



# Guelph Engineering Society



Report on NCWIE at University of Toronto,  
November 27-29.

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## *1. Purpose of Conference*

The purpose of this conference is to network with peers and professionals and discuss how to better support diversity in the field of engineering so as to enable everyone to have the opportunity to contribute in a meaningful way to society. Discussions were focused on the role of women in engineering, the current statistics related to women in engineering, current barriers, the engineering profession and how to be successful within it. This was achieved through discussions and workshops, and creating a network of friends studying engineering across the country.

## *2. Personal Goals for Conference*

As a fifth year student still actively involved with engineers without borders as a senior member I have a significant amount of interaction with engineering students of all different years and with high school students through school presentations. I have the opportunity in this position to act as a role model and represent a responsible and inspiring example of women in engineering. As a camp instructor at UofT I have had experience taking on the role of an engineer and was excited to be able to represent to young girls what an engineer could be. As a recipient of the Canadian Engineering Memorial Foundation (CEMF) Award for women in engineering, I am now an ambassador for the organization and am committed to learning more about the issues that women face and how to overcome them.

My personal goals are to learn more about issues faced by women and approaches taken to overcome them. I think at Guelph we are very fortunate to not face as much discrimination or marginalization as at other schools, however, I recognize that this is not the case across Canadian universities. I am looking to do my masters in the next few years (or entering the workforce), and will likely encounter situations which are less friendly than at Guelph, and I would like to have tools to manage these challenges and help my female colleagues do the same. Finally as an ambassador of CEMF, I give high school level presentations about encouraging girls to enter into engineering programs. In order to responsibly do this I would like to have a better understanding of the challenges

and coping strategies of women in order to better communicate and inform high school girls. Furthermore, I would like to better understand not only the individual coping strategies, but how to affect changes at the societal and systemic level. Taking it back to how I will directly contribute to Guelph, through my involvement with EWB I hope to act as a leader and positive role model to girls in younger engineering years.

### *3. Summary of Events*

#### Understanding Social Styles: Your Ticket to Success

Social Styles workshop with Jana Seijts:

→ Learning how to communicate with people of different social styles – to be successful with managers and bosses

Social styles (read by their office):

1. **Analytical** – thinkers, detail oriented, methodological, habitual, consistent, like rules and no surprises

→ Office tends to be work-oriented, tidy, organized, and filled with activity

2. **Amiables** – want people to be happy, avoid hurting feelings, help others, like support

→ Office tends to have a friendly and open atmosphere, family pictures and personal mementos everywhere, desk oriented for open contact with people

3. **Expressives** – colourful and dramatic, future-oriented, don't like rules, leap before look

→ Office tends to be friendly and open, cluttered and unorganized, motivational posters on the wall, and desk placed for contact with people

4. **Drivers** – want to get to the bottom line, do it now, task-oriented and take action

→ Office tends to have achievements posted on the wall, desk placed so that contact with people is across the desk, or with their back to the door, their calendar is prominently displayed

#### **Key take-away points:**

-these are general stereotypes, often people have a mix of social styles

-analytics/expressives and amiable/drivers are the most conflicting pairs

-this is useful to know to reduce conflict and improve communication in working groups

- helps you learn how to craft and tailor your message depending on who you are giving it to – important ‘soft-skill’ to have in workplace
- about being flexible – not giving up your goals – but making someone else understand your point of view in a way that they are able to understand
- “do unto others as they would like to be done to”
- there is power in understanding others

### **Current Perspectives and Future Challenges – Moving Forward in an Ever-Changing Environment**

Kerry Black – Masters Student UBC

Websites: [www.wie.apsc.ubc.ca](http://www.wie.apsc.ubc.ca)

Check out Macleans – “Getting into the game”

History of Engineering:

- evident in class composites in hallways
- women’s washrooms – tiny janitor closets converted
- 27.4% of Guelph engineering enrollment is female
- but there is still an issue of retention
- the potential negative effects of looking back on our accomplishments
  - not thinking about the injustices and challenges that women are still currently facing in engineering

Stereotypes:

- look at clipart:  
construction workers, men, blueprints, hard hat

Traditional Values:

- importance on hard science, reluctance to support multi-disciplinary – “soft engineering”
- rigid and inflexible
- narrow definition of excellence
- typical engineering traits are associated with masculinity

Modern Values:

- integrated approaches – innovation, creativity, sustainability, inter-disciplinary approaches
- holistic framework
- communication skills essential
- leader and team player
- much more relatable person

Challenge Stereotypes:

-increasing awareness, changing perceptions, challenging expectations

Engineering Culture:

-lady Godiva?

