# GradCohort 2 0 1 7

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WASHINGTON, D.C. APRIL 7-8, 2017







Computing Research
Association
Women







#### **Dear Grad Cohort Participant**,

**We welcome you to the 2017 CRA-Women Graduate Cohort Workshop!** The next few days are filled with sessions where 30 senior computing researchers and professionals will be sharing their strategies and experiences to help increase your graduate school and career success. There are also plenty of opportunities to meet and network with these successful women as well as with graduate students from other universities. We hope that you will take the utmost advantage of this unique experience by actively participating in discussions, developing peer networks, and building mentoring relationships.

The 2017 CRA-Women Graduate Cohort Workshop is made possible through generous contributions by Microsoft Research, Association for Computing Machinery, Google, Intel, Computing Research Association, Department of Energy, National Science Foundation, a private foundation, Capital One, IBM, Toyota Research Institute, AAAI, ACM SIGACT, ACM SIGAI, ACM SIGARCH, ACM SIGCOHM, ACM SIGGRAPH, ACM SIGIR, ACM SIGMOBILE, ACM SIGOPS, ACM SIGPLAN, ACM SIGSOFT, Amazon, D. E. Shaw Research, Facebook, a private contributor, Two Sigma and in some cases department funds from participating universities/institutions. Please join us in thanking them for their kind support.

We hope that you take home many new insights and connections from this workshop to help you in your graduate school and career journey in the world of computing. Be ready to be inspired, learn, and meet many interesting technical women.

#### Sincerely,

Lori Clarke, Sandhya Dwarkadas, and Ayanna Howard

CO-CHAIRS, CRA-WOMEN GRADUATE COHORT WORKSHOP







#### Thursday, April 6, 2017

1:00 PM - 8:00 PM **Early Registration** - *Mezzanine Foyer* 

6:00 PM - 8:00 PM Welcome Reception - Mezzanine Foyer

#### Friday, April 7, 2017

7:00 AM - 8:00 PM Registration - Marquis Salons 5/6 Foyer

7:30 AM - 8:30 AM Breakfast - Marguis Salon 6

8:30 AM - 8:45 AM Welcome - Marquis Salon 5

Speaker(s):

Lori Clarke (University of Massachusetts, Amherst),

Sandhya Dwarkadas (University of Rochester), and Ayanna Howard (Georgia Tech)

	First year Marquis Salon 5	Second year Marquis Salons 1/2	Third year Marquis Salons 3/4
8:50 AM - 9:50 AM	Networking	Finding a Research Topic (including Interdisciplinary)	Industry vs. Academic Research Positions
Speaker(s):	Soha Hassoun (Tufts University) and Lynne Parker (University of Tennessee, Knoxville)	Julia Hirschberg (Columbia University)	Dilma da Silva (Texas A&M) and Kim Hazelwood (Facebook)
9:55 AM - 10:55 AM	Master's vs. Ph.D.	Presentation and Other Verbal Communication Skills	Preparing Your Thesis Proposal and Becoming a PhD Candidate
Speaker(s):	Bushra Anjum (Amazon, Inc.) and Rita Wouhaybi (Intel Corp.)	Lori Pollock (University of Delaware)	Susan Davidson (University of Pennsylvania) and Martha Kim (Columbia University)

10:55 AM - 11:15 AM Break

11:15 AM - 12:15 PM

M.S. Career Opportunities
and Job Search

Speaker(s):

Jennifer Hill (Capital One) and Patty Lopez (Intel Corp.) Perspectives from Grad Cohort Alums

Bushra Anjum (Amazon, Inc.)
Lydia Tapia
(University of New Mexico)
and
Kate Tsui
(Toyota Research Institute)

Ph.D. Academic Career Paths and Job Search

Michelle Mazurek (University of Maryland) Susan Rodger (Duke University) and Mary Lou Soffa (University of Virginia)

12:15 PM - 1:30 PM	ACM Sponsored Lunch - Marquis Salon 6			
	First year Marquis Salon 5	Second year Marquis Salons 1/2	Third year Marquis Salons 3/4	
1:30 PM - 2:30 PM	Financing Your Graduate Education	Balancing Graduate School and Personal Life	Ph.D. Non-Academic Career Paths and Job Search	
Speaker(s):	Dilma da Silva (Texas A&M) and Janie Irwin (Penn. State)	Radhika Nagpal (Harvard) and Melanie Wu (Pomona College)	Amanda Stent (Bloomberg) and Rita Wouhaybi (Intel Corp.)	
2:30 PM - 3:00 PM	Break			
3:00 PM - 4:00 PM Speaker(s):	Keynote - Marquis Salon 5  Jan Cuny (National Science Foundation)			
4:00 PM - 4:15 PM	Break			
4:15 PM - 5:45 PM	Poster Session - Marquis Salon 9/10			
6:30 PM - 10:30 PM	Reception hosted by Microsoft Research - Marquis Salon 5			
Saturday, April 8, 2	2017			
7:30 AM - 8:30 AM				
8:30 AM - 9:40 AM Speaker(s):	Strategies for Human-Human Interaction - Marquis Salon 5 Jamika Burge (Capital One), Janie Irwin (Penn. State) and Patty Lopez (Intel Corp.)			
9:40 AM - 10:10 AM	Break			
	First year Marquis Salon 5	Second year Marquis Salons 1/2	Third year Marquis Salons 3/4	
10:10 AM - 11:10 AM	Finding an Advisor and Developing an Effective Working Relationship	Building Your Professional Persona	Entrepreneurial Opportunities & Skills	

2017	Grad	Cohort

Amanda Stent (Bloomberg)

Kate Tsui

(Toyota Research Institute)

Jamika Burge (Capital One)

and

Radhika Nagpal (Harvard)

with them

Speaker(s):

	First year	Second year	Third year
	Marquis Salon 5	Marquis Salons 1/2	Marquis Salons 3/4
11:20 AM - 12:20 PM	Summer Internships	Building Self-Confidence	Publishing Your Research
Speaker(s):	Deb Agarwal	Mary Lou Soffa	Soha Hassoun
	(Lawrence Berkeley National Lab)	(University of Virginia)	(Tufts University) and
	and	and	Ming Lin (University of North
	Jennifer Hill (Capital One)	Melanie Wu (Pomona College)	Carolina, Chapel Hill)

