



Looking badass in a cool picture with some dude

NCWiE – National Conference for Women in Engineering 2014

Engineering and Computer Science Association

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2 INTRODUCTION

The National Conference on Women in Engineering (NCWiE) is organized every year by a member association of the Canadian Federation of Engineering Students (CFES). This year, the conference was hosted at the University of Saskatchewan.

In 2014, the General Assembly of CFES voted that, starting with the 2015 edition of the conference, the name of the conference will be changed to the *National Conference on Diversity in Engineering*¹. The intent was to encourage an inclusive environment, cover additional topics, and allow for different discussions. As such, the content of this report was drafted looking at a conference geared towards increasing diversity in general, rather than just the inclusion of women.

¹ Bids for NCWiE are done at the CFES Congress two years prior to the conference. Therefore, the name change is only valid for future bids and it was not applied to NCWiE 2014, for which planning had already started.

3 SCHEDULE

The content of the conference was structured under 3 streams: Communication, Identification, and Implementation.

	Friday November 14th		Saturday November 15th			Sunday November 16th		
	Center Room	Starlight Room	Starlight Room	Top of the Inn	South West Room	South West Room	Center Room	East Room
7:00			Breakfast			Breakfast		
7:30			Keynote: Professional Communication Corey Owen			Keynote: Changing the World Roger Garriock		
8:00			Break			Break		
8:30			Communicating with Kids	Negotiation Tactics	Leadership Communication	Mat/Pat Leave	Planning NCWIE / CDE	Workplace Culture
9:00			Coffee Break			Coffee Break		
9:30			Conference Bidding 101	Building Resumes	Cultural Communication	Diversity Scholarships & Admissions		Equal Opportunity vs. Outcome
10:00	Registration		Career Fair Conference Foyer		Lunch	Lunch		
10:30			Keynote: Gender Physics Retro Ann Hixson			Mentors & Friends		Female Friendly Curriculum
11:00			Visible vs. Invisible Minorities	Gender Physics		Midafternoon Break Keynote: Grant Imahara		
11:30			Midafternoon Break			Sponsored by College of Engineering		
12:00	Welcome Luncheon - Top of the Inn		Positive Space	Aboriginal Engagement Sponsored by PCS		Farewell Notes		
12:30			Banquet Prep					
1:00	Transportation		Cocktail Hour Delta Bessborough with Condition One					
1:30			Partner Banquet Sponsored by PCS					
2:00	Tours	Registration	After Party					
2:30								
3:00								
3:30								
4:00								
4:30	Transportation							
5:00	Networking Dinner Center Room Sponsored by Graham							
5:30								
6:00								
6:30								
7:00	Transportation							
7:30								
8:00								
8:30	Evening Event							
9:00								
9:30								
10:00	Transportation							
10:30								
11:00	Pool Party	Movie Night						
11:30								

4 CONFERENCE PROCEEDINGS

4.1 Professional Communication

The purpose of the Professional Communication “stream” was to teach how to approach sensitive issues and communicate effectively about them.

This first keynote was given by a professor at the *School of Professional Development* at the *University of Saskatchewan*. The talk addressed introductory communication notions such as

the speaker-message-audience relationship, the ways in which rhetorical devices are applied (in particular, ethos, pathos, and logos), and common practices and misconceptions about communication.

The content was reminiscent of ENCS 282, although with less material covered, and condensed into an hour. This made the whole keynote completely irrelevant for me or any member of the ECA, and while I do acknowledge the importance of understanding how to communicate and create the right framework for the delegates to make the most of the sessions, this wasn't executed properly.

Ironically, having a traditional, academic lecture at 8am is not the best way of communicating because the audience is left completely passive – if not sleeping – and therefore not engaged. Not only that, but the content should be a part of every attendee's education. If not, there is a huge deficiency in their Engineering education that is not related to the conference.

Finally, I believe the talk created a sense of intellectual restriction, as it was encouraging a specific mindset and focusing on the abstract and academic aspect of communication instead of asking participants to be open minded about the content of the conference and teaching them effective communication, two skills that are essential to the creation of a learning environment.