-cheers/hymn?

-traditions?

→make new traditions that are relevant and appropriate for today

Typical Female Engineer:

'heels and skirt' vs. 'pants and shoes'

-acknowledge and break down

-programming that reaches all women in engineering

-need to build a community where women support each other

Recognize the relationship between the university institution and attitudes of it, and its relationship to industry

Engineering institution → engineering culture → industry

Successful transitions:

-first year programming

-transitions workshops

-mentoring programs

-open-door policies

-connecting with existing campus resources – counseling services, equity and diversity offices, student development

-links to faculty

\*effective outreach

→ quality vs. quantity

→ GoEng Girl

→creating role models – accurate representation

→start earlier than grade 7-8

→create opportunities for mentorship

→support WIE programs

→involve engineering societies – focus on community building

### **The Role and Future of Women in Engineering**

Dr. Milica Radisic, assistant professor at UofT

-balancing an academic career with family

Professor: 50 hours per week, 100 hours per week if include family responsibilities

Benefits of academic/research career:

- Freedom to pursue own curiosity and interests – drive own research interests independently
- Intellectually stimulating
- Flexible schedule
- Ability to help people reach their educational and career goals

Drawbacks:

- Office door is never closed
  - Not a job, it's a lifestyle – work permeates personal life
- \*comparable to running own business – with same benefits and drawbacks

-universities are getting better about maternity leave – but still do work even when on maternity leave

### **Diversify Top Management**

-Suzelle Barrington – WiEAG – Engineers Canada, professor at McGill University

-discussing how women can better obtain top managerial positions

-management positions are important – for workforce diversity and sustainability

→ companies that are the most diversified at the top do better financially

-80% of stuff bought in N.A. purchased by women – makes sense to have women designing it

Why limited diversity?

-too few women in engineering

-same low enrollment of women in engineering around the world

-women who are in engineering are primarily in non-traditional roles – biological, biomedical, chemical and environmental in Canada and USA

-there are not a lot of women at the top because there aren't a lot of women at the bottom

-ethics

-in hiring and promoting – preconceived/sub-conscious reaction

-have to seize opportunities, not necessarily going to be given to you

-poor women managers get fired; poor male managers do not

-women do not 'play the game'

-work smartly, not necessarily harder

-delegate – especially family work

-take time to network and think about moving up

-seek a good partner! Can they cook, clean, support you, look after the kids?

### **Playing the Game:**

- train to be competitive – don't be afraid, and if you are, hide it
- train to be a manager – take courses in human resources
- establish peer confidence – make sure people want you as a manager
- build on challenges
  - keep CV updated, and keep track of accomplishments
- get involved in a job other than the bottom line
- plan for managerial position from day 1 of career
  - attend committees, understand the business
- Build self-confidence
- Maintain a CV with achievements
- Why wait to be asked
- Hire a man for billing process
  - Women are often scared to charge too much
- while on maternity leave – try and stay connected to work
- don't rush into first job offer and change jobs if need be

### **Susan McCahan - Role of the University**

Chair of First Year Applied Science at the University of Toronto

University role today:

- Get feedback on learning
- Create an emotional connection
- Creative development of understanding – students are not computers

→problems should be addressed in a human and environmental context

→contextualize problems so that people care about them

-students need to actively engage in their own education and learning

\*think about the value of your education to you

-when you have ownership of your experience, engage with it, and shape it, it is more meaningful

-engineering education has core values but needs to allow for space for opportunities for compelling experiences

\*Service Learning Course

-design project with/for community organization

-i.e. nextlab – MIT cellphone applications

-EPICs

“at least half the best brains in the world reside in women”

## The Power of Professionalism - The First 7 Seconds

Ann Marsh

- brand yourself
- you continually make and reinforce first impressions
- people don't know they have expectations till they are not met

First 7 Seconds of the impression someone forms of you:

### 1. PUNCTUALITY

-first thing that is noticed, whether in person, email, phone, etc.

Power of Wait	Power of Late
How feel when waiting:	How feel when late:
-annoyed	-anxious
-angry	-stressed
-disrespected	-guilty
-unimportant	-humiliated
-wasting time	-judged
-bitter	-regretful
-worried	-sorry

- these emotions do not set up a positive first impression
- you make the choice to be late - its easy to blame others
- represents a lack of value of your own time
- need to be realistic about your schedule and being able to say no
- switch from **reacting to responding**
- schedule in time to work, travel etc.

