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World Pride 2014

Promoting Equality and Acceptance for All



Jeff Luo

Waterloo engineers marched in Toronto's World Pride 2014 on June 29.

LEAH KRISTUFEK
3N CHEMICAL

Sun and high temperatures did nothing to dampen the spirits of revelers in Toronto Sunday before last as the WorldPride festival drew to a close. The 10 day festival celebrates the rights of lesbian, gay, bisexual and transgendered (LGBT) individuals. The pride festival encourages everyone to be proud of who they are, a fact that is irrespective of sexual orientation. Waterloo was represented by the Tool, fifty past and present Waterloo Engineering students and a FEDS contingent of one hundred. They joined several other universities and over 12,000 other people who walked, danced, roller skated and rode floats in support of the LGBT community worldwide. The University of Waterloo itself has a strong LGBT community centered around the GLOW center for sexual and gender diversity located in the SLC.

The WorldPride festival is a forum for activism and education. More than that, it is a festival, one where people can celebrate without judgement what it is to love yourself and to love each other. Being in the parade was a very unique experience. Contrary to normal parades I feel that it was the audience, not the floats that were the most interesting.

Drag artists in resplendent costumes were located intermittently along the route providing a commentary as the parade passed them. People with water pistols eased the heat and everyone seemed to be in a celebratory attitude. The dress code within the boundaries of the festival seemed to be shirts and shorts optional so personalities really shone through. Many people embraced costumes and body painting, sometimes with very political messages.

As we walked in the parade I was struck by just how much love there was in our audience. For many LGBT couples, the level of acceptance they found in Toronto this was a rare chance to act as a couple in public. In fact, for 120 couples it was a honeymoon period, only 3 days after their mass wedding at Casa Loma. The wedding took place with representatives of 12 faiths and gave the lucky couples the chance to tie the knot, a right not yet available to same-sex couples in many countries.

Being a person who is not heterosexual can be challenging whether you are in small town Canada or a country where threats of imprisonment or death might be the consequence of belonging to the LGBT community. Legally the rights of LGBT people vary widely from country to country. Things like having or adopting children, telling other people what it

is like to be LGBT/genderqueer/non-binary and access to gender reassignment resources are dealt with very differently.

Even in Canada, which is known for openness towards diversity, we have not yet reached equality. Legally we are doing pretty well at granting equal rights but socially and culturally there are still barriers. Once someone has realized that they are not interested in the opposite sex they have to go through the difficult process of coming out of the closet. Then they spend the rest of their lives wondering when exactly is the right time if any to tell the new people in their lives. For many this process and this self inflicted secrecy can seriously affect their relationships with family and friends.

Personally I am an ally, I believe in equal civil rights for everyone regardless of gender, sexual orientation, age, racial background etc. People are people that is all there is to it. I am lucky to have parents who will support me no matter what I am or who my friends are. (My dad actually said once that it would be okay if I was a lesbian because then he wouldn't need to worry about me getting pregnant. Thanks, dad.) I am really lucky. Recently however one of my friends from high school came out. He had been dating his long distance boyfriend for months and his parents were really unhappy about it. They moved him out of the house and refused

to let him tell his younger siblings. Sadly enough this isn't uncommon. In some cultures traditions are not easily broken. In small towns oddities are not smoothly acknowledged. I know others who knew they were gay in high school but were too afraid of rejection to come out. They waited for university to come out openly so that small town judgement couldn't hurt them.

It is a straight man's world. We don't even realize it until we look closer. There are plenty of male washrooms and female washrooms but few that are just washrooms. What do you do if you are transgendered identifying as a woman in a man's body or vice versa? Residences are segregated by gender. What are they trying to prevent? Is it awkward for a LGBT first year student to come out to the same people who they share thinly curtained shower stalls with? Then of course there is dating. There aren't exactly a lot of clues now are there? Dating is a precarious process no matter what but the stakes are higher if you are looking for someone of the same sex. Some people are very vocal about their beliefs and don't wish to acknowledge different beliefs or lifestyles. If you wrongly approach someone who is straight and doesn't exactly see eye to eye with you it won't go well.

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Hong Kong Rallies for Democracy



NACHIKET SHERLEKAR
3A NANOTECHNOLOGY

Hong Kong is one of the most culturally diverse and booming economic centres in Asia. It is a major tourist destination, with over 30 million visitors annually, a majority of them from mainland China. It is a city rife with opportunities, attracting people from across the world, and thus possessing a varied demographic.