12:30 PM - 12:45 PM

Wrap-Up & Final Remarks - Marquis Salon 5

Speaker(s):

Lori Clarke (University of Massachusetts, Amherst), Sandhya Dwarkadas (University of Rochester), and Ayanna Howard (Georgia Tech)

12:45 PM - 2:00 PM

Lunch - Marquis Salon 6

2:00 PM - 4:00 PM

**Individual Resume/CV Advising** Marquis Salons 1/2

Individual Academic/Career Advising Marquis Salons 3/4



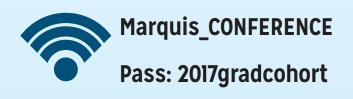
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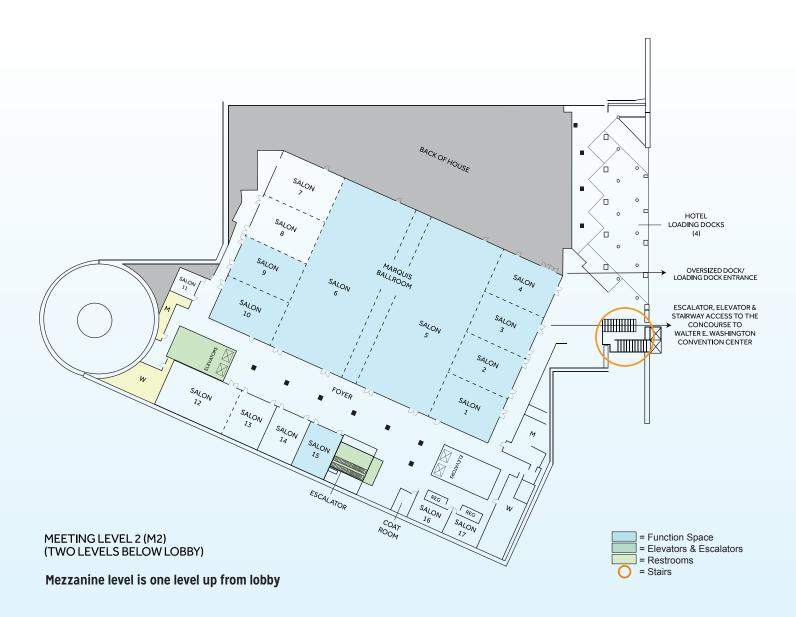








# Floor Plan





# **Sessions**

#### Networking

Soha Hassoun, Lynne Parker Friday April 7, 2017 8:50 am - 9:50 am

Marguis Salon 5

This session addresses the skills that are needed for networking - a very important component of your professional life. The topics include strategies for finding a community, meeting people in the field, and promoting your research and yourself. This session will also address what you should prepare for, learn, and what to do when you attend conferences, workshops, or any technical meeting, including meeting researchers visiting your department.

## ► Finding a Research Topic (including **Interdisciplinary**)

Julia Hirschberg

Friday April 7, 2017 8:50 am - 9:50 am

Marguis Salons 1/2

This session will focus on strategies for actively identifying a viable research topic for your Ph.D. dissertation. It will discuss how to choose between several topics and what you should look for in a topic. It will address how your career plans (e.g., teaching, academic research, or industrial research) may influence your choice. It will also describe the various aspects of a research topic (e.g., theoretical foundation, experimental framework, analytic and experimental results), and it will discuss how to set reasonable goals and milestones so that you can successfully finish in a reasonable time frame.

## ► Industry vs. Academic Research Positions

Dilma da Silva, Kim Hazelwood

Friday April 7, 2017 8:50 am - 9:50 am

Marguis Salons 3/4

This session will focus on the difference in research positions and opportunities in industry and academia. It will describe the expectations and challenges in both and considerations in choosing between the two, including opportunities for moving from one to the other.

#### Master's vs. Ph.D.:

Bushra Anjum, Rita Wouhaybi

Friday April 7, 2017 9:55 am - 10:55 am

Marguis Salon 5

This session will address the main differences in career options and in graduate studies between a Master's degree and Ph.D. degree. Topics include realistic goals and expectations for each degree and various strategies for deciding which degree to pursue.

#### Presentation and Other Verbal Communication Skills

Lori Pollock

Friday April 7, 2017 9:55 am - 10:55 am

Marquis Salons 1/2

This session will focus on building your oral communication skills. Topics include strategies for high quality oral presentations of papers, posters, and panels.

#### Preparing Your Thesis Proposal and Becoming a Ph.D. Candidate

Susan Davidson, Martha Kim

Friday April 7, 2017 9:55 am - 10:55 am

Marquis Salons 3/4

Before being a Ph.D. candidate, students usually have to pass several hurdles, with the last one being the thesis proposal, where you show that you understand the literature and layout your plans for completing a thesis. This session will discuss the goals of the proposal, an outline of what should be in the proposal, how to strategically choose your committee, and how to prepare for your proposal defense. This session also covers how to take a lead role in your research group and publications, strategies for managing your dissertation writing process, and promoting yourself.

#### ► M.S. Career Opportunities and Job Search

Jennifer Hill, Patty Lopez

Friday April 7, 2017 11:15 am - 12:15 pm

Marguis Salon 5

This session will be a discussion of the various career opportunities for Master's graduates and how to find a position that is best for you. Discussion will include possible career paths and the role of mentors in industry. This session will also discuss the process of finding an industry position for Master's graduates, how to prepare for the interview, what questions to ask and what you should expect during the interview, and what to do after the interview. Tips will be given on writing a cover letter and resume that attracts attention.

#### Perspectives from Grad Cohort Alums

Bushra Anjum, Lydia Tapia, Kate Tsui Friday April 7, 2017 11:15 am - 12:15 pm

Marguis Salons 1/2

This session will give all participants the opportunity to hear from past Grad Cohort participants their experiences, lessons learned, and how the program has influenced them throughout their careers. The panelists will advise participants on how to get the most out of the workshop.