4.2 Leadership Communication

This talk addressed how communication was a key element to good leadership. For example, how narrative could be used by different leadership styles to make the leader appear authentic and trustworthy. Unfortunately, the session was again too theoretical as it was more about the *what* instead of the *how*. There was no link between the traits of a leader and the context of the conference. Indeed, it would have been more useful had it created a clear relation between being a leader and increasing diversity in engineering – which was the purpose of the conference.

4.3 Cultural Communication

Cultural communication, given by the same professor, was by far the best session of the first stream. It approached the necessity of cultural competence – that is, the ability to communicate with someone of a different culture and recognize the need to negotiate between cultural codes in order to achieve a common goal.

Having this cultural intelligence is crucial for Engineering students, as they need to be able to interact with people of different backgrounds – not just ethnicity, but also socio-economic or industry differences. Moreover, having this understanding is fundamental in the context of the conference – that is, if we want to promote a diverse environment in Engineering.

Finally, it is worth noting that this subject is not part of Concordia's curriculum, and may be one of the causes of the major communication problems that engineers have – at least at Concordia.

4.4 Gender Physics

The speaker, engineer and former Senior Vice-President at PotatoCorp, kicked off the second stream of the conference, Identification. She explained the concept of gender physics, which defines specific behaviours either as masculine or as feminine. She noted that her ability to use both equally was a key to her success. Indeed, it allows people to be more flexible in their responses to specific actions, and therefore determine the best course of action when making decisions.

Although this could be considered as a dumbed-down, simplistic application of cultural intelligence, it is a good starter and more practical to use. She also used the second part of the talk as a platform for a discussion on decision-making in light of this concept. Because of the interactive aspect, the audience was engaged, and we had the opportunity to hear challenging opinions and different experiences, which made the session interesting and help demystify common stereotypes.

4.5 Positive Space

This session, like the one on Gender Physics, was conducted like a workshop. It focused on the elements that make a positive space – that is, an environment free of discrimination – and how such spaces were implemented at the University of Saskatchewan. It also discussed the common misconceptions around gender, sexuality, race, ability, and Aboriginal status, as well as the importance of being proactive by staying aware of cultural differences and speaking up against any forms of discrimination.

4.6 Changing the World

This speaker used his personal and professional experience at IBM to give life advice, such as “find a work-life balance”, or “be honest”. Even though Garriock had interesting stories to share, he focused his keynote around bullet points that could have been taken straight out of a BuzzFeed list. Despite the title of the session, the content had very little to do with changing the world, was very conventional, and was more about simply leading a good and happy life. I did not find anything in his talk relevant to the topic of the conference.

4.7 Workplace Culture

The session was a presentation given by an employee of Barr Engineering on their company culture. She discussed the different benefits of working at Barr Engineering, such as trainings

offered to employees, availabilities of mentors, or the possibility for one to choose the projects they would like to work on (to a certain extent). Also, I do not believe the presentation was checked or corrected beforehand, as for example, graphs were shown without any legends.

The presentation was essentially an information session promoting the company, and barely addressed anything related to diversity in the workplace. Moreover, as someone working in the mining industry, a sector dominated by men, I expected the speaker to address the issues arising from this lack of diversity as well as any solutions put in place. This aspect was completely ignored.

4.8 Equal Opportunity versus Equal Outcome

This was a panel debate on whether equal opportunity or equal outcome is more desirable. It focused on the implementation of gender quotas when hiring and their impact on gender equality. This session was especially interesting because of the controversial nature of the discussion and the diversity of the panel which, consequently, brought up a variety of different opinions. It was also suitably covering the subject of the last stream, implementation, by tackling which kind of implementation is better when “levelling the playing field”.

With regards to the relevance for the ECA, I do not think there are any situations where enforcing quotas would be advisable, or where we should advocate for it.

