**SIGCSE News in Brief**

We want to thank the many of you who were able to attend the SIGCSE Symposium 2018 in Baltimore for making the conference exciting and memorable!

We also wish to remind everyone about our two upcoming summer conferences: ITiCSE 2018 in Larnaca, Cyprus (July 2-July 4) and ICER 2018 in Espoo, Finland (August 13-15). Please see the preview articles for more information on each of these conferences.

This issue begins with a report on the SIGCSE Symposium 2018. As we look forward to the SIGCSE Symposium 2019, we are pleased to share an article on the new, SIGCSE Board-approved, paper lengths for SIGCSE articles.

Our member interview is with none other than the winner of the 2018 SIGCSE Award for Lifetime Service to the Computer Science Education Community: Jane Prey. Please look to the article for her insights on service and making computing more inclusive.

Lastly, in this issue, we spotlight the CRA-W as an organization contributing to broadening participation in computing.

**Newsletter Credits**

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SIGCSE Symposium 2018 Report
By Tiffany Barnes and Dan Garcia, SIGCSE 2018 Symposium Co-Chairs

We were delighted to co-chair the 49th ACM Technical Symposium on Computer Science Education in Baltimore, Maryland from February 21-24, 2018, and we opened the conference with a CS riff of that iconic Hairspray song. This was the largest SIGCSE conference of all time, shattering many conference records: SIGCSE 2018 had 1,735 registrations and 953 submissions, with 1,119 volunteers participating in the reviewing and selection process to whittle it down to 161 papers, 35 panels and special sessions, 90 posters (growing from 3 to 4 sessions), 10 demos, 34 BOFs, 6 nifty assignments, 11 events, and 34 workshops. We needed a record number 17 parallel tracks to support all of this.

We were inspired to see so many of these submissions innovating to engage a broader audience and to create equitable opportunities for access to computer science education.

We (the program and symposium chairs, collectively) introduced several innovations this year:

- A larger, more diverse Organizing Committee, with paired junior/senior roles.
- A new team was added to our organizing committee, Puzzles, Social, & Board Games co-chairs who coordinated activities, games, and puzzles in the exhibit hall and elsewhere to allow us to connect with other participants, let our hair down, and have fun together.
- A photography chair who captured significant events (supported by all the volunteer photographers who shared their photos on Whova).
- Three paper submission tracks, recognizing the differences in scope and review criteria between (1) CS education research and practice, (2) experience reports and tools, and (3) new curricula, programs, degrees, and position papers.
- First-, second- and third-place paper awards in each paper track, selected by the program chairs, and best demo and poster awards, selected by attendees in Whova.
- A TOCE and sister conferences track, which brought in 15 TOCE papers, and invited presentations by SIGCAS, SIGGRAPH, SIGHPC, SIGITE, SIGCHI, and RESPECT to provide “cross-fertilization” opportunities.
- An Inclusion track, which sought to recognize and support groups that are underrepresented in computing and at the conference, including women, people with disabilities, people of color, historically black colleges and universities, Hispanic-serving institutions, community colleges, and more. We invited community leaders from ACM-W, ACM TYCEC, NCWIT, AccessComputing, ECEP, CAHSI, STARS, IAAMCS, CMD-IT, and CRA-W to design sessions to help our community find more ways to be inclusive.
- For the first time, “Nifty Assignments” (a SIGCSE favorite, eighteen years running) became its own official track, with veterans Nick Parlante and Julie Zelenski serving as the first co-chairs. Nifty was a plenary session in 2017, but this year, Nifty returned to its Saturday morning time as a regular session.
- A “headshot photo booth” in the exhibit hall to allow our attendees to take a professional headshot for their business cards, web pages, and social media accounts.
- Bag stuffing, normally a backbreaking job for early-arriving volunteers, was contracted out.
We had the plenary sessions videotaped and have made them available on ACM’s YouTube channel.

A new conference app by Whova, where attendees could build a personalized schedule, share photos and message others.

We had an amazing lineup of plenary speakers, who gave arguably the greatest collection of talks we’ve ever heard, all beautifully woven into our “CS for All” conference theme.