#### Ph.D. Academic Career Paths and Job Search

Michelle Mazurek, Susan Rodger, Mary Lou Soffa Friday April 7, 2017 11:15 am - 12:15 pm

Marguis Salons 3/4

This session will focus on the different career paths in academia. Topics include the roles of research, teaching, and service, and how they differ in different academic institutions as well as depending on one's position (e.g., tenure track faculty, lecturer, administrator). This session will also discuss the challenges and rewards of research, teaching, and service, and the skills for success in each. It will also discuss changing career paths.

#### ► Financing Your Graduate Education

Dilma da Silva, Janie Irwin

Friday April 7, 2017 1:30 pm - 2:30 pm

Marquis Salon 5

This session will focus on how to identify financial support for your academic studies beyond the initial teaching/research assistantship position, including positioning yourself for research assistantships, tracking down fellowship opportunities, and how to put together a successful application. This session will also address how to survive temporary funding shortfalls or lapses.

#### Balancing Graduate School and Personal Life

Radhika Nagpal, Melanie Wu

Friday April 7, 2017 1:30 pm - 2:30 pm

Marquis Salons 1/2

This session will address strategies for maintaining balance and a positive perspective in your life during graduate school and throughout your career. Topics will include achieving personal satisfaction in your career and family life, balancing your TA duties, your course work, and your research program, decision-making strategies when career and family priorities seem to collide, and reevaluating your personal and career goals and initiating changes.

#### ▶ Ph.D. Non-Academic Career Paths and Job Search

Amanda Stent, Rita Wouhaybi

Friday April 7, 2017 1:30 pm - 2:30 pm

Marguis Salons 3/4

This session will focus on the different career paths for new Ph.D.'s in industry and government laboratories. Topics will include the challenges and rewards of a non-academic career, skills and experiences needed for success, opportunities for advancement and taking the initiative, collaborating with researchers in academia or other organizations, and positioning yourself to make career changes between labs and/or academia

#### Keynote Speaker

Jan Cuny

Friday April 7, 2017 3:00 pm - 4:00 pm

Marguis Salon 5

#### Strategies for Human-Human Interaction

Jamika Burge, Janie Irwin, Patty Lopez Saturday April 8, 2017 8:30 am - 9:40 am Marguis Salon 5

This session will focus on strategies for productive interaction with colleagues (both faculty and students), including the opportunities and challenges of being a woman in a computing technology career. Topics include inter-personal interaction dynamics, uncomfortable situations that might arise and how to react, the pros and cons of dating your fellow graduate students or department faculty, recognizing and dealing with sexual harassment and implicit bias, and family-friendly policies to look for in a working environment.

### ► Finding an Advisor and Developing an Effective **Working Relationship**

Nancy Amato, Marine Carpuat Saturday April 8, 2017 10:10 am - 11:10 am Marquis Salon 5

Obtaining a Ph.D. is like undertaking an apprenticeship. Thus, it is very important to have a good advisor and a good relationship with that advisor. This session will focus on the importance of carefully choosing an advisor, how to get the most out of your interactions with your advisor, and the responsibilities of both student and advisor in making the graduate research experience successful. It will discuss how to work through problems with your advisor, when to consider changing advisors or institutions, and strategies for undertaking such a change. It will also discuss the benefits of having mentors, in addition to your advisor.

## **▶** Building Your Professional Persona

Amanda Stent, Kate Tsui Saturday April 8, 2017 10:10 am - 11:10 am Marquis Salons 1/2

This session will address the dos and don'ts of building a professional image. Topics will include web presence (personal pages and social media), dissemination of technical contributions, and professional ethics.

#### ► Entrepreneurial Opportunities & Skills

Jamika Burge, Radhika Nagpal Saturday April 8, 2017 10:10 am - 11:10 am Marquis Salons 3/4

This session will discuss some of the benefits, and drawbacks of pursuing entrepreneurial opportunities. It will describe what skills are critical for such ventures and how to identify entrepreneurial opportunities.

#### Summer Internships

Deb Agarwal, Jennifer Hill Saturday April 8, 2017 11:20 am - 12:20 pm Marguis Salon 5

This session will focus on how to go about finding an industry or government lab internship for the summer, the advantages and disadvantages of doing so, and how to get the most out of a summer internship.

#### **▶** Building Self-Confidence

Mary Lou Soffa, Melanie Wu Saturday April 8, 2017 11:20 am - 12:20 pm Marguis Salons 1/2

This session will address the confidence crisis that 2nd (and 3rd) year graduate students often face: how to recover from not doing as well in a course as you expected, from not passing the Ph.D. candidacy exams on your first try, from the frustration of not knowing what your specific research project will be, from the feeling that you don't know as much as your fellow graduate students. The discussion will focus on issues and rewards of continuing towards your goals and milestones in grad school where persistence is needed.

## Publishing Your Research

Soha Hassoun, Ming Lin Saturday April 8, 2017 11:20 am - 12:20 pm Marguis Salons 3/4

Publishing your research is a necessary activity for your future career. This session will discuss avenues for publication and what is required for the different types of publications. Also discussed will be the ethical concerns of publishing such as plagiarism, dual submissions, and author ordering.



## ► Deb Agarwal MEMBER



#### Lawrence Berkelev National Lab



Dr. Deborah Agarwal is a Senior Scientist and the Data Science and Technology Department (http://dst.lbl.gov), Head at Lawrence Berkeley National Laboratory (LBNL). Dr. Agarwal's current research focuses on developing computational tools to enable scientists to more effectively organize and use their data to understand and mitigate climate change. She has worked on projects involving watershed understanding, tropical forests, soil carbon, carbon capture, cosmology, particle accelerators, and satellite data. Dr. Agarwal earned her B.S. in Mechanical Engineering from Purdue University. Her M.S. and Ph.D. are from University of California, Santa Barbara in Computer Engineering. Dr. Agarwal's career has taken her around the world including spending time consulting at the United Nations in Vienna, travel to India, Japan and Taiwan, and a year working in Rennes, France on sabbatical at Inria. Dr. Agarwal is committed to increasing diversity of computing and is involved in organizing mentoring programs to help

underrepresented groups succeed. Her hobbies include night photography, sailboat racing, kayaking, swimming, crossword puzzles, and gardening.