However, what sets Hong Kong apart from other Asian metropolises is the unique political structure it possesses. Hong Kong was under British colonial rule until July 1, 1997, when its control was handed over to the People's Republic of China. However, unlike other mainland Chinese cities, Hong Kong has a status of a 'special administrative region', and follows a policy

of 'one country, two systems'. This implies that Hong Kong is not directly under the purview of the Communist Party of China, but rather operates under a pseudo-capitalistic democracy. As a result, citizens of Hong Kong enjoy freedoms such as freedom of speech, unlike their mainland Chinese counterparts.

In the recent past, worries have grown stronger among residents of Hong Kong regarding their continued status of relative freedom. These worries stem from the fact that state controlled media seems to be slowly taking over the city, and that Beijing's stance against Hong Kong has become more aggressive than usual. There has also been anger against Chief Executive Leung Chun-ying (leader of Hong Kong), for various economic and political reasons. The Chief Executive has always been hand-picked by the Chinese government, and has to fulfil the requirement of 'loving the country' before anything else. As a response to this,

a mock referendum on election reform was held by activists toward the end of June, in a lead-up to the annual July 1 protests. This referendum witnessed a promisingly high turnout of nearly 800,000 people, showing that Hong Kong residents are ready to take matters into their own hands. The July 1 protests also saw an encouraging turnout of over 500,000 (according to organisers of the protest), although police pegged the number closer to a 100,000. Hope and passions were high as thousands of protestors, a majority of them students, clogged the streets of the Central business district. Many have said that this is the highest turnout for the protests Hong Kong has ever seen. Unlike past years, the police showed less restraint, sometimes even physically dragging protestors away into waiting police vans to arrest them. Organisers of the protest hope to have direct elections scheduled for 2017, and plan to escalate the protests if Beijing does not comply. Hong Kong residents have

become jaded by Beijing's past promises of full democracy, and coupling this with their general animosity toward mainland Chinese, it is understandable why such a high turnout was seen in this year's protests.

There are many reasons why it is heartening to see such a widespread movement for democracy in Hong Kong. The fate of Hong Kong could directly affect that of Taiwan and Macau, whose situations are very similar to that of Hong Kong. Hong Kong's relative autonomy has so far helped the region retain its culture, language, religions and history. In the long run, if things work out, we might even see the day when grassroots movements in China gain enough momentum to establish a functioning democracy in the mainland. Until then, Hong Kong should count every small victory it has, and hope that with enough momentum and international exposure, they can peacefully transition into a functioning democracy.

ION Rapid Transit Update



NANCY HUI
4A CIVIL

From July 4 to 7, a 60-foot mockup of a light rail vehicle (LRV) returned to the Region of Waterloo as part of a joint event with the City of Kitchener during its Days of #KWAwsome on King Street between Queen and Young street in Downtown Kitchener. The electric LRVs, built by Bombardier, shared its spotlight with a new Grand River Transit (GRT) bus.

So what's new with the LRT project these days?

In March 2014, GrandLinq was the selected as the consortium to design, build, finance, operate, and maintain the ION rapid transit system in the Region of Waterloo. Construction is expected to begin in late 2014.

The Stage 1 of the rapid transit project (known as ION) will be completed by fall 2017, and will consist of 19 km of light rail transit (LRT) from Conestoga Mall in Waterloo to Fairview Mall in Kitchener, and 17 km of adapted Bus Rapid Transit (aBRT) from Fairview Mall to Ainslie Terminal in Cambridge. The ION light rail vehicles will be 100% low-floor vehicles, and thus will be fully accessible.

In Stage 2 of the rapid transit project, the aBRT in Cambridge will be replaced by LRT. The purpose of aBRT is to increase ridership in order to obtain funding for the transition in LRT. After the completion of both stages of the rapid transit project, the urban centres of Waterloo, Kitchener, and Cambridge will be connected by 37 km of LRT.

The LRT will, for the most part, operate in existing roadways in the Region of Waterloo. It will have dedicated lanes on either side of the road, or in the middle of the road, separated

from other traffic by curbs. In these sections, the LRVs must obey traffic signals. You might ask: how will the dedicated LRT lanes fit into the existing roadways? Surely they're far too narrow! In some areas, the Region of Waterloo is selectively expropriating land (e.g. King Street south of Uptown) to fit additional lanes and platforms. In others, the LRVs will run on one-way loops (e.g. Downtown Kitchener and Uptown Waterloo) to reduce land requirements.

In sections where it will not run in existing roadways, it will make use of the existing rail tracks – for example, the Waterloo spur north of Uptown Waterloo. In these sections, the LRVs will be able to operate at speeds of up to 70 km/h.

But, you may ask: how is the LRT different from a streetcar system? The streetcar runs on the road. The streetcar is powered by overhead catenaries. Why not just buy more buses?