- **Brenda Wilkerson**, President and CEO of the Anita Borg Institute, opened with a keynote entitled “The Evolution Before the Revolution,” and shared her experience transforming the Chicago Public Schools, which recently required all students to take a CS course before graduation.

- **Eric Roberts**, recipient of the 2018 SIGCSE Award for Lifetime Service to the Computer Science Education Community, spoke at the First Timers’ lunch about “Teaching Computer Science in a Time of Opportunities and Challenges,” and how to reckon with the incredible pressures of enrollment growth at the University level.

- **Tim Bell**, recipient of the 2018 SIGCSE Award for Outstanding Contributions to Computer Science Education, gave the Friday morning keynote entitled “What’s the big idea with CS Education in K-12??,” and outlined the reasons young students should become engaged with the subject, illustrated using his experience with “CS Unplugged.”

- Finally, **Ruthe Farmer**, Chief Evangelist of the CSforAll Consortium, spoke about “Nodes and Networks for National Impact,” and how we can all contribute to the CSforAll movement to help make it a reality.

Our conference theme of “CS for All” inspired both the content and the processes for SIGCSE 2018. From our keynote selections, to our daily addresses, to the conference app, to the new inclusion and sister conferences and journals tracks, we sought to make the conference more accessible and inclusive. This effort was enhanced by our co-location with RESPECT 2018, the third international conference on Research on Equity and Sustained Participation in Engineering, Computing, and Technology. Many exhibitors, sponsors, workshops, and pre-symposium events supported the CS for All theme as well, providing attendees many ways to expand CS education to new audiences from K-12 to seniors.

Many participants made a point of calling us aside and telling us that this was the best SIGCSE they had ever attended. We are very proud of the SIGCSE 2018 conference, and grateful to all the volunteers, presenters, attendees and staff who made it happen. We’d like to especially thank our sponsors: Github, Google, Inc., InfoSys Foundation USA, Intel, Microsoft, Codio, IBM, Oracla Academy, Turing’s Craft, Vocareum, Inc., zyBooks, ABET, CodeHS, gradescope, Mimir, and Red Hat Academy.

We hope to see you at the 50th anniversary of the SIGCSE Symposium in Minneapolis from February 27 to March 2, 2019!
SIGCSE 2019 Paper Length Change
By Sarah Heckman and Jian Zhang, SIGCSE 2019 Program Co-Chairs, and Manuel A. Pérez-Quiñones and Elizabeth K. Hawthorne, SIGCSE 2019 Co-Chairs

We are pleased to announce that the SIGCSE Board has approved a change to the length of SIGCSE papers. Submissions of CS Education Research papers; Experience Report and Tool papers; and New Curriculum, Program, and Degree Initiative papers can use up to six full pages for content, with references extending to a seventh page!

Many in the SIGCSE community have struggled to fit our work into the previous six-page constraint. Allowing a seventh page for references will, on average, provide about half of a page of additional space. Additionally, a 7th page for references will provide authors the opportunity to situate their work in the literature and will likely lead to increases in citation metrics. These changes will support faculty evaluations, student contributions, and computer science education as a field.

While the change now allows for up to six full pages of content, plus a page for references; authors are not required to use all of the allowed space. Conciseness is encouraged, and all papers will be given full consideration during the review process!

We look forward to receiving your submissions for SIGCSE 2019! Paper abstracts are due August 24, 2018, and paper submissions are due August 31, 2018.

Member Spotlight
In this feature of the Bulletin, we highlight members of the SIGCSE community. In this issue, Bulletin co-editor Maureen Doyle interviewed Jane Prey. Jane is retired and still very active in the CS Education community.

MD: Thank you so much for agreeing to this interview. We looked at your PhD thesis was in using Tablets for Teaching Business Concepts, but your first teaching position was in Computer Science.