## ► Nancy Amato **Texas A&M University**





Nancy M. Amato is Regents Professor and Unocal Professor of Computer Science and Engineering at Texas A&M University where she co-directs the Parasol Lab. Her main areas of research focus are robotics and motion planning, computational biology and geometry, and parallel and distributed computing. Amato received undergraduate degrees in Mathematical Sciences and Economics from Stanford University, and M.S. and Ph.D. degrees in Computer Science from UC Berkeley and the University of Illinois, respectively. She was program chair for the 2015 IEEE Intern. Conference on Robotics and Automation (ICRA) and for Robotics: Science and Systems (RSS) in 2016. She is an elected member of the CRA Board of Directors (2014-2020), is co-Chair of CRA-W (2014-2017), and was co-chair of the NCWIT Academic Alliance (2009-2011). She received the 2014 CRA Habermann Award, the inaugural NCWIT Harrold/Notkin Research and Graduate Mentoring Award in 2014, the 2013 IEEE HP/Harriet Rigas Award, and a Texas A&M AFS

university-level teaching award in 2011. She received an NSF CAREER Award and is a AAAS Fellow, an ACM Fellow and an IEEE Fellow.

## **▶** Bushra Anjum

Amazon, Inc.



Bushra Anjum has a Ph.D. in Computer Science from North Carolina State University and is currently serving as a Technical Lead for the Amazon Prime Program. Situated at Amazon in San Luis Obispo, her team is responsible for the timely, accurate and reliable services for millions of Amazon Prime customers across the world. Specifically, she has expertise in Agile Software Development and Performance Modelling for large scale distributed systems with special emphasis on system design and development for highly-scaleable, fault-tolerant systems. Originally a Fulbright scholar from Pakistan, Dr. Anjum has international teaching and mentoring experience and has served in academia for five years before joining industry. She currently volunteers at ACM MentorNet, ABI Educational Advisory Board, Empowering Leadership Alliance, Leanln.org, Computing beyond the Double Blind's Mentoring Network and The Citizens Foundation.

## ► Jamika Burge

#### **Capital One**



Dr. Jamika D. Burge is the Head of Research Curriculum and Outreach at Capital One, where she oversees research curriculum development and outreach for user research at Capital One. This means ideates and creates innovative user research curricula that empower designers, developers, and engineers to apply design thinking and human-centered design principles into their daily work, and beyond. Prior to joining Capital One, Jamika served non-profit and government organizations, including as a consultant to the Defense Advanced Research Projects Agency (DARPA) in the Information Innovation Office (I20). She provided technical and management consult for innovative DARPA programs which were funded at over \$70 million. She has also worked as a researcher at IBM Research (Almaden, CA and Watson, NY). Dr. Burge holds a Ph.D. in computer science, with a focus on human-computer interaction (HCI) from Virginia Tech, where she was an IBM Research Fellow. She has been featured in the New York Times, ComputerWorld, and in 2016, she was

recognized by HackBright Academy as a Top Tech Leader to Watch. Jamika is also Founder and Principal of Design & Technology Concepts, LLC, a consultancy that focuses on computer science design and education research. She has consulted for Google, the National Center for Women in Technology (NCWIT), and the Association of American Colleges & Universities (AAC&U). She is also active in computer science education and STEM preparedness efforts, and she has received NSF funding for her research supporting inclusion in computing and CS education. Jamika's career has also included positions in the academia (Spelman College and Howard University) and non-profit (Smarter Balanced at UCLA) sectors.

## ► Marine Carpuat **University of Maryland**



Marine Carpuat is an Assistant Professor in Computer Science at the University of Maryland. Her research focuses on multilingual natural language processing and machine translation. Before joining Maryland, Marine was a Research Officer at the National Research Council Canada, and a postdoctoral researcher at Columbia University. She received a Ph.D. in Computer Science from the Hong Kong University of Science & Technology, a MPhil in Electrical Engineering from the Hong Kong University of Science & Technology and a Diplome d'Ingenieur from the French Grande Ecole Supelec. Marine currently serves as a board member for the ACL Special Interest Group on Lexical Semantics (SIGLEX) and is on the editorial board of the Computational Linquistics journal. Marine has received a Google Faculty Research Award, an Amazon Academic Research Award, and an Outstanding Teaching Award in 2016.

## ► Lori Clarke MEMBER



#### University of Massachusetts, Amherst



CRA-W GRAD COHORT CO-CHAIR

Lori A. Clarke is an emerita professor in the College of Information and Computer Sciences, University of Massachusetts Amherst, after serving on the computer science faculty for forty years and as chair from 2011-2015. She is a Fellow of the ACM and IEEE, and a board member of the Computing Research Association's Committee on the Status of Women in Computing Research (CRA-W). Dr. Clarke's research is in the area of software engineering. She is one of the initial developers of symbolic execution and developed one of the first model checking systems applicable to software systems. She has also worked in requirements engineering and object management. Recently, she has been investigating applying software engineering technologies to detect errors and vulnerabilities in complex, human-intensive processes in domains such as healthcare and digital government. She is also involved in efforts to increase participation of underrepresented groups in computing research.

## **▶** Jan Cuny

#### **National Science Foundation**



Jan Cuny started her career as a professor, first at Purdue, then at UMass and the University of Oregon. She is now a program officer at the National Science Foundation (NSF) where she leads the Computer and Information Science and Engineering Directorate's efforts on broadening participation and education in computing. Her work led to the establishment of the eight national BPC-A Alliances that together address underrepresentation in computing from elementary school through the research and professional levels. More recently, she spearheaded NSF's efforts to get inclusive, rigorous, academic computing courses into America's schools. That work led to the development and scaling of several new and exciting high school CS courses (including Exploring Computer Science and the new AP CS Principles course) and scalable models of professional development for CS teachers. It laid the foundation for the 2016 launch of President Obama's CS for All Initiative. For her efforts with underserved populations, Jan has received a number of

awards including the 2006 ACM President's Award, the 2007 CRA A. Nico Habermann Award, the 2009 Anita Borg Institute's Woman of Vision Award for Social Impact, the 2015 NSF Distinguished Service Award, and the 2016 SIGCSE Distinguished Educator Award.

