grad Cohort 2015



Individual advising



Poster session

<http://cra-w.org/events/2015-grad-cohort-workshop/>



Photo booth

365 participants representing 123 institutions across the United States and Canada.



Thanks to Ayanna, Lori and Sandhya

## Attend the Inaugural Virtual Undergraduate Town Hall!

by Lori Pollock, University of Delaware

Would you or someone you know like to hear about leading edge computer science research conducted by a female computer scientist? Would you or someone you know like to participate in short discussions about CS research paths, graduate school opportunities, time management, undergraduate research opportunities and other topics suggested by undergraduate students? If so, the Virtual Undergraduate Town Hall is for you!

On Thursday October 8, 2015 from 2-3pm Pacific/5-6pm Eastern, CRA-W will be hosting the inaugural event in the Virtual Town Hall series. When we say "Virtual Town Hall", you can think webinar so you can attend from anywhere you have an internet connection. For the inaugural event, we are excited to have Dr. A.J. Brush, a



Dr. A.J. Brush

principal UX architect at Microsoft Research present "Inventing Technology for Homes & Families". This 20-minute talk will provide a glimpse into the forefront of research in Human-Computer Interaction. Dr. Brush studies and builds technology for homes and families so she is helping to create the future in which you will be living. During the webinar, opportunities will exist to ask questions and find out where to learn more about the topics Dr. Brush researches. Following Dr. Brush's research presentation, she will provide insights into how to start a research career path through an interactive discussion about graduate school opportunities and the application process.

You may be wondering why a *virtual* town hall? Our goal is to reach as many undergraduate women majoring in Computer Science and related fields as possible to provide them information on research and how to pursue a research path. We want all undergraduate women to be exposed to the research ideas that

are being pursued by women researchers and that are changing the world on a daily basis. We want to provide mentoring advice from distinguished women computer scientists about research career possibilities and how to pursue those possibilities. And we want to spread the word about how to get involved in research, by pursuing an undergraduate research opportunity or by considering graduate school.

We anticipate holding approximately six virtual town hall events each year. If possible, we encourage undergraduate women to organize with friends and virtually attend an event together, such as an ACM-W or similar club event. How about attending over pizza or having an ice cream party at the same time? By attending together, you can carry on the discussions started in the webinar with others. If you are worried it might be a boring screencast, never fear! We will provide plenty of opportunities for you to ask questions and we will also ask for your participation in interactive polls to facilitate sharing across the virtual town hall participants. So even if you end up attending from your own computer with a headset, we promise you an interactive experience and value your input as we aim to make each instance of the virtual town hall better.

If you have an idea for a speaker for a virtual town hall, if you have a particular mentoring topic you would like to see raised, if you have any ideas at all, please contact us as we would love to hear your ideas!

So, spread the word and plan to tune in on October 8th to be a part of the first CRA-W Virtual Town Hall.

For more information: [cra-w.org/undergrad-town-hall-series/](http://cra-w.org/undergrad-town-hall-series/).



# Highlight on Alum Sarah Ita Levitan (continued)

Interviewed by Carla Ellis, Duke University

## **Q: How did you become interested in pursuing research in computer science?**

Having an older sister who studied computer science influenced my initial decision to enroll in an introductory CS course at Brooklyn College. I enjoyed it and decided to take the next level course. My professor, Dr. Dina Sokol, spoke about her work on algorithms and DNA. Her enthusiasm for computing inspired me, and I completed two research projects mentored by her. She recommended that I apply for the DREU program, which solidified my interest in computer science research. Working in a research lab full time and interacting with graduate students and faculty members helped me realize that I wanted to attend graduate school and continue computer science research.

## **Q: How did your DREU experience influence your career path?**

My DREU experience had a huge influence on my career path. Working with Dr. Hirschberg, I became hooked on natural language and speech processing. I ended up returning the following summer, and ultimately joining the speech lab at Columbia as a PhD student, with my DREU mentor as my PhD advisor! I feel privileged to have such a wise and dedicated advisor, whose enthusiasm for research is contagious, and whose commitment to helping her students is extraordinary. She is passionate about encouraging women in CS, and continues to mentor DREU students most summers. Under her guidance, I have mentored a few excellent DREU students. I feel like things have come full circle!

## **Q: What other research experiences did you pursue as an undergraduate? Do you have any insight to share with undergraduates who might want to give research a try?**

My very first research experience occurred during the summer of my college freshman year when I worked as a research intern at the Mount Sinai School of Medicine. I worked with a software development group to help develop a web-based clinical research system for a large NIH-funded clinical trial. My job involved transforming PDF mock-ups of the forms into functional web-based forms using HTML and CSS. I later worked on an honors research project during my senior year in the field of computational biology. The project involved classifying tandem repeats in the human genome. At this stage I was more involved in higher level work, and I was a co-author of my first publication.