JP: The business component is a lucky happenchance. Initially, I had talked to the CS department because I was interested in computing education but there wasn’t just a good fit. I spoke to the education college and they said this was a possibility, so I met with the business school. The business school at UVA is very tech savvy and had students taking Programming and computing courses in the major. My thesis focused on teaching computing concepts to students without any programming knowledge. So, we worked out an arrangement between the Education School and the Business School to co-direct my work. At the time, I was working on GUIs. But later, when working at Microsoft (MS), I found myself working on tablets, which made me feel like I was back working with pen and ink interaction again. I took a year off after my PhD
and re-engaged being a stay at home mom and was quite content. I started working at UVA when Bill Wulf reached out to me. The CS department had won an NSF award focusing on re-thinking how undergraduate computer science was taught, and they wanted someone who had both computing and education expertise. Initially, it was a 3-year project, but I was lucky enough to continue receiving funding for several more years. I was not interested in a tenure-track position because I had decided if my husband wanted to move, I’d go with him.

MD: In 2012, you were awarded the ACM SIGCSE Lifetime Service to Computer Science Education “For her love of and dedication to the computing education community -- academic, industry, government and professional societies; and for her tireless efforts in encouraging more students, especially women, to pursue education and careers in computing.” Congratulations and thank you for your service and leadership. How has the CS Education community changed over the past 25+ years? What has improved and what still needs improving?

JP: I think we’ve come a long way and have a bigger way to go yet. We’ve raised awareness amongst our community. I don’t know if I was ever treated differently at UVA (for being in CS Ed) but I have colleagues who have been treated quite differently. We have to make our colleagues aware of what we do and how we can be an equal and important partner. In addition, the general public is more aware of the discipline and the value we bring to society - we’re getting there. Now, how do we engage with many other groups who can be supporting us to understand and engage with them? I am specifically thinking of interdisciplinary work. I have been very lucky working with many forward-thinkers. However, there are still many folks who are unaware of the challenges of computer science and computer science education, and there’s work to be done to bring them together with us.

Other fields are nervous because they think we’re taking so many students from them, and universities are nervous because they’re afraid of losing us to industry. I would hate to lose any other faculty position to add a CS professor. I really believe it’s important for computing professionals to be well-rounded, to be able to appreciate what they learned in history, biology, and anthropology classes. We need to do a better job of integrating more of a student’s educational experiences. For example, how do we do more work together with the education schools? We just aren’t there. We have to work cross-disciplines to develop a path forward, even though it’s really hard.

MD: When did you attend your first SIGCSE Symposium? According to the SIGCSE conference log, you chaired SIGCSE 1999 in New Orleans, LA. How did you first get involved with SIGCSE and the symposium?

JP: SIGCSE 1992, the very first year I was at UVA. I became an organizer seven years later because I can be bossy at times, and I thought it was worth doing. I volunteered to get involved. It was easier back then because it was a smaller group. Nothing was automated! We got physical copies of the papers mailed to us. Then we had to make copies, address envelopes, and send the papers out to the reviewers. I even had my kids helping me pack the envelopes on the family ping-pong table. And when the reviews came in, I had to physically open, sort, and stack papers. It was a lot of work, and it was hard to divide up to share. I really had to do this on my own. Back then, we didn’t have as many papers, but it was still a ton of work.

Back then, it was also a bit more of an isolated job because you were the only one. There was such a fear of making an error. Because you had to do multiple hand-offs of materials and you couldn’t send reviews to the wrong person. It’s not a task I’d want to repeat anytime soon. But I am so grateful I had the opportunity to contribute.
MD: You are a strong advocate for increasing women's participation in technical fields. When did this journey begin and/or what prompted it?

JP: I have always been interested in this. My parents pushed me toward STEM. When I was in college (Illinois), I don’t think there was a math class where I wasn’t the only female. It was all boys. Even in high school it was imbalanced, but when I went to college it was far worse. At the time, I just went with it. I’m not sure when I became more aware of the imbalance.

My goal was always to be more inclusive - whether in the classroom or in the community. I have always enjoyed being part of a group with a lot of different types of people – gender, ethnicity, talents, whatever. I liked meeting people who are different from me. I tried to apply this to any opportunity I had to form a group - give a broad set of qualified people a chance to work together. Most of the time, they will do an even better job than you ask them to do.