## ► Dilma da Silva MEMBER



#### **Texas A&M University**



Dilma Da Silva joined the Department of Computer Science and Engineering at Texas A&M University as its new department head in 2014. Her primary research interests are cloud computing, operating systems, distributed computing, and high-end computing. Before joining Texas A&M, she worked at Qualcomm Research in California (2012-2014), IBM Thomas J. Watson Research Center in New York (2000-2012) and the University of São Paulo in Brazil (1996-2000). Dilma is an ACM Distinguished Scientist, a member of the board of CRA-W (Committee on the Status of Women in Computing Research), a co-founder of the Latinas in Computing group, and an event liaison with USENIX. She served as an officer at ACM SIGOPS from 2011 to 2015 and chaired the ACM Senior Award Committee in 2015. She is an Associate Editor for several journals, has chaired 30 conferences/workshops and participated in more than 100 program committees. She has published more than 80 technical papers and filed 15 patents. Dilma received her doctoral degree

in computer science from Georgia Tech in 1997 and her bachelor's and master's degrees from the University of São Paulo, Brazil.

## **► Susan Davidson University of Pennsylvania**





Susan B. Davidson received a B.A. degree in Mathematics from CornellUniversity in 1978, and M.A. and Ph.D. degrees in Electrical Engineering and Computer Science from Princeton University in 1980 and 1982. Dr. Davidson is the Weiss Professor of Computer and Information Science (CIS) at the University of Pennsylvania, where she has been since 1982, and currently serves as Chair of the board of the Computing Research Association. Dr. Davidson's research interests include database and web-based systems, scientific data management, provenance, crowdsourcing, and data citation. Dr. Davidson was the founding co-director of the Penn Center for Bioinformatics from 1997-2003, and the founding co-director of the Greater Philadelphia Bioinformatics Alliance. She served as Deputy Dean of the School of Engineering and Applied Science from 2005-2007 and Chair of CIS from 2008-2013. She is an ACM Fellow, a Corresponding Fellowship of the Royal Society of Edinburgh (2015), received the Lenore Rowe

Williams Award (2002), was a Fulbright Scholar and recipient of a Hitachi Chair (2004), and received the Trustees' Council of Penn Women/ Provost Award (April 2015) for her work on advancing women in engineering.

## ► Sandhya Dwarkadas MEMBER **University of Rochester**





Sandhya Dwarkadas is the Albert Arendt Hopeman Professor of Engineering and Professor and Chair of Computer Science at the University of Rochester, with a secondary appointment in Electrical and Computer Engineering. She received her Bachelor's from the Indian Institute of Technology, Madras, India, and her M.S. and Ph.D. from Rice University. Her research areas include computer architecture and parallel and distributed systems. She was named a 2017 IEEE fellow for her contributions to hardware- and software-based shared memory implementations and system reconfigurability. She is a CRA-W board member, co-chair of Grad Cohort, and chair of the BECA awards committee.



## ► Soha Hassoun MEMBER



#### **Tufts University**



Soha Hassoun is Professor and Past Chair of the Department of Computer Science at Tufts University. Soha received the BSEE degree from South Dakota State University, Brookings, SD, a Master's degree from the Massachusetts Institute of Technology, Cambridge, MA, and a Ph.D. degree from the Department of Computer Science and Engineering, University of Washington, Seattle, WA. Her current research interests include developing algorithmic solutions to facilitate designing integrated circuits, and understanding the impact of new technologies such as double-gate devices, carbon nanotubes, and 3-D integration on design. Her other research includes computational methods for Systems Biology and Metabolic Engineering, including pathway analysis, modularity, pathway synthesis, and predictive modeling of biochemical networks. Dr. Hassoun was a recipient of the NSF CAREER Award, and several awards from ACM/SIGDA for her service, including the Distinguished Service Award in 2000 and 2007, and the 2002 Technical Leadership Award. She co-founded

the International Workshop on Bio-Design Automation in 2009. In 2013, she was recognized by the Electronic Design Automation Consortium as one of 33 luminaries in the field of Electronic Design Automation. She served on the IEEE Council on Design Automation, and was Director of Educational Activities for ACM's Special Interest Group on Design Automation for several years.

### ▶ Kim Hazelwood

#### **Facebook**



Kim Hazelwood is a senior engineering manager in Facebook's Infrastructure division, where she leads a performance analysis team that drives the data center server and storage roadmap. Her research interests include computer architecture, performance analysis, and binary translation tools. Prior to Facebook, Kim held positions including a tenured Associate Professor at the University of Virginia, Software Engineer at Google, and Director of Systems Research at Yahoo Labs. She received a Ph.D. in Computer Science from Harvard University in 2004, and is the recipient of an NSF CAREER Award, the Anita Borg Early Career Award, the MIT Technology Review Top 35 Innovators under 35 Award, and the ACM SIGPLAN 10-Year Test of Time Award. She has authored over 50 conference papers and one book. On a personal note, Kim has been married for 16 years, and has four daughters, from 8 years old down to 14 months old. For fun, she has run several marathons, has appeared in one major motion picture, and

has contributed to two television series

## **▶** Jennifer Hill

#### **Capital One**



Jennifer earned her Ph.D. in Applied Mathematics from the University of North Carolina at Charlotte, where her research centered on stochastic optimization. She leads a phenomenal team of Data Scientists at Capital One who build self-adaptive machines to anticipate customers' needs and help them be successful in pursuit of their personal goals. Voice and image recognition, Natural Language Processing and Deep Neural Networks are ongoing areas of research and development to these ends. Extracurriculars include hiking, traveling and spending time with family and friends.

## ► Julia Hirschberg MEMBER



## **Columbia University**



Julia Hirschberg is Percy K. and Vida L. W. Hudson Professor and Chair of Computer Science at Columbia University. She previously worked at Bell Laboratories and AT&T Labs where she created the HCl Research Department. She served on the Association for Computational Linguistics executive board (1993-2003), the International Speech Communication Association board (1999-2007; 2005-7 as president), and the International Conference on Spoken Language Processing board since 1996. She has been editor of Computational Linguistics and Speech Communication, is a fellow of AAAI, ISCA, ACL, ACM, IEEE, and a member of the National Academy of Engineering. She has received the IEEE James L. Flanagan Speech and Audio Processing Award and the ISCA Medal for Scientific Achievement. She currently the serves on the IEEE Speech and Language Processing Technical Committee, is co-chair of CRA-W Board, and has worked for diversity for many years at AT&T and Columbia. She works on spoken language processing and NLP, studying text-to-

speech synthesis, spoken dialogue systems, entrainment in conversation, detection of deceptive and emotional speech, hedging behavior, and linguistic code-switching (language mixing).