4.9 Mentors and Friends

This second panel was composed of professional women engineers that had been mentors, mentees, or both. They focused on their personal experience and gave recommendations for young people being mentored. They did not mention the Friend aspect at all.

Because it was only about their personal experience, it was hard for the audience to apply to themselves. Moreover, the subject had little to do with the topic of the conference; how mentorship could help increase diversity was not a topic covered by any of the panelists.

4.10 Closing keynote: Grant Imahara

The closing keynote was given by Electrical Engineer Grant Imahara, who is also one of the members of the MythBusters crew. In his presentation, he went over his years doing the show, and some of his favourite experiments. The talk didn't have a name, except being named after him, and indeed he only focused on himself, and nothing relevant to the topic of Diversity in Engineering. While he might have inspired diverse people to join Engineering through MythBusters, he did not address this point at all. It would have been much more interesting had it been the only female host on the program.

It was particularly disappointing to have a closing keynote that had nothing to do with the conference, especially when considering the financial implications of bringing a well-known speaker. I felt it was an easy way for the conference to attract people. However, wow-factor does not replace the need for good content, nor does it hide the superficial, self-promotional aspect of a keynote.

5 BUDGET

Expenses	
Delegate fees	\$300.00
Flight – Departure (YUL-YXE)	\$611.80
Flight – Return (YXE-YUL)	\$498.60
Funding Sources	
ECA NCWiE Funding (for WIE)	\$1000.00
ECA Conference Funding	\$410.40
Total cost to ECA	\$1410.40

6 CONCLUSION

I must admit that the overall content of the conference was completely underwhelming. Most of the sessions lacked content related to Diversity in Engineering, and even when there was, the content was simply not useful enough.

This conference report might seem long for someone arguing they haven't learned anything; I actually did learn, but I took those lessons from where the conference failed at its purpose, not where it succeeded.

Despite all of this criticism, it is worth mentioning that the organization and logistics of the conference were almost flawless, and I appreciate and recognize the incredible work of both the host university and the organizing committee.

Moreover, the conference was also an opportunity to network and understand how other universities and their student associations were working compared to the ECA. From talking to different student leaders, I derived my most important hindsight from the conference: almost all engineering schools across Canada have incredible school spirit, something Concordia lacks. So, most student associations focus on carrying on this school spirit – they host parties, sell “swag”, perpetuate a – often non-inclusive – culture catering only to previously involved students. The ENCS student body at Concordia is more diverse, usually oriented towards a professional career, and less interested in getting the “university experience”. Therefore the ECA should not fall into the trap of mindlessly imitating those student associations – even though they are successful – and keep in mind the different environment that is present at Concordia.

I am placing high standards on this conference not just because diversity is an extremely important subject in this field, but also because of the investment the ECA and other universities make by attending. CFES seems to be placing the same kind of attention on the conference too, as they are repositioning the subject on Diversity instead of being exclusive to women. It will definitely be interesting to see what comes out of this modern step that will be in effect next year.

I would also recommend to CFES to think about the purpose of the conference as well. I went there wanting to see new opinions, talk about issues, and come back with possible solutions. Indeed, I believe this should be the ultimate goal of the conference; otherwise, what would be the point of getting more than a hundred Engineering students, handpicked for their positions of leadership, and bringing them together in one place? The organizers should focus on harnessing this collective intelligence created by the diversity of the people present, instead of spoon-feeding common arguments on why diversity matters, which could have been done just as effectively through Youtube videos, watched in the comfort of my couch with ketchup-flavoured popcorn – an estimated savings of 99.64% of the budget. I would assume that everyone attending the conference is already well-aware of the importance of diversity and wants to proactively advocate for it. Therefore the conference should concentrate on improving diversity in the delegates’ home universities and in a broader Canadian – or even world-wide – context.

Finally, from the ECA’s perspective, because of the above-mentioned arguments, I would strongly advise against sending delegates to the conference again. The experience is not enriching enough for the students compared to the investment. In future years, if delegates are to be sent, the ECA should ensure that CFES provides more information with regards to the content of the sessions, prior to conference.