I would advise undergrads looking for research experience to take initiative and be proactive. Read about the research that your professors are involved with, and if something interests you, send



*Sarah conducting an experiment*

them an email, or better yet, go to their office hours. Go to research talks and approach the speaker with questions, and ask about opportunities to work with them. The summer is a great time to get significant research experience, and I would strongly recommend applying to the DREU program.

Don't be discouraged if your first experience with research is not quite what you expected. At entry level, basic research can involve repetitive, detail-oriented chores such as collecting, cleaning and converting data. This is an incredibly important part of research, and it makes it easy to contribute to a project while you fill in the gaps in your background with a lot of reading and asking questions.

## **Q: What made you decide on your specific research area? What excites you most about your current research?**

I decided to focus on spoken language processing after my DREU experience. My specific research area of deception is a fascinating one; the project began before I joined the lab, and I was very interested in joining this project when I began my PhD. I've always enjoyed reading mysteries about spies and deception, and it's pretty cool to be working on automatic deception detection. I'm most excited by the wide range of applications of my work. I recently attended a program review meeting at the US Air Force Academy, and this gave me a deeper appreciation of the broader impact of our work in terms of its implications for law enforcement and national security.

## **Q: If it's not too soon to ask - What are your future career plans (after graduation)?**

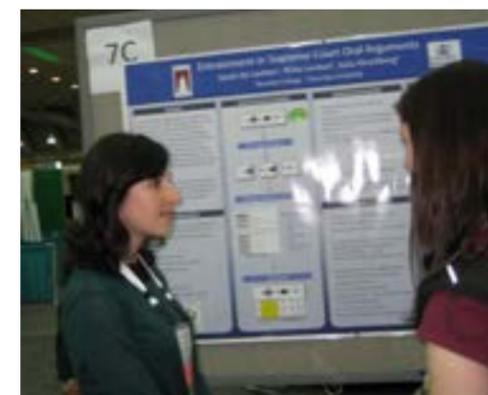
I have not yet decided what career I'd like to pursue when I graduate. This summer I had a wonderful experience working with the speech and natural language team at Interactions Corporation. I was exposed to a research environment within an industry setting,

and had the gratification of seeing my work deployed in a real world application. I'm also interested in mentoring and teaching so I'm considering academia as another career option. Whatever career path I end up taking, I hope I have the opportunity to use my work and abilities to contribute to science and society.

## **Q: Have you been involved in other activities that support women in computing (e.g., participating in a local women-in-computing group, attending Grace Hopper)?**

After my summer as a DREU participant, I attended the Grace Hopper conference (funded by DREU), to present results from my summer research. It was a truly incredible experience; I had never seen or even imagined that there were that many women in CS! I was used to being the only female (or maybe one of two or three) in classes of 30,40, or 50 students. The conference talks and workshops inspired me to start a Women in Computer Science club on my campus. It was a challenge to recruit women to participate, since there really weren't that many, but we did host a panel event featuring female faculty and alumnae. I received great feedback about founding the club, and even encouraged a few younger students to apply to participate in the DREU program.

Now that I am at Columbia, I've had the opportunity to participate in the very active Women in CS club, and I served as the mentorship chair for the past few semesters. As part of the WICS Mentorship Program, younger female students with an interest in computer science are assigned to female mentors who act as role models, advice givers, and friends. Instead of pairing one mentor to one student, we began an initiative where we assign students to "Mentorship Circles" with 3-5 members in each circle. Each circle has a leader who mentors the group, and there are some members of the group who are both mentees and mentors to younger students. This gives a more flexible dynamic to the groups, and creates an open, sharing environment. The circles meet informally a couple of times a month, over coffee or lunch. As part of the program, we held networking events for the participants, and we also ran contests to provide incentives for the circles to meet regularly. Our mentorship program is a wonderful opportunity for



*Sarah at Grace Hopper*

students to learn first-hand about internships, research experience, graduate school, and job options, in a relaxed, enjoyable way. Mentors gain from the program



*Sarah with other Columbia WiCS members*

by experiencing what it means to be a role model for younger students, practice leadership skills, and encourage other women to pursue a career in computer science.

## **Q: What do you do for fun? How do you balance life outside of work with your career objectives?**

I love to end a long day of work by coming home and relaxing with my wonderful husband and adorable daughter. I am fortunate to have a circle of family and friends that are supportive and encouraging of my career path. I try to balance my different roles by focusing on my current task. When I am at my desk, I am giving my work my all. And when I'm at the dinner table, my laptop is away and my family is my main focus. It's definitely a challenge, but both jobs are incredibly rewarding.