## ► Ayanna Howard MEMBER



### **Georgia Tech**



CRA-W GRAD COHORT CO-CHAIR

Ayanna Howard, Ph.D. is Professor and Linda J. and Mark C. Smith Endowed Chair in Bioengineering in the School of Electrical and Computer Engineering at the Georgia Institute of Technology. She also holds the position of Associate Chair for Faculty Development in ECE. Her academic career is highlighted by her focus on technology development for intelligent agents that must interact with and in a human-centered world. This work, which addresses issues in artificial intelligence, computer vision, and robotics, has resulted in over 200 peer-reviewed publications in a number of projects - from assistive robots in the home to therapy gaming apps to remote robotic exploration of extreme environments. She has over 20 years of R&D experience covering a number of projects that have been supported by various agencies including: National Science Foundation, Procter and Gamble, NASA, ExxonMobil, Intel, and the Grammy Foundation. Dr. Howard received her B.S. in Engineering from Brown University, her M.S.E.E. from the University of Southern California, her M.B.A. from the Drucker Graduate School of Management, and her Ph.D. in Electrical Engineering from the University of Southern California. To date,

her unique accomplishments have been highlighted through a number of awards and articles, including highlights in USA Today, Upscale, and TIME Magazine, as well as being named a MIT Technology Review top young innovator and recognized as one of the 23 most powerful women engineers in the world by Business Insider. In 2013, she also founded Zyrobotics, which is currently licensing technology derived from her research and has released their first suite of therapy and educational products for children with differing needs. From 1993-2005, Dr. Howard was at NASA's Jet Propulsion Laboratory, California Institute of Technology. She has also served a term as the Associate Director of Research for the Georgia Tech Institute for Robotics and Intelligent Machines and a term as Chair of the multidisciplinary Robotics Ph.D. program at Georgia Tech.

## **▶** Janie Irwin

#### Pennsylvania State University



Mary Jane (Janie) Irwin is an Evan Pugh Professor and the A. Robert Noll Chair in Engineering in the Department of Computer Science and Engineering at The Pennsylvania State University. Her research and teaching interests include computer architecture, energy-aware and reliability-aware design, emerging technologies, and VLSI systems design and design automation. She is a Fellow of IEEE and ACM and a member of NAE and AAAS. Awards Janie has received include the 2003 IEEE/CAS VLSI Transactions Best Paper of the Year Award, the ACM Athena Lecturer Award, and the 2012 Ten-Year Retrospective Most Influential ASP-DAC Paper Award. Janie also has a long list of professional service activities including service to CRA-W. She first joined the CRA-W Steering Committee in 1991, served as co-chair from 1993 to 1996 and transitioned to being an Emeritus member of the Steering Committee in 2011. Janie received her M.S. and Ph.D. degrees from the University of Illinois, Urbana-Champaign long ago and an

Honorary Doctorate from Chalmers University, Sweden in 1997.

## ► Martha Kim

#### **Columbia University**



Martha Kim is an Associate Professor of Computer Science at Columbia University where she leads the ARCADE Lab. Kim's research interests are in computer architecture, parallel programming, compilers, and low-power computing. Her work has explored low-cost chip manufacturing systems, reconfigurable communication networks, and fine-grained parallel application profiling techniques. Her current research focuses on hardware and software techniques to improve the usability of hardware accelerators as well as data-centric accelerator design. Kim holds a Ph.D. in Computer Science and Engineering from the University of Washington and a bachelors in Computer Science from Harvard University. She is the recipient of the 2013 Rodriguez Family Award, the 2015 Edward and Carole Kim Faculty Involvement Award, a 2013 NSF CAREER award, and the 2016 Anita Borg Early Career Award.



## ► Ming Lin **University of North** Carolina, Chapel Hill





Ming Lin is currently John R. & Louise S. Parker Distinguished Professor of Computer Science at the University of North Carolina (UNC), Chapel Hill and an honorary Chair Professor (Yangtze Scholar) at Tsinghua University in China. She obtained her B.S., M.S., and Ph.D. in Electrical Engineering and Computer Science from the University of California, Berkeley. She received several honors and awards, including the NSF Young Faculty Career Award in 1995, Honda Research Initiation Award in 1997, UNC/IBM Junior Faculty Development Award in 1999, UNC Hettleman Award for ScholarlyAchievements in 2003, Beverly W. Long Distinguished Professorship 2007-2010, Carolina Women's Center Faculty Scholar in 2008, UNC WOWS Scholar 2009-2011, IEEE VGTC Virtual Reality Technical Achievement Award in 2010, and several best paper awards at international conferences. She is a Fellow of ACM and IEEE. Her research interests include physically-based modeling. virtual environments, sound rendering, haptics, robotics, and geometric computing. She has (co-)authored more than 290 refereed publications in these areas and co-edited/authored four books. She has served on hundreds of program

committees of leading conferences and co-chaired dozens of international conferences and workshops. She is a member of IEEE Computer Society (CS) Board of Governors, the Chair of 2015 IEEE CS Transactions Operations Committee and a member of Executive Committee of 2015 IEEE CS Publications Board. She is a former Editor-in-Chief of IEEE Transactions on Visualization and Computer Graphics (2011-2014) and a member of several editorial boards. She also has served on several steering committees and advisory boards of international conferences, as well as government and industrial technical advisory committees.

