The Grace Hopper Celebration of Women in Computing

One Student's Experience

Conference Reports

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When I first heard about the Grace Hopper Celebration of Women in Computing I knew it was the place for me. The combination of my two favorite passions - computer science and women's issues - was too much for me to resist. When my university agreed to pay for the conference I was set. Washington D.C. here I come!

The conference was in honor of Grace Hopper, one of the first Computer Programmers in the U.S., a leading force in the development of COBOL and compilers, and the woman who said ``It is easier to apologize than to get permission.'' It was part of a movement to provide women in computing a forum for encouragement, communication, and networking. Women get about 12% of the Ph.Ds granted in

computer science (Taulbee Report) and the number of women undergraduates choosing to major in computer science has been steadily declining since the mid-1980s.

The conference was different from anything of the sort I had ever attended. The participants were not just students; they included professionals with jobs in the industrial world, women with Ph.Ds working in academia, people who had started their own business, executives of large computer companies, and civil servants. As a first-year undergraduate, even graduate school seemed like something I might never achieve, much less becoming as successful as so many of these women had become.

The conference was being held in Loews L'Efant Plaza Hotel, but, like many of the other students, I was on a budget and stayed at the (much cheaper) student housing provided by George Washington University. The evening before the conference many of us gathered in the lobby of our dorm. It was then that I began to notice our great diversity. We included people from California, British Columbia, Texas and Boston. Some were mothers, while some had barely left home! We were graduate students studying for our Ph.Ds, Master's students finishing up our theses, undergraduates trying to figure out what we wanted from life. As the conference progressed I noticed the same trends among all of the participants. We were from a great variety of backgrounds, yet were pulled together by the same thing that is pulling the world together - computing.

It was finally the first day of the conference. I had been anticipating this for some time, yet I was a little apprehensive. This was, after all, a **technical conference** and the only background I had was a year's worth of classes and what I had picked up on my own. Much to my surprise and delight the speakers were great! The women chosen to speak at the conference were at the top of their respective research areas. The wide variety of subjects kept the talks general enough for even an undergraduate to understand. The speakers spoke with such enthusiasm that I found myself considering study in areas I hadn't even known existed. They brought an excitement to the field of computer science that I often find missing. They inspired me to dream about what I might do in the future.

Some highlights of the technical talks:

- Keynote speaker Anita Jones gave a very good overview of how the Department of Defense distributes its money for research and a history of scientific funding in

the U.S. I found it enlightening to understand the way the DoD distributes its money. It was also interesting to hear how the NSF was founded.

- Mary Jane Irwin (Pennsylvania State University) spoke on ``Design Challenges in Massively Parallel, Fine Grain Architectures,'' explaining some of the concepts that allow her MGAP (micron-grain array processor) architecture to provide trillions of operations a second: packing more processor arrays on a single board, a snake configuration for computation, and digital parallel architecture.

- Three speakers really gave me a feel for where computer science is going. Mary Shaw (Carnegie Mellon University) spoke on ``Abstraction and Codification in Software Engineering.'' This historical look at the development of engineering disciplines from craft to commercial to a science and her statement that computer science is still in the craft stage made me wonder what the future developments in computer science and software engineering might hold. I didn't have to wait long to find out. Susan Graham's (University of California, Berkeley) talk, ``Language Implementation,'' discussed programming languages that will raise the level of computer science by making languages more robust, usable, and object oriented. Barbara Liskov (MIT) also contributed to advancing the vision of software engineering in the context of distributed applications using object oriented databases with ``The Structure of Distributed Programs.''

Maria Klawe (University of British Columbia) gave a very entertaining talk on a non-traditional area of computer science research, ``Making Electronic Learning Environments Succeed for Girls and Boys.'' This was especially interesting to me because I feel like we need to teach girls to use and enjoy computers at a young age to see them eventually become computer scientists.

These women, who had accomplished more than most any other women currently in the field of computing, were also approachable. I spoke with two who had done their undergraduate work at my school, Rice, and they both were interested in what I was doing and encouraged me to continue to follow their paths to graduate school and other opportunities. A graduate student friend got a chance to discuss her research area with one of its pioneers. This type of interaction was inspiring to all of us who were newer to the field. We were reassured that what we were doing was right, that there was a place for us in the world of computer science.

On Friday, in addition to some technical talks, there were two panels. The first ``Computers and Policy Issues: They Impact our Lives'' discussed two of the most

controversial current events in both computing and the world in general: The Clipper Chip and the National Information Infrastructure. With the information I learned the day before Dorothy Denning's talk on encryption, I was able to understand the government's reasons for adopting the Escrowed Encryption Standard. The panel helped me see the drawbacks to the Clipper Chip and how it would affect the commercial aspects of our world. With both sides well presented I came to understand the needs and drawbacks of such a system, as well as the need for development of something better, something that can be more acceptable to all involved while still not hindering law enforcement.

After the panel I had the pleasure of eating lunch with a group of women from Sun and DEC. These women had joined their companies and were working their way up through the ranks, leading groups and projects. It was very interesting to talk with them because they had stories and experiences to relate about dealing with people and managing groups. I really was privileged to have this particular lunch with them, because immediately after lunch was a panel on the choice they had made, ``The Management Option.'' The panel featured some of the highest ranking women in the computer industry. They were vice presidents of large computer firms and founders of their own companies. This panel focused on the trials and benefits of being a woman trying to get to the top. The women on the panel shared many of their personal experiences. The audience's questions and comments made many of us consider the differences in problems the younger generation might encounter. One student from Carnegie-Mellon spoke up saying that, unlike most of the panel members, she had never experienced sexism. This was encouraging to many, to think that the world is changing and those of us who are just starting our careers might not have to deal with the same problems the women on the panel had to deal with, but it made me examine my own experiences. I realized that, like her, I had encountered very little overt sexism, but I also think there are some more covert attitudes that will affect us in the future of which she is not aware.

The last day of the conference was filled with workshops. Since many overlapped I was not able to go to all of them, but the ones I did attend gave many people a chance to comment and discuss the different topics and were very informative. The workshops ranged from cultural issues of gender in computer science to the graduate school experience for women.

It would seem like all of these events were more than enough to fill three days, but

there was more. Thursday night was a Gala Banquet featuring Mildred Dresselhaus, a physics professor at MIT whose experiences as a woman in science had spanned many years. We also honored Nico Haberman, a strong supporter of women in science and a mentor of at least one of the women at the conference. After the banquet was a special screening of a work in progress for PBS of *Minerva's Machine: How Women are Changing Computing*, which turned out to be very controversial. We all seemed to have very set ideas of how girls and women in computing should be portrayed and wanted this documentary to help our cause. At the same time as the video there was a disco in another ballroom, which seems to be a rare event for normal conferences.

Friday night offered an incredible reception at the National Museum of Women in the Arts. The museum featured an unusual array of interesting art, from Georgia O'Keefe's work to a wedding dress made of underwear.

All in all the conference presented an incredible amount of options to the participants. It gave women who rarely get a chance to interact with other women a forum for making friends and contacts, for discussing their research and projects, for getting ideas for their future, and for getting excited about their field. We left the conference to go back to places where their are few women, but we will remember the experiences at the Grace Hopper Celebration in times of loneliness and isolation and know that we are not alone.