## Nomination Opportunities

Please consider nominating deserving women for awards! Many major awards of the ACM are due November 30, 2015. These awards include the A. M. Turing Award, our field's most prestigious award, as well as the following: the Distinguished Service Award, Grace Murray Hopper Award, Paris Kanellakis Theory and Practice Award, Karl V. Karlstrom Outstanding Educator Award, Eugene L. Lawler Award for humanitarian contributions, Outstanding Contribution to ACM Award, and the ACM/AAAI Allen Newell Award. See [http://awards.acm.org/award\\_nominations.cfm](http://awards.acm.org/award_nominations.cfm).

The Computing Research Association (CRA) awards include the A. Nico Habermann Award for contributions aimed at underrepresented groups and the Distinguished Service Award for service to the computing research community. Nominations are due December 11, 2015. See <http://cra.org/awards/>.

CRA-W's BECA nominations are due February 15, 2016. See <http://cra.org/cra-w/beca-award-program/>.

You can find more awards at [cra-w.org/scholarships-and-awards/](http://cra-w.org/scholarships-and-awards/).

# AlumNews



## Abeer AlJarrah

University of North Carolina, Charlotte

I am a fourth year PhD student in Software Information Systems at the University of North Carolina at Charlotte. My research focuses on security and privacy for smart phone systems at the application and system levels. I have been chosen to participate in a summer school at the University of Bochum in Germany. I expect to defend my dissertation proposal this December.

## Sarah Andrabi

Microsoft

I graduated with my MS in Computer Science from the University of North Carolina at Chapel Hill. My research focused on studying the usability of visual cryptography paired with augmented reality. Wired magazine wrote an article featuring my research. While at UNC Chapel Hill, I founded the Graduate Women in Computer Science group. In February 2015, our group held a Women in Computing Research Workshop to expose undergrad women to the possibilities of CS and give them an opportunity to network. The conference was a success. Our hope is to make a yearly regional conference. I am currently working at Microsoft as a Security Program Manager in the Windows and Devices Group in Redmond.



## Deana Brown

Google

I'm excited to join Google as a User Experience Researcher having recently completed my PhD in Human-Centered Computing at Georgia Tech. I am grateful for the support of the community as a grad student and look forward to continued support as I embark on this new phase of life.

## Ewa Deelman

University of Southern California

I am the recipient of a 2015 HPDC Achievement award (<http://www.hpdc.org/2015/awards/achievement-award/>). The award was presented in June 2015 in Portland, OR at the annual HDPC conference. I received the award for my "significant influence, contributions, and distinguished use of workflow systems in high-performance computing."



## Marie desJardins

University of Maryland, Baltimore County

I just completed a year as an American Council on Education Fellow, and will be starting a new position at UMBC this fall as Associate Dean of Academic Affairs in the College of Engineering and Information Technology. Last year, I was named UMBC's Presidential Teaching Professor and received an NCWIT 2014 Undergraduate Research Mentoring Award. I've been increasingly active in the CS education community, most notably leading the NSF-sponsored "CS Matters in Maryland" project to develop curriculum and train teachers on the new AP CS Principles course and spearheading statewide efforts for CS courses to count towards high school graduation in Maryland.



## Aleksandra Faust

Google[x]

I recently joined Google[x]'s self-driving car team, leaving Sandia National Labs after nine years. Earlier this year, my Ph.D. dissertation won the Tom L. Popejoy Award, a prize awarded to the best doctoral dissertation in Engineering, Math, and Sciences at the University of Mexico. I was co-founder of the annual Machine Learning in Planning and Controls of Robot Motion workshop at IROS. To promote STEM, I had the pleasure of co-organizing the Becoming a Robot Guru Workshop at the IEEE International Conference on Robotics and Automation (ICRA), a discipline-specific workshop for broadening participation in Computer Science. I have also served as a mentor at Go, Girl, Go!, at ICRA, and organized and participated in a number of STEM outreach events in local public schools.



## Laura Fulton

University of Pittsburgh

In May, I presented with Microsoft YouthSpark at the Microsoft Ignite Conference. In late July, I was at the Google headquarters for the 2015-2016 Google Student Ambassador Summit. I was also 1 of 20 female engineering students selected nationally to attend Square's College Code Camp this summer, a five-day coding immersion program with sessions in iOS development, machine learning, engineering architecture, and security. I plan to share my experience at Pitt as I co-chair and help plan the second She Innovates Women's Hackathon.



## Danai Koutra

University of Michigan, Ann Arbor

I just joined the faculty at the University of Michigan Ann Arbor as an assistant professor in the EECS department (CSE). My research focuses on fast and principled methods for exploring and understanding large-scale graphs, and includes graph similarity and matching, graph summarization and visualization, and anomaly detection. My work has been applied mainly to social, collaboration and web networks, as well as brain connectivity graphs.



## Sandeep Kuttal

University of Tulsa

I recently joined the faculty at the University of Tulsa (TU) as an assistant professor in the Tandy School of Computer Science. My research is broadly in the area of software engineering, empirical evaluation and human computer interaction. My current research focuses on end-user programming, end user software engineering and information foraging. Prior to joining TU, I had a joint appointment as a post-doctoral scholar at Oregon State University and University of Nebraska-Lincoln.