When folks became concerned about the diversity in computing, it was natural for me to want to be a part of this. At UVA, I had worked hard to make sure we had balanced gender TAs and tutors. If enough women didn’t apply, I’d go around to try to find them and get them to apply. So, I needed them to help make our classrooms more inclusive - not just for women, but minorities. Many were hesitant to volunteer but were eager to participate when I asked for their help.

If you split the hair, I’m more about inclusion over diversity - I want to be sure everyone can participate.

MD: Your career in computer science has included an industry career prior to earning your PhD; 12 years as a Senior Research Program Manager, 11 years as a computer science faculty member at the University of Virginia, and 2 two-year rotations as Program Director at the NSF. Could you share with us what prompted you to make the different moves in your career, and what might you suggest for others considering switching?

JP: I got my PhD late in life. I did it as an intellectual challenge versus trying to further my career. I never really had thought about having a career; I was focused on my family. It took that call from Bill Wulf asking me to apply for the job at UVA that things changed. I went to the NSF in 2001 for the first time, taking a 2-year sabbatical. It was a really eye-opening experience. I’d complained before about how slow things moved along at the NSF and after I went there, I realized the process was mostly necessary and valuable. When I went back to UVA, I’d just started back when Microsoft called me. I’d received funds from Microsoft in the past and met many of them at SIGCSE. When they called me, they told me they had a job I should consider. So, I went to Microsoft and had a good time there and retired from Microsoft. The NSF talked to me into another two more years. I was really ready to retire after the last two years at the NSF.

Each place, no matter where I went, wants to do the right thing. Externally, you may question motives or criticize their actions, but they almost always are trying to do the right thing. I got to see all three sides - industry, academia, and government, and see how they are trying to do the right thing. This led me to see that each area thinks in its own way. Each place had its own strengths and weaknesses. In the government, I liked that we looked at the whole country and what was the biggest bang for the general good and I liked that the day ended at five p.m. In industry, I loved the independence of identifying interesting projects and meeting great researchers and providing funding for interesting ideas. In academia, I got to work with great colleagues and students and teach the next generation of CS professionals. I loved each of those places.
My favorite is academia because of the freedom to explore new and different ideas and working with interesting faculty and students. This, despite the constant worry over funding!

MD: I am teasing, but have you ever applied for a job?

JP: (laughs) I’ve never actually gotten a job by applying! Even after I graduated from college, I went to work at the company where my dad worked, and I worked during the summers. Bill Wulf (UVA), NSF, and Microsoft all called me! I didn’t have a resume until I went to UVA. It wasn’t until I went to the NSF in 2001 that I had to write an official CV!

MD: You said you liked giving funds to people doing great work while you were at Microsoft, but you also led the Tablet Technologies in Higher Education Initiative and the Gender Equity and Pipeline Strategy for Microsoft Research.

JP: It was wonderful. Not only was I part of the technical team, but I was the money guy. I’d send out RFPs, and schools would apply and say what they could deliver. Faculty would submit five-page summaries of deliverable timelines and plans. I tried to include schools which aren’t often funded by industry. For example, I tried to target liberal arts schools, HBCUs. I liked projects which were undergraduate-led at undergrad institutions when appropriate. I had total control. I asked for input, of course. But it wasn’t hard to get great proposals because the faculty really stepped up to the plate. The faculty had great proposals and, an advantage over the NSF, it was a much simpler process request.

MD: You had four years at the NSF and years at Microsoft. Are there one or two projects that you are so happy you funded?

JP: There were many that I was thrilled to fund. The tablet initiative had several. Richard Anderson at University of Washington created a Classroom Presenter, which was a platform to provide individual attention with each student with the teacher using tablet technology. Joe Tront at Virginia Tech added other features to support student active drawing and students could save it or not. Beth Simon at UCSD developed classroom pedagogies that provided baseline education research for the use of tablets in the classroom. And there were many others.

