



Guelph Engineering Society



Report on National Conference on Women in Engineering at Queen's University,
Kingston
November 9 - 11, 2007.

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1. Purpose of Conference

The purpose of this conference was to discuss and explore the various challenges that women face when considering pursuing a degree and career in engineering, career opportunities available to female engineers after graduation, as well as to network with other engineers both at the university level and at the professional level.

2. Personal Goals for Conference

With just over a year left till my graduation, one of my goals was to network with professionals in the field of engineering in order to gain insight on the career opportunities that are available for female engineers. In addition to that, being a member of a visible minority, I wanted to see if there were any barriers for people from diverse backgrounds to join the workforce. Having been involved in a leadership position through the Office of Intercultural Affairs and as a female engineering student at Guelph myself, I wanted to know the reasons behind low enrolment into engineering programs at universities in Canada in order to be able to encourage female students, especially those from racialized backgrounds, to take greater interest in engineering programs, within our local community.

3. Summary of Events

Employment Equity by Gurjit Sandhu

Gurjit's focus was on employment equity in which she presented some shocking statistics on the enrolment of women in engineering across Canada as well as enrolment in the specific engineering disciplines. She also mentioned that although policies do exist for diversification in the workforce, it doesn't necessarily mean that they are practiced. Systemic discrimination has been a problem since hundreds of years now and measures need to be taken in order to breakdown stereotypes against different cultures and religions, but also to get out of our strictly defined characteristics and roles of each gender. She also mentioned that womens' voices have often been suppressed by their male counterparts, but also that women have been conditioned into silencing

themselves. Professors, parents, teachers, students and the society at large, all have a role to play in understanding each other and condoning discrimination. Both men and women should learn about their differences and similarities and work on embracing them rather than using those against each other. Work needs to be done in order to get out of the “student culture” that constantly leans towards the fact that engineering is a male dominated profession and that it is well suited for those that exhibit male characteristics and needs to be more supportive, welcoming and inclusive of all.

Xerox Canada by Emily Moore

Emily talked about the qualities that leaders that reach to the top possess, and in specific talked about the life experiences of female leaders that have done phenomenal in both engineering and non-engineering fields at Xerox. She believes that there are certain characteristics that a good leader must possess, such as talent, drive, self knowledge, confidence, integrity, work-life balance and building and maintaining relationships. She gave us an example of the “Labyrinth of Leadership” and believes that's a great way to describe the problems women face in engineering professions. She doesn't really believe that there is a glass ceiling that exists as such anymore, but that the path to get to a woman's final destination, when compared to the same path being taken by a man, takes a lot more time and effort and for that reason many women leave half way instead of continuing to want to achieve their goals. She believes women must be more confident in their abilities and take credit for when they deserve it. She also pointed out that women are often found to rise up a company's project management side rather more often than the technical side.

Women have diverse leadership skills and are therefore knowing oneself is really important in finding the best fit in terms of work. Also a really important aspect for women is finding a balance between family and home and their careers and therefore they need to figure out what they want in life and then set out to achieve it.

Woman in the Workplace by Katie MacInnis

Katie is a recent graduate from Engineering at Queen's and got hired by EnCana. She talked about some of the things that women should look out for and be aware of when they are close to graduating and would like to enter the workforce. There are a number of options that one has after doing their undergraduate degree. They can either take a break and travel, do graduate work or get a job in an engineering or a non-engineering related field, which includes both full time and contract positions. One of the key things to keep in mind, is that networking is extremely important. Joining professional engineering and other such organizations and going to conferences are some of the ways in which one can get exposure to people that are doing well in the professional world. Having an updated resume is important in being able to apply for jobs. Once a job offer is made, some of the things to consider when making a choice are

salaries, benefits, savings, long term incentives and perks. Other aspects to consider are location, moving expenses and geographic flexibility. Employers can be from a small company or a large company and each of them have their advantages and disadvantages. When making a decision as to what to do after graduation, it is really important to set goals, so that the decision is based on what you want to do in life.

Shell Canada by Michelle

Michelle is in a very senior position with Shell Canada and discussed how she has been able to successfully find a balance between her work and personal life, especially having a spouse that also has a successful career. Michelle stressed the fact that men and women need to be equal at home as well as equal in the work force if they want to be able to maintain a healthy lifestyle. She also believes that as one rises in their ranks in the workplace, it becomes relatively easier to demand flexible working hours, if one chooses to do so. Companies need to be made aware of what the challenges that women and men face are. For that, one must be clear on what they want in life and make sacrifices where need be according to that. What is really important to remember is that, no one is alone. Women need to find mentors and peers that are supportive and seek their help and advice when the need arises rather than trying to do everything themselves. In general, Michelle feels that society in general needs to work on their mentality on "gender-specific" roles and until men and women don't work on these issues collaboratively, there will continue to be problems with stereotyping and discrimination.