## Aditi Mallavarapu

University of Illinois at Chicago

I successfully completed my Masters from the University of Illinois at Chicago in October 2014 with a publication in the field of Educational Data Mining. I am currently working with Perficient Inc. as a Technical Consultant. Recently, I was given an opportunity to present my work at the Eighth International Conference on Educational Data Mining, held in Madrid, Spain. I plan to go back to school for a PhD this coming August.



## Chris Martens

Carnegie Mellon University

I will have defended my Ph.D. dissertation on August 31st! My research revolves around programming languages and formal methods for interactive storytelling and game design, as well as logical formalisms for studying narrative structure. I plan to begin a postdoc in the fall and search for faculty positions next year.

## Monica McGill

Bradley University

I am associate professor and game design lead at Bradley University. I have focused my research on creating games to improve health,

particularly in the area of diabetes. Over the spring semester, I and seven undergraduate students in my capstone class produced and released Coco's Cove, a game that features Coco, a monkey who happens to have type 2 diabetes. Currently available on Google Play, the puzzle-platformer game features 100 levels across five worlds.

## Maureen Ngugi

University of North Carolina, Charlotte

After completing my CRA-W sponsored internship at Clemson University, SC, I was hired by Premier, Inc as a QA Analyst. I worked on back-end testing, which enhanced my database skills. I was also able to get hands on experience as an ETL developer within the company. I then took an opportunity at WellsFargo. I now perform ETL work as a SSIS developer and enjoy it tremendously. Thanks CRA-W for the opportunity you give women to successfully enter and continue a career in the Tech field!



## Youwen Ouyang

California State University San Marcos

I am Professor and Chair of Computer Science and Information Systems Dept. at Cal State San Marcos (CSUSM). We will host the 4th Women's Hackathon @ CSUSM on October 24, 2015. The semi-annual 12-hour event encourages high school and university women to create software solutions of social impact. The inaugural event was held in April 2014 as part of the 2nd International Women's Hackathon, initiated by Microsoft Research. Since then, Women's Hackathon @ CSUSM has served close to 200 young women from 25 high schools and 8 colleges. Thanks to generous support from local companies, the events are free to students and provide a team of floating mentors to inspire, and support young women throughout the events. Learn more or register for the October 24 Women's Hackathon at: [www.sandiegohackathon.org](http://www.sandiegohackathon.org).



## Iman Saleh

Intel Corporation

I recently joined Intel as a Developer Evangelist and I am happy to announce a new parallel programming online workshop that I am organizing for HPC developers. The Hands-On Workshop (HOW) Series is a comprehensive set of Webinars that provides an in-depth intensive course on efficient parallel programming of Intel® Xeon® family processors and Intel® Xeon Phi™ coprocessors. Attendees will get access to a remote server for the online coding exercises. They will also receive a certificate of attendance if they complete the series. The best part, it's all FREE! For more details, schedule and registration, check <http://colfaxresearch.com/how-series/>

## AlumNews (continued)



### Karla Saur

University of Maryland, College Park

I will defend my PhD thesis at the University of Maryland, College Park in September 2015. My dissertation is on dynamic upgrades in high availability systems, building general-purpose

frameworks for efficient, on-line data transformation in support of flexible system services. After graduation, I will join Intel Labs as a distributed systems researcher. I'm looking forward to this new chapter in my research!



### Erin Solovey

Drexel University

After finishing my PhD in computer science at Tufts in 2011, I was awarded the NSF/CRA Computing Innovation Fellowship which supported my two years at MIT as a post-doc in the Humans and Automation

Lab and CSAIL. In 2013, I joined Drexel University as an assistant professor of Computer Science where I direct the Advanced Interaction Research lab. My main research area is human-computer interaction, specifically emerging interaction modes and techniques, such as brain-computer interfaces, physiological and wearable computing, and reality-based interaction. This past summer, Phoebe Wooldridge joined the lab from Carleton College as a DREU student, and Shelby Keating from Drexel will be in my lab this upcoming year as a CREU student.



### Monet Spells

Georgia Institute of Technology

I finished a summer-long internship at Intel (Portland, OR), where I worked on mobile form factors as a UX Researcher for the Mobility Client Platforms group. The coolest part of the summer: I initiated, planned, and

conducted a research workshop introducing teenagers to design-thinking concepts such as problem definition, user research, empathetic thinking, and rapid prototyping to encourage problem-solving and critical-thinking skill development. I enjoyed the pilot workshop so much that I will continue the research at Georgia Tech, where I hope to include more diverse populations of teens.



