The ACM Awards Banquet 2000, Vicariously

by [Lynellen D. S. Perry]

As you'll recall, saxophone and piano Jazz filled the Pavilion Room of the Fairmont Hotel, San Francisco, on the drizzly Saturday evening of May 6, 2000. You weren't at the ACM Awards Banquet this year? Well then! Let me tell you about it. The Pavilion Room décor was decidedly retro 1950s, but the food was divine: cheese assortments, peeled prawns, a duck carving station, open bar, and more. Have you ever wondered where your membership dues went? Never let it be said that ACM is too stuffy to throw a good party. On the other hand, this party was black-tie ... maybe that is stuffy. Charles House, a former ACM president, was the Master of Ceremonies; Kay Mauchly Antonelli and Jean Bartik were the featured speakers with the keynote address entitled "ENIAC - Where It All Began."

I randomly happened to meet Jean Bartik for a few moments during the reception. If I hadn't just read the invitation again, I wouldn't have realized the significance of who was introducing herself. Realizing that she was a Pioneer in computing, my brain scrambled to ask her some, any, meaningful question. Here's what I came up with, and thank goodness I've never claimed to be an extemporaneous speaker.

> Me: So, you'll be speaking about the ENIAC tonight?
> Mrs. Bartik: Yes, it was quite exciting to work on.
> Me: Did you find it tedious to program?
> Mrs. Bartik: Tedious? No. We had very different goals from programmers today. We worked with, and for, users who were quite knowledgeable. Today you have to create programs that idiots can use!

And then she was whisked away by the arrival of Kay Mauchly Antonelli, her long-time friend and co-speaker. After the reception, we all found our seats for dinner in the Venetian Room. Gold appears to be the signature color of the Fairmont, and it was nearly suffocatingly gold in the Venetian Room. Perhaps that is what the gilt tomb of a Pharaoh feels like. Anyway. What is the main point of the annual ACM Awards Banquet, you may ask? To honor the ACM Award winners and newly-elected ACM Fellows. (What is the gender-neutral form of 'Fellow'?) The awards ceremony preceded dinner. Since my stomach said the time was three hours later than my watch said, I was grateful for the reception hors d'oeurves.

The Doctoral Dissertation Award of $5,000 (and publication of the dissertation by Springer-Verlag) is presented annually for the best computer science and engineering dissertation. Dieter van Melkebeek of

the University of Chicago was the winner this year for his dissertation Randomness and Completeness in Computational Complexity. It is interesting to note that for the 17 years and 23 recipients of this award, there is not a single woman awarded. If you're considering submitting your dissertation to the competition, keep in mind that the awards committee seems to define "best" as work that is heavily theoretical, not practical.

Ronald Boisvert was awarded the Outstanding Contribution to ACM Award for "his leadership and innovation as Editor-in-Chief of the Transactions on Mathematical Software and his exceptional contributions to the ACM Digital Library project." EICs do indeed work very hard on their publications. Mr. Boisvert is credited with streamlining the handling of TOMS manuscripts by making the entire process electronic. I am very pleased to see other ACM EICs following in the pioneering footsteps of ACM Crossroads. ACM Crossroads has used an entirely electronic system since our inception in 1994. Mr. Boisvert is also credited with creating a web page for the TOMS journal which was used as a model as other ACM journals came online. While I have not compared the web pages of ACM Crossroads and TOMS, I am again pleased to note that ACM Crossroads was groundbreaking in this area, having been the very first electronic publication of the entire ACM. The Outstanding Contribution award has been given twice to women, but to men 27 times.

The Distinguished Service Award went to Anita Borg, of the Institute for Women and Technology, "for her role in creating and promoting an active, international community for women in computing." If you are a woman in a computing field, you definitely must consider joining the Systers mailing list (and/or Systers-Students), and browsing the IWT website. Of the 29 times this award has been given, at least 3 (and as many as 6) of the recipients were women. Mrs. Borg is currently fighting brain cancer and I'm sure she would appreciate your prayers.

The next award presented was newly created this year: the Eugene L. Lawler Award for Humanitarian Contributions Within Computer Science and Informatics. Since this is a new award, let me quote the description. "The Lawler award recognizes an individual or a group who have made a significant contribution through the use of computing technology. This endowed award will be given once every two years, assuming that there are worthy recipients. The amount of the award is $5,000 and is financially supported by individual contributions." The first recipient is Antonia Stone, founder of Playing to Win and CTCNet. These organizations attempt to bridge the digital divide by bringing equitable technology access to underrepresented ethnic and socio- economic youth.

Daniel Sleator (Carnegie-Mellon University) and Robert Tarjan (Princeton University and InterTrust Technologies Corporation) won this year's Paris Kanellakis Theory and Practice Award "for their invention of the widely-used 'Splay Tree' data structure." They first published this data structure in Journal of the ACM in 1985. I've been in computer science since 1989 and I've never heard of it. I'm beginning to think that my professors are not as well-read as they claim to be if they never mentioned the Splay Tree. I'm glad I've never claimed to be well-read in computer science in general. If you're like me and you've never heard of it, you'll get lots of search results by searching for the phrase "splay tree" at a major search engine. This award was first presented in 1996 and none of the 14 recipients to date have been women.