While at NSF, I remember the CSEMS scholarship program. This provided funds for schools to use as scholarship for STEM majors. I met a Catholic sister from a small regional, first-to-college school at SIGCSE. When we talked about her school, I encouraged her to apply for the scholarship program. The sister applied and won - she wrote an excellent proposal, too! It was the first time the school had received funding from NSF and the school sent me a thank you note for encouraging her to apply. We need to keep encouraging everyone to apply. I ran into her a few years later and learned that she worked with the Chemistry Department to apply to the same program, and they won. Those are the kind of things I remember about the NSF - we can find underserved communities and help them shine. This is the reward for working through all of the bureaucratic stuff!

MD: What haven’t I asked you that you wish I had asked you?

JP: “What do I think the community can do to help itself?” I believe NSF is an under-utilized opportunity for the SIGCSE community. One of the big needs is to receive more grant money. I don’t mean the big research schools, but the smaller schools have creative and necessary educational ideas which need support. At the NSF, the money allocated to disciplines for awards in a program is based, in part, by proposal pressure. If you only submit six proposals and all six are great, only one
might get funded. If you submit 60 proposals, the community will probably get more than one funded.

It would be better if we, the CS community, had more proposals. I know we have the ideas! The program officer can request more funds if more proposals are submitted (they can argue need, interest) and then they can fund more work. But this all starts with writing proposals, and that’s a failing of our community.

We can start by talking to the NSF CS Program Officer and see what’s missing. What areas are undersubscribed, which are the priority areas? For example, if there are no current awards around algorithms, a well-written proposal developing a different way to teach algorithms will stand out. In general, we need to start thinking more holistically and not just focus on CS. We need to think about the role of our core courses, figure out how the emerging areas of computing fit into our curricula, how to engage with other disciplines, et cetera. Lots of exciting challenges. And we need to figure out how we can get support for doing this from places like NSF.

MD: How do you spend your time now that you are retired?

JP: My husband says I’m not retired, I just work for free! Currently I serve as: co-chair ACM Council of Education Board and Council, CSTA board member, Guest Editor-In-Chief of SIGCSE’s 50th edition, and other activities around diversity and inclusion with the ACM. We also have six grandchildren, which makes life so much better. We spend our winters in Florida and really enjoy being out in the sunshine and warm weather. Life is good!

ITiCSE 2018 Preview
By Michael Goldweber

ITiCSE 2018, to be held in Larnaka, Cyprus and hosted by the University of Central Lancashire, Cyprus (UCLan Cyprus) is shaping up to be a truly international event of the highest caliber. Consider the following statistics. Approximately one third of the 193 submitted full paper manuscripts had at least one author affiliated with a USA-based institution. Similarly, one third of the submissions had at least one author affiliated with an institution outside of both the USA and Europe. About 45% of the submissions had at least one author affiliated with a European institution. The sum of these percentages exceeds 100% due to 23 submissions co-authored by researchers from multiple countries. This fills out a “standard” ITiCSE program of two and half days of three parallel sessions with 56 accepted manuscripts yielded an acceptance rate of 29%; this is the second lowest in ITiCSE history! Only ITiCSE 2007, in Dundee, Scotland had a lower acceptance rate (28.9%)

The presentation of technical papers is not the only conference activity. Ten Working Groups have been selected, out of fourteen submitted, to meet and work concurrently during the conference. A sampling of working group topics include curriculum design and pedagogy for IoT, cloud computing, cybersecurity education, research on novice programming, and strategies for promoting the adoption of
educational innovations. While the final working group reports will not be published until the end of the year, working groups will not only present preliminary findings during the conference, but typically solicit feedback on their work from conference participants.

In addition to technical papers and working groups, ITiCSE 2018 will also have all of the other traditional features of an ITiCSE conference. These include Tuesday afternoon excursions, poster sessions, the always popular tips-n-techniques session, and engaging keynote addresses.

While it is too late to submit a manuscript or join a working group, it is not too late to consider attending ITiCSE 2018 to learn more about computer science education around the world and to make new friends and collaborators.