### Vinitha Hannah Subburaj

Baldwin Wallace University

I received my PhD from Texas Tech University, where my research focused on software specification languages, formal methods, intelligent agent systems, and language processing. I then joined the faculty at

Baldwin Wallace University in Ohio as an assistant professor in the Department of Math and Computer Science. Since joining Baldwin Wallace, I have become the assistant chair and secretary of the division of Math, Computing, and Sciences. I was selected to attend AACU's and Project Kaleidoscope's 2015 Summer Leadership Institute.



### Manaz Taleyarkhan

Purdue University

This summer I worked at Intel in Internet of Things. My internship in IoT marketing entailed project management for a user experience design project for collaboration spaces. This fall I will propose my master's

thesis in Computer Information Technology regarding CAD simulations and their effect on student design thinking. In my spare time I enjoy clay sculpture as well as tinkering with machines in any lab that will have me. My colleagues and I are organizing a graduate women in Computer Information Technology Cohort at Purdue University, and I'll be returning to teach in the Engineering Projects In Community Service Program. I am honored to be a 2015 Grace Hopper Scholar.



### Qinsi Wang

Carnegie Mellon University

I am a final year Ph.D. student under the supervision of Prof. Edmund M. Clarke (Turing Award 2007) at Carnegie Mellon University. My research focuses on developing formal models and analyzing methods and tools for

various types of biological models, which include discrete logical models, hybrid multi-scale rule-based models, hybrid models, and stochastic hybrid models. Recently I received the Richard King Mellon Foundation Presidential Fellowship Award in the Life Sciences for the 2015-2016 Academic year. I have also been invited to the 3rd Heidelberg Laureate Forum.

### Drew Williams

Marquette University

This summer, I accepted an internship with Intel Corporation, working with the Internet of Things Community Evangelism team as a Software Technology intern. Ultimately, the project was presented at this year's Intel Developer Forum. In addition to this work, I was also able to talk with and inspire high school interns at Intel, travel to a hackathon in California to interact with makers, and present my work to other teams at Intel on more than one occasion. Now that the summer is over, I will return to Marquette University to begin the second year of my Computational Sciences PhD program.



### Carole-Jean Wu

Arizona State University

In Fall 2012 I started an assistant professor position in Computer Science and Engineering at the School of Computing, Informatics, and Decision Systems Engineering, Arizona State University.

Earlier this year, my architectural energy harvesting research work received the Best of IEEE Computer Architecture Letters Award and was presented at the International Symposium on High Performance Computer Architecture. The work has been supported by a prestigious grant, the Bisgrove Early Career Scholarship of Science Foundation Arizona, an EAGER award from NSF, and recently it received additional support from the NSF CISE core program. I have also been actively involved in broadening the participation of women in computing. Last year, I led the ASU Grace Hopper scholarship program enabling more than ninety female students to attend GHC-2014, Phoenix, AZ. I am continuing the effort this year to bring forty-five students to GHC-2015 in Houston, TX. Hope to meet many of you at GHC-2015!



### Jishen Zhao

University of California, Santa Cruz

In January 2015, I joined the Computer Engineering Department at University of California, Santa Cruz as an assistant professor. My research is concerned with a broad range of computer architecture,

with an emphasis on memory and storage systems, GPGPU architectures, and emerging technologies. One of my recent research directions is persistent memory, merging the memory and storage systems with new memory technologies. Before joining UCSC, I was a research scientist at HP Labs.

## Patty Lopez Receives Honors



Patty Lopez, Senior Platform Applications Engineer at Intel Corporation and Board member of CRA-W, has recently received two awards.

On August 4th, the Society of Women Engineers (SWE) released the names of its annual awards program recipients. The annual

initiative recognizes SWE members and individuals who enhance the engineering profession through contributions to industry, education and the community. Award recipients will be honored at a formal ceremony at WE15, the world's largest conference for women engineers, on Oct. 23, 2015 in Nashville, Tenn.

Patty is a winner of the SWE Award for Advocating Women in Engineering. This award honors an individual who has demonstrated professional excellence in their chosen STEM field and has proven to be an advocate of women in engineering and SWE's objectives. Colleen Layman, president of SWE, said: "These are the role models who lead by example and inspire the current and next generation. We are honored to have them as part of our mission."

Patty has also been named as one of New Mexico's Women of STEM for contributions in motivating young women to pursue education and careers in science, technology, engineering and math (STEM) fields. Patty was among the first women to earn a Ph.D. in computer science at New Mexico State University.

The New Mexico Women of STEM will be featured in a calendar distributed to public schools around New Mexico to encourage young women to make STEM choices for their own careers. The calendar was the brainchild of Supercomputing Challenge program manager Patty Meyer who said of the project, "It will show all young women, regardless of race or background that they can succeed in STEM careers too."