The Grace Murray Hopper Award is given to a young computer professional (must be younger than 35 years old at the time the single major technical or service contribution was made). Wen-mei Hwu, University of Illinois at Urbana-Champaign won this year for his "design and implementation of the IMPACT compiler infrastructure . . . In addition, he has made fundamental research contributions to the field of instruction-level parallel processing." The prize of $5,000 is supplied by Unisys Corporation. You would think that this award would go to a woman more often than the other awards since it is named for an outstanding woman. However, since 1971 when the award began, only one (??) woman is among the 25 winners. Believe it or not, we are getting near to the end of the awards list.

The Software System Award went to The Apache Group for the creation of that "hugely popular webserver that is freeware and has been adopted by millions of sites." IBM endows this award with its $10,000 prize. Dr. Fran Allen, representing IBM and presenting the award, mentioned that Apache was chosen in part because the developers kept it "free from any one corporation that might want to change the standards for its own benefit." Dr. Fran Allen is one of the very few women that have been on the development teams who have won this award (or its obsolete predecessor award titled Programming Systems and Languages Paper Award).

The Allen Newell Award is endowed by the American Association for Artificial Intelligence (AAAI) and individuals. The award is presented for "career contributions that have breadth within computer science, or that bridge computer science and other disciplines." This year's winner is Dr. Nancy Leveson of the Massachusetts Institute of Technology for her pioneering work in software safety. This award was first given in 1994 and Dr. Leveson is the first woman to win it.

Finally we have reached the end of the awards. The crowning glory of the ACM Awards presentation is the All-Male Turing Award. Erm, that's the Ancient-Male Turing Award. Oh, wait. I mean the A.M. Turing Award, named after Alan Mathison Turing whom I truly hope needs no introduction. Do I really need to point out that no woman has won this award during its entire lifetime (since 1966)? This year the prestigious winner is a major contributor to computer science "for landmark contributions to computer architecture, operating systems, and software engineering": Dr. Frederick P. Brooks, Jr. The silver award bowl is accompanied by a $25,000 check (supported by Bell Labs, Lucent Technologies) and is given for major and long-lasting technically important contributions to the computer field. Dr. Brooks in indeed well-known for landmark contributions in computer architecture, operating systems, and software engineering. He founded the Computer Science department at the University of North Carolina at Chapel Hill and his more recent research has focused on real-time 3D graphics and haptic displays.

Now truly just before dinner is served, 30 people were inducted into ACM Fellow-ship. Fellow-hood? Has anyone found that gender-neutral term yet? Three of this year's 30 Fellows are women. There are a total of approximately 382 Fellows now, and approximately 32 of them are women. It appears that you may need to have a particular name in order to become a female ACM Fellow: 12 of the 32 women are as follows. There are four Fellows named Mary, three named Susan, three named Barbara, and two named Nancy. Maybe I should change my name to improve my chances.

Dinner itself was fabulous even if the jazz ensemble was a little too loud for conversation. Actually, the menu is your standard banquet fare: salad, rolls, beef and vegetables, and a novelty chocolate dessert. Still, it was incredibly tasty.

After dinner, we finally got to hear from the keynote speakers. They told us the story of their involvement with the ENIAC project for a wonderful hour and a half (much longer than the 30 minutes they were slated for). Here is a fragment of their incredible journey as Pioneers in computing.

Kay Mauchly Antonelli was a math major college Senior when World War II started. In June of 1942, she saw an ad in the newspaper that read, "Wanted: Women Mathematicians." So she called the two other math major women at her school and one of them went with her to interview with the Army, which sent them to the University of Pennsylvania because the school had a differential analyzer, an analog machine, at its Moore school.

Jean Bartik had heard about the opportunity to work on the differential analyzer from her calculus teacher. The salary was $2,000 per year plus an additional $400 per year if they worked on Saturdays too. Their title was "Computer", as in someone who computes. Aberdeen Proving Ground personnel had developed an algorithm, "numerical integration," which the women were taught to use in calculating trajectories. It took 40 hours of calculations to complete each trajectory on the differential analyzer.

Kay and Jean were thus employed throughout the war and in 1945 the Army fired all but five of the women Computers. Those five were kept on so that they could study the ENIAC and then keep it running at Aberdeen. Since there were absolutely no manuals, they learned from the wiring diagrams and the logic diagrams. In November 1945, they saw the ENIAC for the first time.

Hopefully that little taste of their story is enticing enough that you want to dig deeper into this often neglected part of computing history. Neglected? Yes. For example, not a single one of the women ENIAC programmers were invited to the 1996 ENIAC 50th Anniversary celebration held by ACM. Seems strange, doesn't it? None of the ENIAC programmers have been inducted into ACM Fellow-hood, either. They seem to be mostly forgotten. Well, it was an interesting evening and I'm grateful I could be there. Who knows but maybe someday YOU'LL be at an ACM Awards Banquet. Maybe not just in the audience either, but up on the stage receiving an award. Best wishes!