

REMARKS BY GEORGIA TECH PRESIDENT G. WAYNE CLOUGH
Society of Women Engineers Conference, March 17, 2000

I am pleased to welcome all of you to the Georgia Institute of Technology. We are proud to be your hosts for this regional conference of the Society of Women Engineers, and we join you in celebrating Women's Awareness Month.

Georgia Tech has an outstanding chapter of SWE that celebrated its 40th anniversary last November. For the past two years in a row our SWE chapter was recognized for having the best student section in Region D. And the reason is because these young women are so active.

They provide academic support for their membership, post job search opportunities on their website, help members put their resumes together, and gather background about the companies where they interview. And they send out an annual Resume Book to more than 250 companies.

They also reach out into the community to cultivate the next generation of women engineers. Whatever your opinion of the value of network television shows, they have clearly helped to communicate what it is that doctors and lawyers do, and to showcase women in these professions. You can't watch prime-time TV without seeing women doctors and lawyers in action, and a commensurate number of young women are pursuing careers in these fields. By comparison, engineering is a stealth profession. You can't get a sense of what an engineer does by watching network TV, or through any other mass media, for that matter. So it is up to us as engineers to find other ways of promoting our profession.

The Georgia Tech chapter of SWE does that here in Atlanta. They help Girl Scouts earn their science badges, do demonstrations in middle schools, and reach out to high school students as they begin to think about college in concrete terms.

Another goal for our chapter of SWE is to network with women engineers in other places. And hosting this conference gives women at Georgia Tech a great opportunity to do that. So we are very pleased to have you on campus, and we hope your time here will be inspiring and productive.

If we look back over the 20th century, two of the most powerful social trends were the technological revolution and the women's movement. Technology now permeates every aspect of our lives at work and at play, from the office to the kitchen. Two-thirds of women now work outside the home, up from one-third just 30 years ago, and their advances have affected our social institutions to such a degree that we cannot imagine how a woman's role could have been so narrowly defined 100 years ago.

But these two trends have not yet converged, and that is our challenge for the 21st century. Although women make up 46 percent of the total U.S. workforce, they comprise only 22 percent of the scientific workforce and only 9 percent of the engineering workforce.

Right now, most technology is being developed by young, white males, which is a pretty narrow demographic slice of the population. It is not that women are not good at technology, but rather

that boys are inducted into the world of technology by playing video and computer games, which do not appeal to girls because they mostly feature violence or men's sports. Although this immersion in electronic games gives boys a head-start on technology, it also gives them a very abstract view of it, and as a result they do not necessarily apply it where it's needed most.

In contrast, women are much more practical about how technology can be used to affect people's lives. Anita Borg, who founded the Institute for Women and Technology in 1997, says that guys think, "Here is this cool technology; what neat things can we do with it?" But women tend to start with a practical problem and look for ways to solve it using technology.

When women technology designers met last fall in Silicon Valley, they asked questions like: Why hasn't someone invented a smoke detector that can tell the difference between a burning house and burning toast. Or, why hasn't someone invented a sensor you can put in a Tupperware container to tell you when the food has gone bad? These are questions that it simply does not occur to young white males to ask, yet they represent very useful applications for technology. As technology becomes ever more pervasive in all of our lives, it is clear that a broader perspective needs to be brought to bear on its design.

And as technology becomes ever more pervasive, it is also clear that engineers are becoming leaders. It used to be that the MBAs ran the world while the engineers tinkered with mechanical things in the back shop. But in today's high-tech world, engineers are gaining power and influence. They can control their own destiny, and the broader leadership opportunities for engineers have grown astronomically. Women need to be full partners and participants in these opportunities, and not be left behind.

As a technological university, Georgia Tech has a unique opportunity to help more women become engineers and take advantage of the growing leadership opportunities that are opening up for our profession. And the Engineering Workforce Commission ranks us first in the nation in graduating women engineers.

Women comprise 28 percent of Georgia Tech's student body. Our big success story is the College of Sciences, where women make up about half of the student body, and they outnumber men in biology, chemistry, earth and atmospheric sciences, and discrete mathematics. We do less well with engineering, where 23 percent of our students are women, but that is better than the national average of 19 percent. And it has been improving. Our female engineering enrollment is up 14 percent since 1995, and in chemical and industrial engineering, women now make up 37 to 38 percent of our students.

Of our academic faculty, 14 percent are women. We have 100 female professors, and 42 of them have tenure. A decade ago, we were hiring about a half-dozen women faculty each year, and more than half would leave without ever achieving tenure. Within the past two years, however, we hired 24 women faculty. Five of them have already achieved tenure, and the remaining 19 are on track for tenure.

The percentage of our engineering faculty who are women is twice the national average, but it is still only about 10 percent, so we need to do better. And we are doing better. Since 1995, the number of women faculty in engineering has increased by 80 percent.

We also have more women in leadership roles at Georgia Tech. Within the past year, we appointed not one but two female academic deans, as well as Georgia Tech's first female registrar. Our dean of students is a woman, and so is the associate vice president for auxiliary services who presides over such thorny matters as parking and housing. I could continue with more examples, but my time is running out and you get the point.

Victoria Friedensen, director of Diversity in Engineering Workforce for the National Academy of Engineering, says the problem is not that women are dumb – they get higher grades in science and engineering than men do. The problem, she says, is that “the academic climate is chilly.”

So we are pleased to have you here to help us turn up the thermostat, because we need the women's movement to converge with the technological revolution. We need your intellect and your talents in engineering. We need your participation and your perspective. We need your leadership. And we believe that the United States and the world will be a better place because of the contributions you will make as engineers.

Again, welcome to Georgia Tech, and we hope you have a great conference and a great time while you are here.