## Margaret R. Martonosi receives Marie R. Pistilli Award



Margaret R. Martonosi, Hugh Trumbull Adams '35 Professor of Computer Science at Princeton University, has been selected as the Marie R. Pistilli Women in Electronic Design Automation (EDA) Achievement Award recipient for 2015. The award honors Margaret for her technical leadership of high-impact research projects in the design of power-efficient computer architectures and sensor systems as well as her creation and organization of career development programs for women and minorities. As a highly visible woman in leadership positions at Princeton and within her professional community, Margaret also has acted as a mentor and role model for graduate and undergraduate women students.

"Margaret's research interests are in computer architecture and mobile computing, with particular focus on power-efficient systems. Her work has included the development of the Wattch power modeling tool and the Princeton ZebraNet mobile sensor

network project for the design and real-world deployment of zebra tracking collars in Kenya. Her current research focuses on hardware-software interface approaches to manage heterogeneous parallelism and power-performance tradeoffs in systems ranging from smartphones to chip multiprocessors to large-scale data centers.

Margaret is a Fellow of both IEEE and ACM. She was the 2013 recipient of the Anita Borg Institute Technical Leadership Award. She also has received the 2013 NCWIT Undergraduate Research Mentoring Award and the 2010 Princeton University Graduate Mentoring Award. She serves on the Board of Directors of the Computing Research Association (CRA). She is a former board member of CRA-W, having created the Discipline Specific Workshop program. She has also served as a DREU mentor and speaker at Grad Cohort and Career Mentoring Workshops.

The award, named for DAC's former organizer Marie Pistilli, was formally presented to Margaret in June at the 52nd Design Automation Conference (DAC) in San Francisco.

## Laura Haas wins SIGMOD Edgar F. Codd Innovation Award



Laura Haas, IBM Fellow and Director of IBM Research's Accelerated Discovery Lab, is the recipient of the 2015 SIGMOD Edgar F. Codd Innovation Award for pioneering innovations in the integration of multiple, heterogeneous data sources. The Codd award is given each year to recognize a member of the community who has made innovative and highly significant contributions of enduring value to the development, understanding, or use of database systems and databases.

Laura is best known for her work on the Starburst query processor (from which DB2 UDB was developed); on Garlic, a system that allowed federation of heterogeneous data sources; and on Clio, the first semi-automatic tool for heterogeneous schema mapping. Garlic technology, married with DB2 UDB query processing, is the basis for

the IBM InfoSphere Federation Server, while Clio capabilities are a core differentiator in IBM's InfoSphere Data Architect.

Laura served as Vice President of the VLDB Endowment Board of Trustees from 2004-2009 and was vice chair of ACM SIGMOD from 1989-1997. In 2010 she was recognized with the Anita Borg Institute Technical Leadership Award. She is a member of the National Academy of Engineering and the IBM Academy of Technology, an ACM Fellow, and Vice Chair of the board of the Computing Research Association. Laura has spoken at a number of CRA-W career mentoring workshops.

The award was presented in June at the annual SIGMOD conference. Laura presented a short talk on "Two Projects on Information Integration" as part of the award ceremony, reflecting on past achievements and their impact. She was also one of two keynote speakers for the conference. Her keynote talk was titled "The Power Behind the Throne: Information Integration in the Age of Data-Driven Discovery".

## CRA-W Alums win GHC ABIE Awards

The Anita Borg Institute, a non-profit organization focused on the advancement of women in computing, has announced the winners of the 2015 Grace Hopper Celebration (GHC) ABIE Awards. ABI will celebrate the ABIE Award winners at the 2015 Grace Hopper Celebration of Women in Computing, held in Houston, Texas on October 14 - 16, 2015.

"The GHC ABIE Awards recognize the tremendous contributions of brilliant women in technology at a fitting venue - the largest gathering of technical women in the world," said Telle Whitney, president and chief executive officer of the Anita Borg Institute and co-founder of the Grace Hopper Celebration. "We're thrilled and extremely proud of these women's achievements as researchers, educators, entrepreneurs and technical leaders. We look forward to acknowledging their accomplishments at the 2015 Grace Hopper Celebration."

The winners are nominated by their peers and chosen by a panel of fellow technologists and past ABIE Award winners based on their extraordinary achievements and commitment to excellence. The GHC 2015 ABIE Award Winners include:



### Lydia E. Kavraki Wins the Technical Leadership ABIE Award

The Technical Leadership ABIE Award recognizes women technologists who demonstrate leadership through their contributions to technology and achievements in increasing the impact of women on technology. Lydia E. Kavraki has

made significant research contributions in physical algorithms and their applications in robotics, including robot motion planning, hybrid systems, formal methods in robotics, assembly planning, micromanipulation and flexible object manipulation. Lydia has also worked extensively in the fields of computational structural biology, translational bioinformatics and biomedical informatics.

