Interview with Gloria Townsend

Dr. Gloria Childress Townsend is a Professor of Computer Science at DePauw University where she has taught for over 36 years. Dr. Townsend has served on the ACM-W Executive Board and is currently the Chair of the ACM-W Chapters Committee. She has been a founder and organizer for ACM-W Celebrations of Women in Computing and is a passionate advocate for women in computing.

What have been the most interesting and engaging parts of your work with women in computing?

My favorite part of working with female students and with female colleagues, as well, is watching them "grow". Computer Science is a greenhouse in which women flourish – mature and flower, just as plants do. Young women enter my Computer Science I (CS1) courses, very often without any computing knowledge. Before I can catch my breath, they glide through internships, research experiences, and Senior Capstone, landing in graduate school or industry positions. When women share stories about their journeys, I have both a feeling of pride (because many women chose computer science after taking their first class with me) and a vicarious thrill (because the stories are so dramatic and impressive). Sometimes the stories end full cycle (the most exciting stories of all), when former students become colleagues. Maria Schwartzman and I teach in the same department now, where she was once my CS1 student. Lindsay Jamieson is a member of the ACM-W Chapters Committee; she also was once my CS1 student.

What advice do you have for young women considering or studying computer science?

In order to create the journeys I described above, students need to "take the first step". Opportunities for women in computing are numerous. Women must seize these opportunities proactively: Prepare their resumes early and edit them often; sign up for interviews where "there is nothing to lose" and where every interview provides more practice and more confidence; and network with others by attending conferences (especially ACM-W Celebrations!) and other events. Women's journeys assume a stepping-stone metaphor. Each step of the journey leads to a slightly more demanding but better position; however, women must "stretch" themselves and accept a new challenge to navigate each step of the journey.

What advice do you have for faculty members and senior professionals to encourage women in our field?

The single best and easiest thing that we can do for our students is to encourage them. What does that mean: *We encourage by encouraging*? Although the answer seems circular, I truly believe that computer scientists fail to appreciate the importance of a few words of encouragement. For thirty years, I have written short notes of encouragement on students' exams. In all this time, I have never had a male student mention one of the notes, yet dozens of women have said something to the effect, "I had no idea that I had talent until you told me that I did."

How has the teaching of computer science changed in your 36-year career?

When I began teaching in academic year 1979-80, I didn't notice gender differences in the classroom, because there was parity. Slowly, over the next 10 years, the numbers of women in my classes and in our major began to diminish. The last 25 years of my career took on new meaning as I tried to correct the persistent and pervasive problem of underrepresentation.

With respect to programming languages, I've taught CS1 using BASIC, Pascal, C++, and now Java. In 1980, our department suite housed one teletype machine. Later we acquired four personal computers that we shared (in a small office) among several mathematicians and computer scientists. The field of security was in its infancy, because changing one's password did not require entering the old password. When I would leave the room to go to the restroom, the mathematicians (boys will be boys) would change my password. Soon thereafter, I asked the department to buy a Radio Shack, TRS80 (the affectionately-named Trash80). I put the machine on a wheeled cart and took it into my classrooms. Students would gather around me, sitting on the floor, kindergarten style. I thought that I was extremely cool. The Office of Publications thought I was extremely cool too and sent a photographer to take this picture for one of its brochures, showing that DePauw was on the "cutting edge" of technology.

Which metrics or key performance indicators should we watch to see the influence of our efforts on improving the balance in the fields?

The research I'm watching (mostly NCWIT research) is the work involving male allies. Coincidentally, an "Expanding the Women-in-Computing Community" BOF that I've held at SIGCSE for the last decade attracts more and more men each year. I believe that one of the keys to unlocking the underrepresentation issue lies in increasing our male allies – and not just allies, but allies who are actively working just as diligently as women are working to balance computer science.

How have the ACM-W Celebrations changed since the first ones you organized? Any interesting stories to share?

After the very first Celebration in Indiana in 2004 – the Indiana Celebration of Women in Computing (INWIC) – I charged the $12,000 hotel bill to my personal MasterCard. At the time, I had no idea how much money from registrations and sponsorships we would clear, and our only assets were $2000 from ACM-W. I'm happy to report that we cleared enough money to provide a small nest egg for INWIC2006 – and to keep my finances in the black. Over the years, the amount of support that Celebrations enjoy increased dramatically. Celebrations' enduring

partner, Microsoft, provided amazing support through Revi Sterling, then Jane Prey, and now Rane Johnson. As PI of the National Science Foundation BPC-A grant (094059), I secured enough funding to create twelve new Celebrations. Today, creating a new Celebration is easier than ever, with financial support and adaptable resources. (Contact Wendy Powley to inquire about starting a new Celebration: wendy@cs.queensu.ca)

In your book *One Hundred One Ideas for Small Regional Celebrations of Women in Computing*, you offer many outstanding ideas - how can we use this to get ourselves organized for our next Celebration?

The book arranges its "ideas" in chronological order, so one can organize a Celebration by following the steps in order. The first steps pertain to finding co-organizers. I cannot emphasize enough both how important these first steps are and how lasting the rewards of working with one's co-organizers are. I met wonderful Suzanne Menzel shortly before we worked together to create INWIC2004. She subsequently became a dear friend. We cooperated in a film series project, coauthored a paper, helped each other establish a regional ACM-W chapter, submitted an NSF grant proposal, and worked in a successful *recruitment-of-female-CS1-students* project. Besides Suzanne, early Celebration pioneers were Bettina Bair in Ohio, Tracy Camp in Colorado, and Laurie Dillon in Michigan. My "twin", Wendy Powley took Celebrations across the border to Canada, and she now chairs the Celebrations Committee.

Who have been your mentors – who have influenced your work in ACM-W and our field?

The advice I passed on to students earlier concerning the benefits of a stepping-stone model is advice that I learned personally. My entire life would be different had I not met Flo Appel (who later became a treasured friend) in a SIGCSE restaurant line in Nashville, TN. Flo recommended my joining an NSF-funded workshop about computing ethics, in 2000. I met Tracy Camp at the workshop. Tracy has always been a source of inspiration and support. When I was one of only a handful of women teaching computer science in Indiana, I read Tracy's famous "Pipeline" article. At the workshop, I told her about my Celebrations dream, and she invited me to join ACM-W. Tracy has made "all the difference" in my life. She linked me to a broader support network; she served as a role model for me – at first, through her writing alone – and later, through her ACM-W leadership. The final stepping-stone to Celebrations and now to Chapters came from Elaine Weyuker, another ACM-W Chair. She funded INWIC2004, and the Celebrations dream that I had in 1993 became reality. A special thank you to every one of my "stepping stone" helpers and to all other readers who give women support in realizing their dreams.