For more details about ITiCSE 2018, please see https://iticse.acm.org

ICER 2018 Preview
By Lauri Malmi, Ari Korhonen, Robert McCartney, and Andrew Petersen

You are warmly invited to the fourteenth annual ACM International Computing Education Research (ICER) conference, which will be held in Espoo, Finland, 13-15 August 2018. ICER provides a forum for presenting and publishing high-quality research in computing education. ICER 2018 will continue to feature its traditional single-track format, which is designed to encourage the authors and audience to engage in lively discussion about each work presented.

We offer a range of submission categories that allow for different types of participation, supporting work at levels ranging from initial ideas, to exploratory work, to completed research studies. Research studies are the main focus of the conference. Research papers have an 8-page limit excluding references.

To support work in earlier stages, ICER will offer a track for lightning talks, 3-minute presentations that articulate an idea for a research study, provide an update on current research, or invite collaborators. Moreover, a Works in Progress Workshop will be held the afternoon and morning after the conference,
providing participants with an opportunity to gain critical and in-depth feedback on their research ideas or projects.

The SIGCSE Doctoral Consortium will be held the day before the conference. Students accepted for the consortium will participate in an all-day workshop conducted by prominent leaders in the computing education research community. Participants will also present their work at the conference in a dedicated poster session.

In addition to the scheduled activities, we invite proposals for other activities, such as workshops, to be held prior to or after ICER. If you have an idea for an activity that you would like to propose, please contact Ari Korhonen (Ari.Korhonen@aalto.fi) or Lauri Malmi (Lauri.Malmi@aalto.fi).

Espoo is the second largest city in Finland and is located next to the capital city of Helsinki. The transport connections from the airport and the centre of Helsinki to Espoo are excellent. Espoo is a centre of international company headquarters and high-technology businesses, at the heart of which stands the Aalto University campus. Many commute daily to Espoo from the neighbouring municipalities in the Helsinki Metropolitan Area. Large natural areas are characteristic of Espoo: seashores, the archipelago, the wilderness in nature reserves and the waterways of the lake highlands. The cultural landscapes, constructed environments and natural areas of Espoo are like Finland in miniature.

We look forward to seeing you in Espoo in August!

Koli Calling 2017 Conference Report
By Calkin Suero Montero and Mike Joy

The Koli Calling International Conference on Computing Education Research is a single-track conference dedicated to publishing high quality work in all areas of teaching and learning in the computing disciplines. The 17th Koli Calling was held in November 2017, as per tradition, in the Koli National Park in Finland, organized by the University of Eastern Finland and the University of Warwick, UK. At the time of the conference every year, the national park is filled with white beautiful snow adding a mystical character to the iconic panoramic view from top of the Ukko-Koli hill. The quietly cold temperatures of the season are perfectly balanced by the lively and warm atmosphere of the conference.

The 17th conference saw all-time record numbers of submissions and attendances (35% increase compared to 2016), with participants joining the conference from as far afield as New Zealand and South Africa. The keynote address, “What can we learn about teaching from MOOCs?” by Professor Katrina Falkner, was a highlight of the conference. The speech took the audience through an exploration of the translation of established pedagogical practices into MOOC environments as well as the potential and wealth hidden in the analysis of students’ data available in the MOOC platforms.

The conference had a full but very lively and interactive program, seeing for the first time Guerrilla Poster Presentations, a different way of attracting the audience to the posters session, where the speakers surprised the audience by standing up and delivering their 1-minute pitch presentation from the place where they were anywhere in the auditorium. The program also included a pop-up hands-on workshop on digital fabrication and pedagogical
methodologies of the eCraft2Learn project\(^1\), where the audience participated in the physical creation and programming of a lighthouse. These activities facilitated networking, idea exchange, and community building among all participants.

Although the conference had a strong Computational Thinking flavour this year, with a 2-day doctoral consortium on the topic prior the main conference, the paper and poster presentations also covered a variety of interesting topics. These topics included teaching and learning programming; program design; affect and emotion expression in computer science and while programming; reflection, feedback and assessment; program plagiarism; and visualisation tools. The following presented work deserve special mention:

- The Best Paper award was received by Francisco Enrique Vicente Castro and Kathi Fisler for their work “Designing a Multi-Faceted SOLO Taxonomy to Track Program Design Skills Through an Entire Course” (doi:10.1145/3141880.3141891). This paper brings forward our understanding of how students learn to program through the development and deployment of a new SOLO-like taxonomy that operates at a course level.