Lydia is the Noah Harding Professor of Computer Science and Professor of Bioengineering at Rice University, where she has mentored more than 20 female undergraduate students. She is the faculty mentor of the Undergraduate Women in Computer Science Club. Lydia is the recipient of the 2000 Grace Murray

Hopper Award, a Fellow of ACM, IEEE, AAAS, AAAI, AIMBE and a member of the National Academy of Medicine. She has served as a DREU mentor for many years.



### Lydia Tapia wins the Denice Denton Emerging Leader ABIE Award

The Denice Denton Emerging Leader ABIE Award recognizes a junior faculty member for high-quality research and significant positive impact on diversity. Lydia Tapia is an Assistant Professor of Computer Science at the University of New Mexico (UNM). Her

field of research is methodologies for the simulation and analysis of motion, and she applies these methods to both robots and disease-causing proteins as the director of the Adaptive Motion Planning Research Group. Previously, Lydia was a Computing Innovation Post Doctoral Fellow at the University of Texas at Austin. She received her Ph.D. from Texas A&M University and a Bachelor of Science from Tulane University. Lydia is highly committed to K-12 outreach and research experiences for undergraduates. Lydia has attended CRA-W mentoring workshops, been a DREU mentor, and served as the CRA-W webmaster for several years.



### Joanne McGrath Cohoon is the A. Richard Newton Educator ABIE Award Winner

The A. Richard Newton Educator ABIE Award recognizes educators who develop innovative teaching practices and approaches that attract girls and women to computing, engineering, and math. Joanne McGrath Cohoon

is a sociologist with the rank of Full Professor in the University of Virginia's Department of Engineering & Society. She has conducted extensive research about the gender imbalance in computing and put her knowledge into practice through her work with the National Center for Women and Information Technology (NCWIT). Joanne is a senior research scientist for NCWIT, where she promotes diversity and equity by improving the practices of institutions that educate and employ computing professionals. Joanne is a board member of CRA-W.

## News from Affiliated Groups: Teaching intro CS? Get Inspired by EngageCSEdu

by Beth Quinn, NCWIT

Are you a new faculty member teaching your first CS1 or CS2 course or an experienced faculty member teaching it again after many years away? Even with burgeoning CS enrollment, do you sometimes wonder if your program's intro courses may be driving away students you might not want to lose? If so, check out EngageCSEdu ([www.engage-csedu.org](http://www.engage-csedu.org)), a comprehensive collection of instructional materials for introductory undergraduate computer science courses developed by The National Center for Women & Information Technology (NCWIT) and Google, and available to all interested computing educators.

NCWIT partnered with Google to develop EngageCSEdu as part of their shared commitment to increasing the meaningful participation of women in computing. We know that students' experiences in introductory courses have a big impact on their attitudes about, and commitment to, the field. A great experience in an introductory CS course can make the difference between continuing in computing and leaving [1]. The goal of the EngageCSEdu project is to provide an easy-to-search, easy-to-use way for CS faculty to share their best approaches to teaching introductory computing courses, and in doing so, improve the intro CS experience for all students.

What sets EngageCSEdu apart from other collections is its explicit focus on materials that are likely to engage a broad group of students. All materials in the collection--which currently include projects, assignments, homework, and some lecture materials--have been reviewed by experts for their effective use of research-based pedagogical strategies for engaging and retaining a diverse range of students (which we call "Engagement Practices") and for the quality of their approach to the technical material. Besides finding course materials that employ these practices, the

EngageCSEdu site also contains a wealth of information about these Engagement Practices, including examples and links to relevant NCWIT resources.

Two important Engagement Practices that are used throughout the collection are providing content that is meaningful and relevant to students' lives, and making interdisciplinary connections to computing concepts. Many of the materials also employ techniques that encourage, and ideally structure, cooperative work among students. These three techniques are among 17 Engagement Practices that research suggests improve the recruitment and retention of women into computing majors [1,2]. Visit the EngageCSEdu site to explore these and other Engagement Practices.

Collection materials all have a Creative Commons license that allows other instructors to use, and in some cases, modify them. Currently, the collection contains nearly 1500 teaching materials (68% covering early course materials, i.e., CS1, and 33% addressing more advanced "CS2" topics). The project continuously accepts new submissions from any postsecondary faculty member via an online submission process. Authors of high quality materials are eligible for our annual Engagement Excellence awards [<https://www.ncwit.org/project/ncwit-engagecsedu-engagement-excellence-awards>]. If you would like additional information about the collection, submitting your work, or the awards, please contact us at [engagecsedu@ncwit.org](mailto:engagecsedu@ncwit.org).

[1] Barker, L.; Hovey, C.L.; Thompson, L.D., "Results of a large-scale, multi-institutional study of undergraduate retention in computing," in *Proceedings of the Frontiers in Education Conference*, 2014.

[2] Simon, Beth, Julian Parris, and James Spacco. "How we teach impacts student learning: peer instruction vs. lecture in CS0." In *Proceeding of the 44th ACM Technical Symposium on Computer Science Education*, 2013.