Outreach/Retention of Women in Engineering by Lisa Romkey

Lisa is a graduate from University of Guelph and in fact is not an engineer but has worked with engineers in trying to understand why there are gaps in the recruitment at the university level. Lisa believes that men and women have different learning styles and recently women's interest in engineering has gone down considerably. One of the reasons why that is so, she argues, is the mostly absent or negative portrayal of women in the media, that pursue careers in science or engineering. Right from the moment girls are brought up in their early years, parents and teachers create a very "girly environment" in which they are taught that they are delicate and are mostly capable of doing softer roles in life. Science and engineering is seen as something that is more suited to males than females due to their biological abilities.

Some of the reasons women leave engineering is because they feel that engineering is a field that is concerned with things and not people and society at large. Its considered a male dominated field, with very little scope or career opportunity for women. Women feel that there is inadequate career counseling and the course content taught is very narrow. There are also concerns about balancing school and family, especially at the graduate level. Research has

shown that women place emphasis on connectedness and relationships and want to make a difference with their careers.

It is important for parents, teachers, people in engineering to accurately promote the benefits of being in engineering and to encourage women to pursue it as a career by making them feel confident in their abilities.

Some of the ways in which effective outreach can be done is by using Language and Visuals that are more suited to female students and their interests and to get them to do hands-on activities in order to boost their confidence. Demystifying science and technology is also important along with exposing stereotypes about those that are in the field. Increasing awareness about how engineering can be applied in a meaningful way as well as connecting it with people's diverse backgrounds and interests is crucial, so that the "Men's Club" atmosphere of being in engineering can be broken out of. Some of the things that really need to be changed are the student culture on campus, the curriculum, female confidence, information about engineering careers and their scope, media portrayal and mentality involving gender stereotypes and roles.

4. Evaluation

i) Conference Organizers

The conference was put together very well overall and the speaker choices were amazing and truly inspiring. The overall theme of the conference "Breaking through the glass" and the individual topics chosen for the sessions, including the keynote speaker sessions were great. The package that was provided to each delegate, the registration process, transportation, hotel choice, seminar rooms, everything was managed very well.

However, there are a few things that could be improved on for the next time this conference is held. Male engineering students should be encouraged to attend, since a lot of the information was just as important and relevant to them. A social event/opening event should be planned on the Friday night and the conference should be held early on Saturday and Sunday throughout the day. Sessions shouldn't run parallel to each other so that those attending have the opportunity to go to all of them and learn about everything, rather than having to choose one out of several good options. If possible, attendees should be asked their dietary requirements before they arrive for the conference, in order to be able to accommodate to allergies, kosher, halal, vegan and vegetarian options.

ii) Delegate

I had a wonderful time at the conference, both in terms of networking with engineering students and professionals from different universities and professional backgrounds but also by being increasingly motivated and inspired by the speakers that shared their experience and insight. It was very empowering to see female engineers make such a huge impact in Canada and elsewhere in the world and reminded me that women are just as capable as men.

I made an effort to talk to people from different backgrounds, different engineering disciplines and different universities and even took their contact information in order to continue to keep in touch and learn from one another. I also took down notes for each of the seminars that I attended in order to be able to share them with students at Guelph and also to remember what was said so that I can implement it in my every day life.

I tried to attend seminars on different topics and focuses but within my goals and interests in order to be able to get as much useful information out as possible and contributed to all group activities that took place. Having been open and respectful of others ideas, I feel that I maintained a very friendly and approachable attitude towards others that were present and thus represented Guelph in a positive way. The team of engineers that went from Guelph had a strong presence and we hope to use what we learned at the conference by improving ourselves as engineers and by spreading what we learnt through interacting with other fellow engineers. We also tried to find out how we could host an NCWIE conference sometime in the future on our campus and explored other ways in which we could contribute and collaborate with other campuses and organizations. Personally I feel that WISE should be supported and expanded on our campus and that we should really increase our level of engagement in outreach for women. I definitely attained all the goals I had set out through the seminars that I attended and the people that I interacted with and in fact learnt a lot more than I had initially thought I would. The conference really increased my own confidence level, helped me be a lot more clear as to what my career goals are and showed me ways in which I could make a real difference in the field of engineering. If I was to attend another conference, I would aim to learn about the things that I didn't get a chance to learn about at this conference.