## ► Patty Lopez MEMBER







Dr. Patty Lopez is a Senior Platform Applications Engineer at Intel Corporation, working with customers to deliver Xeon server chip solutions that power high end data centers and mission critical applications. Prior to joining Intel in 2008, she spent 19 years as an Imaging Scientist for Hewlett Packard, creating and transferring technology in imaging into scanner, camera, and all-in-one products. She has released over fifty products and holds seven imaging patents. She earned her B.S. (with honors), M.S., and Ph.D. in Computer Science from New Mexico State University (NMSU). Patty serves on the advisory boards of the Computing Research Association-Women (CRA-W), the Computing Alliance of Hispanic Serving Institutions (CAHSI), the NMSU Foundation, and the NMSU Computer Science Department. She is an emerita board member for the Anita Borg Institute, and is a Distinguished Alumna for the NMSU College of Arts and Sciences. She received the Society of Women Engineer's 2016 Advocating Women in

Engineering Award, and the HENAAC/Great Minds in STEM Community Service Award in 2010. A founding member and co-chair of Latinas in Computing, a MentorNet mentor, and a member of the NCWIT Latinas in Tech Advisory Board, Patty has been active for the past several years on the Grace Hopper Celebration of Women in Computing Conference organizing committee, and served as the 2013 GHC General Co-Chair (Industry). Her research interests include CS education, E-textiles, and wearable computing. Her volunteer efforts are focused on building the STEM pipeline for K-16 and beyond, and creating an inclusive organizational culture in the workplace.

## ► Michelle Mazurek **University of Maryland**



Michelle Mazurek is an Assistant Professor in the Computer Science Department and the Institute for Advanced Computer Studies at the University of Maryland, College Park. Her research aims to improve security- and privacyrelated decision making by understanding user needs and then building sound tools and systems. Recent projects include examining how and why developers make security and privacy mistakes when building mobile apps; analyzing how users learn and process security advice; understanding how interactivity affects users' perceptions of sensitive resource use on Android; and examining convenience/security tradeoffs in end-to-end encryption. Michelle received her her Ph.D. in Electrical and Computer Engineering from Carnegie Mellon University in 2014. Her research is funded by NIST, DoD, the NSA Science of Security lablet, and Google.

## ► Radhika Nagpal

#### **Harvard University**



Radhika Nagpal is the Kavli Professor of Computer Science at Harvard University and a core faculty member of the Wyss Institute for Biologically Inspired Engineering. She received her Ph.D. in Computer Science from MIT in 2001, and then after several meandering steps, joined Harvard CS in 2004. At Harvard, she leads the Self-organizing Systems Research Group (SSR) and her research interests span computer science, robotics, and biology, Recent work includes the termite-inspired robots for collective construction and the kilobot thousand-robot selfassembling swarm (Science 2014), which is ironic since in 2004 she told Harvard she'd never have hardware or a lab. Her awards include the Microsoft New Faculty Fellowship (2005), NSF Career Award (2007), Anita Borg Early Career Award (2010), and the Nature Top 10 award (2014). Her awards do not include: dissertation awards of any kind, Sloan, Darpa young investigator, Packard, McArthur, or any awards that are given to people who do well

under the age of 35. Radhika is also the author of a blog article on tenure-track life, called "The Awesomest 7-year Postdoc", and an advocate for a more inclusive and nurturing culture in science. Outside of research, she enjoys the arts (painting, dance and music) with her husband and two teenagers (ages 14 and 17).

## Lynne Parker University of Tennessee, Knoxville



Dr. Lynne E. Parker is the Associate Dean for Faculty Affairs and Engagement in the Tickle College of Engineering (since January 2017), and Professor in the Department of Electrical Engineering and Computer Science. She received her Ph.D. in Computer Science from the Massachusetts Institute of Technology. Prior to becoming Associate Dean, she served for two years as the Division Director for Information and Intelligent Systems in the Computer and Information Science and Engineering Directorate at the National Science Foundation, where she co-chaired a White House-commissioned task force that created the National Artificial Intelligence Research and Development Strategic Plan. She has been on the UT faculty since 2002, and served as Associate Head of the EECS Department from 2010-2014. Prior to joining the UT faculty, she worked for several years as a Distinguished Research and Development Staff Member at Oak Ridge National Laboratory. Dr. Parker is the founder of the Distributed

Intelligence Laboratory at UT, which has conducted research in multi-robot systems, sensor networks, machine learning, and humanrobot interaction. She has made significant research contributions in distributed and heterogeneous robot systems, machine learning, and human-robot interaction. Her dissertation research (1994) on ALLIANCE, a distributed architecture for multi-robot cooperation, was the first PhD dissertation worldwide on the topic of multi-robot systems, and is considered a pioneering work in the field. She has published extensively in these areas and has received numerous awards for her research, teaching, and service, including the PECASE Award (U.S. Presidential Early Career Award for Scientists and Engineers), the IEEE RAS Distinguished Service Award, and many UT Chancellors, College, and Departmental awards, Dr. Parker has been active in the IEEE Robotics and Automation Society for many years: she served as the General Chair for the 2015 IEEE International Conference on Robotics and Automation, as the Editor-in-Chief of the IEEE RAS Conference Editorial Board, as an Administrative Committee Member of RAS, and as Editor of IEEE Transactions on Robotics. She is a Fellow of IEEE.

#### CRA-W ► Lori Pollock MEMBER **University of Delaware**



Dr. Lori Pollock is Alumni Distinguished Professor in Computer and Information Sciences at the University of Delaware and ACM Distinguished Scientist. Her research focuses on software artifact analyses for easing software maintenance, testing, and developing energy-efficient software, code optimization, and computer science education. She co-leads the Partner4CS team in Delaware to integrate CS into K-12 through teacher professional development and undergraduate service to teachers in the CSIOK national efforts. She is also co-leading the WeC4Communities NSF INCLUDES launch pilot partnering higher ed, libraries and Boys and Girls Clubs to encourage middle school underrepresented students in computing to create computing artifacts to help address local community problems. She serves on the Executive Board of the Committee on the Status of Women in Computing Research (CRA-W), which was honored with the National Science Board's 2005 Public Service Award to an

organization for increasing the public understanding of science or engineering. She was awarded the ACM SIGSOFT Influential Educator award 2016 and University of Delaware's Excellence in Teaching Award, E.A. Trabant Award for Women's Equity in 2004.