### Upcoming Events and Deadlines

2015		2016	
Oct. 14	CRA-W career mentoring tracks at Grace Hopper	Feb. 15	Newsletter updates, articles due
Oct. 14-16	CRA-W outreach at Grace Hopper, Houston, TX	Feb. 15	Application deadline for summer DREU program
Nov. 30	Application deadline for 2016 Grad Cohort	Feb. 15	BECA nominations due
Dec. 15	Deadline for Discipline Specific Workshop proposals		

## News from Affiliated Groups: ACM-W Scholarships for Research Conferences

by Adriana Compagnoni, Stevens Institute

The ACM-W Scholarship for Attendance of Research Conferences program provides support for women students in Computer Science and related programs who wish to attend research conferences. The student does not have to present a paper at the conference to be eligible. Applications are evaluated on 6 occasions each year, in order to distribute awards across a range of conferences, with 1-6 awards given for each group of applications. The 2014-2015 ACM-W Scholarships were made possible thanks to the generous support of Google and Oracle.

If the award is for attendance at one of the ACM special interest group conferences (SIG conferences), the SIG will most likely provide complementary conference registration and a mentor during the conference. The number of free registrations available varies from SIG to SIG.

ACM-W has helped students attend a wide range of meetings including SIGGRAPH, SIGCHI, ICDIPC, Women in Cyber Security, ACM EC, SIGCSE, IEEE Conference on Norbert Wiener in the 21st Century, DIS, IPDPS, ICC, ACM CHI, AAMAS, FLAIRS, RO-MAN, WIMS, CSCW, New Interfaces for Musical Expressions, GECCO, SpringSim, and ICSE amongst others.

The scholarships expose students to prominent researchers in their field, introduce students to new research, and excite them about doing research themselves. We ask students to share their thoughts on the conference they attended and we never cease to find truly inspiring stories. Here are some recent examples:

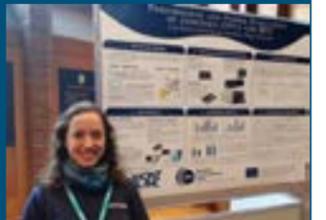
*"This year was my first time serving on the committee in the role of Proceedings Chair. Receiving the scholarship to attend helped me to network with the other committee members including top researchers in the field of HCI in Korea, whom I otherwise would never have the opportunity to meet... I also had the opportunity to meet with individuals on my dissertation committee who are external members." - Deana Brown, Georgia Tech, attended CHI 2015.*



*"Educational Data Mining is a growing multidisciplinary field of research, and there is almost no faculty member who works on this domain at my home university... My research is about a virtual learning environment (TeachLivE) for novice teachers. At the conference, I discussed several challenges about my research with different people, and they patiently helped me to resolve most of them." - Leila (Roghayeh) Barmaki, University of Central Florida, attended the 7th International Conference on Educational Data Mining.*



*"After receiving the news that I was awarded this scholarship, I decided to present a poster in the Career Workshop for Women and Minorities in Computer Architecture (CWWMCA) to make the most of the experience" - Luna Backes, Universitat Politècnica de Catalunya (UPC) attended the 47th Annual IEEE/ACM International Symposium on Microarchitecture.*



The program has grown tremendously in terms of number of applications, number of awards, number of supporting SIGs, and dollar amount awarded per year, despite budget pressures. In the first year of the program (2006-07) we were able to distribute four awards, for a total of \$2,000. This year (2014-15) we gave 43 awards in a total of \$37,000, shared between undergraduates, master students, and PhDs. While it is easy to see the growth in the number of awards and the average value of these awards, the impact in terms of qualitative gains is harder to quantify.

Beyond the thankful messages of our students we have only anecdotal evidence of some of our undergraduate students going on to PhD programs and becoming faculty members with their own students. We hope to keep strong this wonderful cycle of women supporting other women in computer science.

The next application deadline is October 15 for conferences taking place in December and January.

For more information and to apply visit: [women.acm.org/scholarship](http://women.acm.org/scholarship). If you have any questions, contact scholarship committee chair Prof. Adriana Compagnoni, [Adriana.Compagnoni@stevens.edu](mailto:Adriana.Compagnoni@stevens.edu)

# About CRA-W



## CRA-W Board Members

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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://www.cra-w.org>.

CRA-W has received funding from the Computing Research Association, National Science Foundation, Microsoft Research, Google, Yahoo!, IBM, Walmart Labs, Facebook, Two Sigma, Intel, Alfred P. Sloan Foundation, D. E. Shaw Research, Henry Luce Foundation, and ACM Special Interest Groups. We thank them for their support.

CRA-W encourages individual contributions from alums of our programs and other CRA-W friends. 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 <http://www.cra.org/cra-w/donate/>.