### 2. APPEARANCE

- 55% of first impression is visual
- ask for a copy of dress policy for you interview
  - shows how they want to be represented
- where what you where - needs to be authentic
- judgment - question credibility if you dress inappropriately
- \*always have a jacket or blazer
- want to stand out and look professional
  - like a leader
- appearance - reflects how you feel
- should fit, be age appropriate, represent your personal brand
- \*\*can also relate to appearance of emails - you are creating a visual through your communications (phone, email, etc)

### 3. ATTITUDE

- presentation

- body language (related to N.A. business culture – varies with different cultures)
- smile, posture, eye contact, arms, facial expressions
- \*what attitude/message are you conveying?
- you where your attitude
  - park your issues at the door
- bring passion, energy and positivity
- networking is very important
  - walk through doors with confidence
  - you are going to get and give value
- when you have the opportunity to present, try not to be behind a podium/table
- think about what message you are communicating non-verbally
- stand up in a meeting if you have something to say

#### 4. LANGUAGE

- The Introduction
- email: always have subject in subject line
  - always have a greeting
- answer your phone with consistency – same with clients or colleagues
- \*voicemail greeting – make sure appropriate
  - don't lead with I'm sorry
  - start with positivity – “thank you for calling”
- don't do other stuff while you are on the phone
- try as much as possible to be face to face, then phone, then email
- introductions like a presentation
  - who intro to whom
  - be consistent with honorific, story, etc
  - client/guest first

#### 5. THE HANDSHAKE

- face to face
- web to web
- firm is good – not too firm though
- 2-3 pumps
- \*extend hand and just go for it – take initiative
- wash hands☺
- in business environment, there should be no gender difference – shake everyone's hands the same
- less is more
- be gracious (if someone has sweaty hands, don't make a fuss)

#### 6. PREPARATION

- people don't know how prepared you are
- when unprepared, feel how you do when late

-prepare for networking event – see who is going to be there and set up expectations for the event  
→the line represents when you are meeting expectations, above it you are exceeding, below you are not meeting

Ownership  
Accountability  
Responsibility

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Blame  
Excuses  
Deny

Preparation → Confidence → Calm → *Calmfidence*

## 7. CONSISTENCY

-figure out your brand and stick with it  
-so first impression becomes a lasting and authentic impression

## 4. Evaluation

i) The conference was overall very well organized and carried out. There were many excellent speakers and logistically the weekend went very smoothly. The sessions on professional development were especially interesting and engaging. There was a bit of overlap in content of speakers, and many people who probably should have been there (related to the PEO) were not able to because the conference was held the same weekend as the PEO conference, which appears to be poor planning. My major criticism was related to turning learning and awareness into action. We were exposed to a lot of different issues, but aside from the conversations the Guelph delegates had in our room, which were very valuable, there was not enough time to discuss what we could do in Guelph. I think some break out sessions where we assessed the current status in our individual universities and what we hoped to change when we returned, as a group or individuals would have been very useful. Creating action items is taking it a step further to actually creating change in our universities. Further, we could have shared this information to the other university delegates and try and create a network of support. For example, if we know that UBC overcame a similar challenge we were facing – then we can go to them for advice. Likewise, if McMaster or Waterloo are facing the same issues, we could collaborate with them to come with ideas and support networks together.

ii) I felt that overall I gained a lot from the conference and was very inspired to make changes upon return to Guelph. Already I have spoken at the December 6<sup>th</sup> memorial at Guelph City Hall, and was largely inspired to do so

because of my attendance at this conference. Another area I am interested in becoming engaged with is a mentoring program for female student in engineering, as well as others who feel they are a minority and discriminated against. I learned at the conference the importance of mentoring programs and think that is an area that I could contribute to. In the new year I intend to get in touch with the gender officer (?) of the SOE and see how I can help out or get this program running if it is not. Further, as a delegate of CEMF I would like to continue giving presentations about the merit of engineering as an exciting career option. I feel that I was able to fully participate socially and academically at the conference, took lots of notes, networked a bunch and attended all the sessions. At another conference, I would initiate the recommended action item list as I mentioned above, and translate this learning into action at Guelph. I still plan on touching base with the other delegates and discussing potential action items.