

On March 3, 2009 at Ryerson University, a panel discussion entitled “How I became a Successful Engineer” was held by the IEEE Toronto WIE Affinity Group. Three female engineers spoke about their path to success, the challenges they faced along the way, and the key skills that they found indispensable in their careers and lives. More than forty engineering graduate students and alumni working in industry participated in the discussion.

Behnaz Ghoraani, Chair of IEEE Toronto - WIE moderated the event, which began with a presentation on the 125th Anniversary celebration and IEEE Women in Engineering (IEEE-WIE).

The first speaker was Lynn McNeil, Director of Quality and Information Technology at Genum Corporation. Lynn has over 20 years experience in high tech semiconductor operations and engineering. She has co-authored several papers and holds patents in advanced thin film technologies and advanced packaging. Lynn is also a member of the American Society for Quality and the IEEE, and is a community leader, which includes the Hamilton Engineering Week Organizing Committee. In her presentation, Lynn said that every morning she values the company she works for and the people she is with. “When you can see a future of your company and your own future within that company, it is a very good place to be”. In fact, Lynn has changed her carrier multiple times through the years – all within Genum Corporation - and she encouraged the audience to have the ability and passion for embracing change and seeking out opportunities. Throughout her presentation, Lynn explained her deep appreciation for the need for broad and diverse skill sets, including technical, social and business skills, and she encouraged the participants to acquire a mix of technical, business, and people management skills. She highlighted that the university experience provides tools for lifelong learning and an opportunity to understand and develop life-balance skills. Finally, she explained that it is up to the individual to keep up with technology, business, market trends, as well as trends in management practice.

Firoozeh Khalily, Director of Product Management at Rogers Cable, was the next speaker. Firoozeh has broad technology expertise, and has held a variety of engineering, marketing, business development, and planning roles with network and service providers since 1992. In her presentation, she spoke about how she has coped with all these changes to her career, noting that “success means different things to different people. You need to define what success means to you.” She described how success is not just being technologically perfect - it is developing interpersonal skills, and being a well-rounded person. To her, this includes the ability to accept input from others and to have patience and perseverance. Firoozeh mentioned that as an engineer, one has to work hard and strive to be the best in his or her field, mastering subjects and learning to communicate with colleagues about complex technical issues. She spoke about how skill and experience can never be taken away from a person, and encouraged attendees to “plan for the future, observe trends, notice changes, and hear the

nuances that others miss.” Firoozeh explained how important it is to find a niche and build on core competencies. When talking about factors that would change the future of engineering, she said to look towards the issues facing the environment. According to her, this will create a huge shift in engineering in the coming years, and that technology will change quickly. Also, Firoozeh highlighted the impact of positivity on career. She said to assume that solutions already exist, and that behind every success story is someone who refused to believe that there is no solution. Closing her speech, Firoozeh said that having children is another huge responsibility: “You have to guide another member of society into the world, so include your children through your busy life-style. A super-woman is a myth - having family and a career is a big balancing act. The journey is the reward - do not wait for something to happen, live your life now, enjoy the journey.”

Next, Kasia Wtorek, a Product Engineer at Gennum Corporation, talked in the panel. Kasia has been in the industry for about 5 years and has already had two careers so far, both at Gennum. For the first 2 years she worked as an analog designer, a challenging position which she enjoyed, but did not consider her niche. Now she is a Product Engineer, a role that resonates with her because of its mix of technical and interpersonal, as well as its breadth. Kasia now deals with a wide range of departments and people, and influences colleagues by her combined skills in data analysis and communication. Kasia encouraged the participants to embrace change, to have the courage to step forward for challenging projects, and to have the confidence to step outside their comfort zone. She suggested picking projects and working with many different people as a means of expanding one’s skill set – and to pass those skills along to others. Also, Kasia mentioned the importance of seeking mentorship in technical and business world. She said it is very important to learn how to effectively communicate with people, how to establish work relationships, how to read situations and how to ensure a professional environment. Her closing comment was to “be self-reflective. This helps you to know if you are getting what you want, and if not, have the courage to change.”