- The Best Presentation award went to Juho Leinonen and Arto Hellas for their presentation of their paper “Thought Crimes and Profanities whilst Programming” (doi:10.1145/3141880.3141902). Their work takes us through an analysis of how, why and when students include swear words in their programming assignments.

- The Best Poster award went to Josina I. Koning, Hylke H. Faber and Menno D.M. Wierdsma for their poster “Introducing Computational Thinking to 5 and 6 year old students in Dutch primary schools; an educational design research study” (doi:10.1145/3141880.3141908). This is an exploratory study of how 5 and 6-year-old children develop computational thinking concepts, and what primary school teachers need to know in order to support them.

As per tradition, the conference allowed time for exploring the Koli National Park with a guided excursion to the Ukko-Koli hill through snowy trails, as well as relaxing spa and sauna visits for networking and socialising each evening of the conference.

The Koli Calling conference is a truly special event with a perfect combination of high quality research presentations, interactive sessions and social programs. We welcome you to Koli Calling 2018 in November!

\(^1\) https://project.ecraft2learn.eu/
Broadening Participation: CRA-W
By Erik Russell (CRA), Julia Hirschberg (CRA-W Co-chair, Columbia) and Margaret Martonosi (CRA-W Co-chair, Princeton)

The Computing Research Association’s Committee on the Status of Women in Computing Research (CRA-W) was established in 1991 to increase the participation and success of women in computing research. CRA-W is currently co-chaired by Julia Hirschberg (Columbia University) and Margaret Martonosi (Princeton University) who lead an active volunteer board of 26 successful researchers from academia, government labs, and industry. Increasingly, CRA-W’s portfolio has broadened to include under-represented minority men in many programs as well. Visit CRA-W.org to learn more about our many programs for undergraduate and graduate students, early- and mid-career faculty, and researchers in government labs and industry.

One hallmark CRA-W annual event is Grad Cohort, which offers career mentoring to first-second- and third-year graduate students to help them succeed and advance through their graduate studies. The 2017 CRA-W Grad Cohort Workshop was held in Washington, D.C. in April 2017. We received 1,519 applications and accepted 550. The program always includes senior technical women speakers from academia, industry, and government. With a demonstrated track record of valuable mentoring for attendees, applications to attend for Grad Cohort continue to outstrip funding for invited participants quite considerably.

Visit the “Programs” section of our website (https://cra.org/cra-w/) to learn about opportunities for engagement organized by audience: undergraduates, graduate students, faculty, and industry and government researchers. These include:

- Participate in an Undergraduate Town Hall event, and enjoy a virtual mentoring experience.
- Learn about the research and career paths of distinguished researchers at a Distinguished Lecture Series event.
- Attending Grace Hopper? Join us for the CRA-W mentoring track or apply as a Research Scholar!
- Learn to thrive in graduate school. Attend a Graduate Cohort Workshop: Grad Cohort for Women or the Underrepresented Minorities and Persons with Disabilities (URMD) Grad Cohort.
- Thinking about life after graduate school? Attend an Early Career Mentoring Workshop.
- Attend a workshop that provides discipline-specific mentoring and technical knowledge.

Students and researchers can learn more by following our Facebook page or LinkedIn group or joining the mailing lists on our webpage. CRA Membership is available to Academic Departments, Labs/Centers, and Professional Societies. Visit CRA.org to see if your company or department is a member of CRA and learn more about membership benefits.
### Deadlines and Upcoming Dates!

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<td>Oct 19</td>
<td><strong>SIGCSE 2019</strong> Nifty Assignments, BoFs, Posters, Demos, Lightning Talks, SRC, Pre-symposium events proposals due</td>
</tr>
</tbody>
</table>