## ► Susan Rodger MEMBER



#### **Duke University**



Susan Rodger is a Professor of the Practice in the Department of Computer Science at Duke University. Over twenty years ago, she was a faculty member in the Computer Science Department at Rensselaer Polytechnic Institute. She received her Ph.D. in Computer Science from Purdue University, and her B.S. in Computer Science and Mathematics from North Carolina State University. Her research is in visualization, algorithm animation, and computer science education. She has developed JFLAP software for experimenting with formal languages and automata. JFLAP was recognized as one of two finalist candidates in the NEEDS Premier Award for Excellence in Engineering Education Courseware in 2007. Rodger leads the Adventures in Alice Programming project and has taught computing to over 300 K-12 teachers. Rodger has supervised over eighty undergraduate students in research projects. Rodger is a member of the SIGCSE Board as immediate past chair, and is a member of the

CRA-W Board and the ACM Education Policy Committee. She is an ACM Distinguished Educator and a recipient of the ACM 2013 Karl V. Karlstrom Outstanding Educator Award.

## Mary Lou Soffa **University of Virginia**



Mary Lou Soffa is the Owen R. Cheatham Professor of Sciences at the Computer Science Department at the University of Virginia, serving as the Department Chair from 2004 to 2012. From 1977 to 2004, she was a Professor of Computer Science at the University of Pittsburgh and also served as the Dean of Graduate Studies in the College of Arts and Sciences for five years. Her research interests include warehouse scale computers, software systems for multi-core architectures, optimizing compilers, software testing, program analysis and software security. Mary Lou received the SIGSOFT Influential Educator Award in 2014, and the Ken Kennedy Award in 2012 for contributions to compiler technology and software engineering, exemplary service to the profession, and lifelong dedication to mentoring and improving diversity in computing. She received the Anita Borg Technical Leadership Award and the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring. She received the Computing Research Association (CRA) A. Nico Habermann Award in 2006 and

was selected as a Girl Scout Woman of Distinction in 2003. She served on the Computing Research Association Board (CRA) for ten years and was a committee membrane Co-Chair on CRA-W. She currently serves on the ACM Publication Board.

## ► Amanda Stent MEMBER



#### **Bloomberg**



Dr. Stent works on text analytics and discourse processing as NLP architect at Bloomberg LP. Previously she has held positions as Director, Research and Principal Research Scientist at Yahoo, as Principal Member of Technical Staff at AT&T Labs — Research, and as associate professor in the Computer Science Department at Stony Brook University in Stony Brook, NY. She holds a Ph.D. in computer science from the University of Rochester. She has authored over 90 papers on natural language processing and is co-inventor on over a dozen patents and patent applications. She is one of the rotating editors of the journal Dialogue & Discourse.

## ► Lydia Tapia **University of New Mexico**



Lydia Tapia is an Assistant Professor in the Department of Computer Science at the University of New Mexico. Since becoming an Assistant Professor, she has graduated two Ph.D. students (both with distinction, one earned the Popejoy Award for top dissertation at UNM), earned over 5 million in research and equipment funding (including a NSF CAREER Award and PI of a NSF National Robotics Initiative Grant), and filed two patents, one on a novel Unmanned Aerial Vehicle design and another on a method to design allergen treatments. She achieves this amazing work due to her thriving research team that simulates and analyzes the motions involved in both molecular and robotics applications. Her students have won an international award for undergraduate research, a national conference research award, and regional awards for high school computing. When they are not in the lab, you can often finding them doing interactive robot demos for the community at local schools, museums, and robotics competitions.

#### Kate Tsui

#### **Toyota Research Institute**



Kate Tsui recently joined as an UX Researcher at Toyota Research Institute. Before joining, Kate was an assistive Robotics Researcher and a Postdoctoral Associate at Yale University under Dr. Brian Scassellati. From 2001 through 2006, Kate worked for Sun Microsystems in several software engineering roles, including development and quality assurance. In 2004, she graduated from the University of Massachusetts Lowell with her B.S. in computer science. In Fall 2006 and Spring 2007, Kate served as the teaching assistant for 91.301 Organization of Programming Languages; she was a guest lecturer for this class. Kate interned at Yale University in 2008 and Google in 2010. She received her M.S. in computer science in 2008, HCl certification in 2010, and Ph.D. in computer science in 2014, all from UMass Lowell under Dr. Holly Yanco. Kate specializes in robotics and human-robot interaction as an assistive

technology researcher. Her research interests stem from the cross section of computer science, robotics, assistive technology, humanrobot interaction, and human-computer interaction. Kate is passionate about increasing the quality of life for people outlying the general populace using assistive robotic devices. Over the last 7 years, she has worked with clinicians and end-users from several special populations, including children with Autism Spectrum Disorder, teenagers and young adults with Cerebral Palsy, and adults and seniors with Brain Injury.

## ► Rita Wouhaybi

#### Intel Corp.



Rita is a systems architect with the Industrial & Energy Solutions Division in the Internet of Things Group at Intel Corporation. Rita received her Ph.D. in Electrical Engineering from Columbia University in 2006. She also holds a B.E. and M.E. degrees in Computer and Communications Engineering from the American University of Beirut. Rita's career includes more than 15 years of industry experience, including engineering, management and research positions. Her research interests include peer-to-peer and distributed networks, game theory, the use of machine learning in networking and social networks. Rita filed over 150 patents and published over 20 papers in acclaimed IEEE and ACM conferences and journals. She was also the recipient of several awards for both academic and industry achievements.

## ► Yuqing Melanie Wu MEMBER





#### Pomona College



Professor Wu is an Associate Professor of Computer Science at Pomona College. She completed her Ph.D. in Computer Science from University of Michigan, Ann Arbor. She earned her M.S. degree from Indiana University, Bloomington and an M.S./B.S. degree from Peking University, China. She joined Indiana University in 2004 and taught there until 2015. Prof. Wu's research focuses on data representation, query languages, query processing and optimization, indexing and security of data repositories for relational, semi-structured and graph data. Prof. Wu's recent research involves algebra for gueries, normalization, indexing and security of XML data repositories, storage and query of data on the Semantic Web, exact and approximate search on graph data, data management in parallel computing environments, and analysis of social media data for social-economical insights. Prof. Wu is a member of ACM-W executive council and the chair of ACM-W communication committee. She is also a member of CRA-W board and co-chairs the CREU (Collaborative Research Experiences for Undergraduates) program.



# lnstitutions

We're delighted to host over 500 participants representing 179 institutions across the United States and Canada this year. We would like to extend a special thanks to the bolded institutions for their generous sponsorship of the 2017 CRA-W Grad Cohort Workshop.

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