Concluding the presentations was a panel discussion, with questions asked by the audience on a range of topics. Feedback on this event was varied and positive, with participants noting that the “personal stories made the presentations very exciting.”

Q&A

Below is a summary of the discussion held as part of the panel, with questions asked by the participants and answers provided by the panellists as indicated below:

Q: How fierce is the competition?

A. - Lynn: There are two levels of competition: can you compete on the technical level - you now have to strive to be the best in your field, not just Toronto or your company. Another level is political & global - you have to keep global perspective and keep up your skills. If you get tunnel-vision, you will get taken out by competition.

- Kasia: I don't expect my job is safe; I always think about my skills, my interpersonal skills.

- Firoozeh: I remember hiring a person who had great interpersonal skills, everyone loved him. Unfortunately after 6 months, the focus of the team changed and his position disappeared. For 2 years he went from job to job to job, he did his best everywhere he went and contributed greatly to the teams that he was a part of. Just two weeks ago, he finally got a position that was related to his field of expertise. That's the story of survival and perseverance...

Q. Lynn, do you recommend having business degree on top of engineering? Would you dedicate time to the degree?

A. It didn't make sense for me to take two years away from my job in any way, including financial. Also, I think you need to have a couple years of experience before you start your MBA in order to get any value out of it. I did it part-time and it was hard. I took executive program as opposed to management level, as that is where I need to apply that knowledge right away. I liked to study academically first and then apply the knowledge to the case, having the discipline of writing the exams. I spent 2-3 years evaluating MBA & Exec MBA programs in Ontario before choosing one.

Q. From all presenters got that reflection is important. I'm in first year, how would you apply that to the situations? Should I reflect on my communication with friends or should I read a book to help develop it in a way?

A. Kasia: I like to read books, I read about 'traffic rules' for communication and then went to a meeting and saw it happen. Also during university, I reflected on my conversations with professors.

Lynn: You need to know your time for reflection - my time is in the shower. It's important to consciously take time and think about my interaction with other people.

Firoozeh: It's important to not allow your ego to get in a way when you're listening to another person. If you have respect for people's ideas and other people often have interesting and useful perspective on things.

Behnaz: The best way is to practice as Kasia mentioned. For a student, you can join a society, volunteer, do something that is outside of your own environment and lets you practice.

Q. How do you establish the relationship as a mentee or a mentor?

A. Lynn: One key thing is to ask - people have this inhibition about asking for mentorship. When looking for a mentor, not only look for technical or business but behavioural path that you like. If you're a mentor remember that this is a two-way relationship. It's not about making a person to be just like you, but to help them to develop as their own person, give opportunities for learning.

Kasia: If you are being mentored, remember that this person will influence and shape you, so it is important to look at their decisions and decide if you want to be shaped by this person. A mentor doesn't have to be in the work group that you're in, if there's someone outside my group who I think would be helpful I will ask that person.

Firoozeh: Usually companies have a mentoring program and at the beginning of the year people have an opportunity to sign up to be a mentor or to have a mentor.

Q. Where do I start, where do I find a mentor?

Lynn: Decide on what you need mentorship in. IEEE has resources. Use your network, like the people you've met here today, it doesn't mean we will directly mentor you but we may be able to link you with someone else who matches your interest.

Q. Being a woman engineer how did you overcome gender-related obstacles?

A. Firoozeh: I believe that women usually need to work much harder to prove themselves and gain the same level of respect as their male colleague. If you start at the same level as a man you need to work much harder to prove yourself and to integrate into the team but once you're there you're a part of the team.

Lynn: Now in Canada, women represent the lowest percentage in engineering of all times. But the important thing to keep in mind is that every child has potential regardless of their gender or even whether they want to pursue engineering - they all deserve an equal treatment and equal chance to achieve their potential.

Q. Did you have imaginary or real role models through your career path?

A. Lynn: Outside of my family, I still look to Dr. Barber - he sat on government bodies at national level to foster ITEC industries, constantly gave back to the community, was a member of multiple boards, and is the kindest and most generous person. He absolutely enjoys seeing other people grow and succeed.

Firoozeh: On many different levels many different people - your parents on how you were raised, on professional level people that don't give up and persevere to succeed, single mothers that don't give up.