The LRVs are very similar to streetcars. However, the LRVs run in a dedicated lane, whereas streetcars do not. Furthermore, these LRVs will have higher capacity than streetcars – up to 200 per train. Finally, passengers will not need to cross lanes to get from the sidewalk to the LRT platforms to the vehicles: the stops will be located close to existing traffic intersections, and the platforms will be directly adjacent to the LRV lanes, to take advantage of the 100% low floor LRV design.

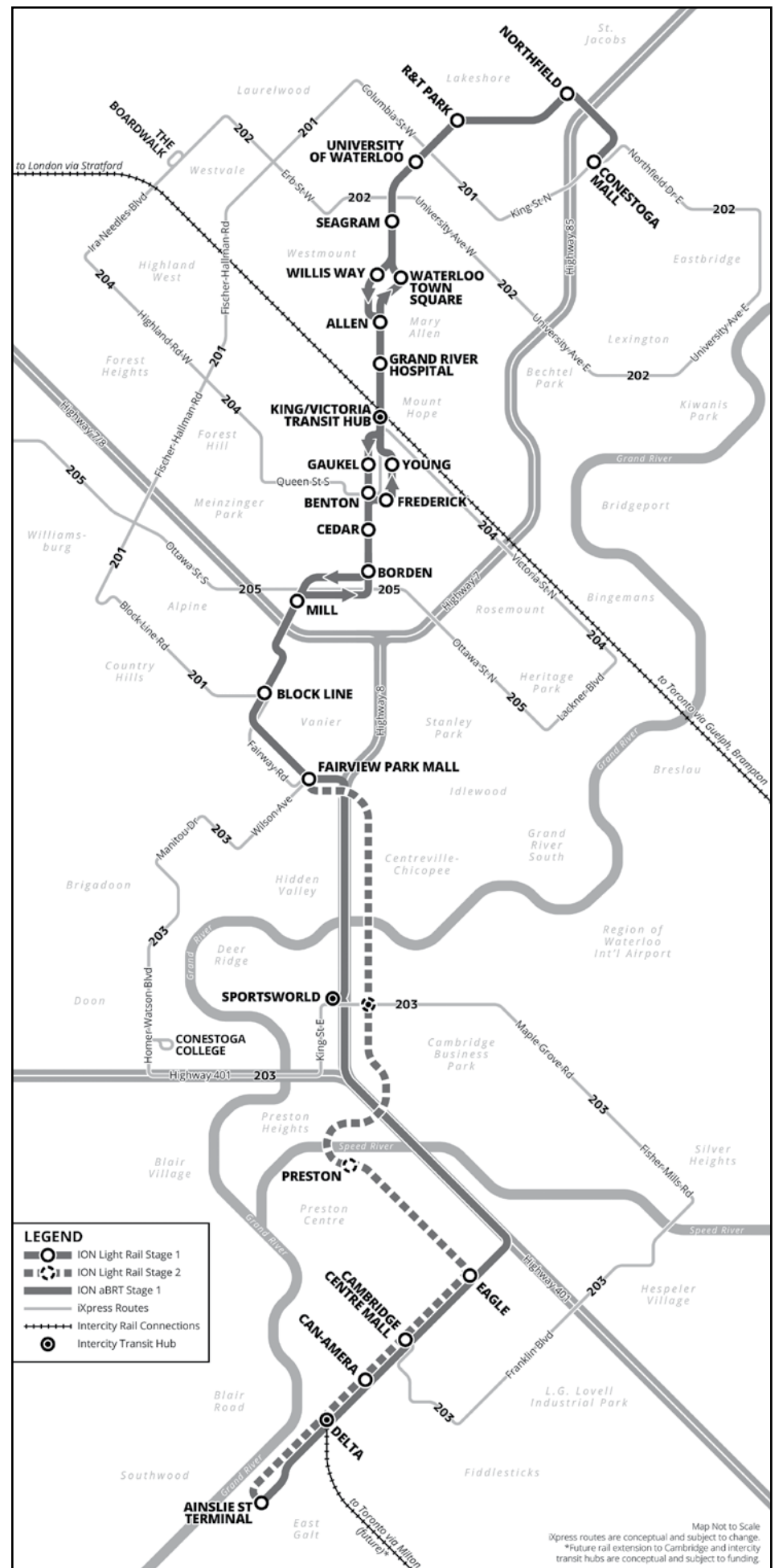
As for buying more buses – if you buy a region the buses required to support projected population growth, they will need more roads. If you build more roads, you will need more space than for an additional LRT lane. Using LRVs allows greater passenger density than with buses, allowing LRVs to impact other road users less.

Needless to say, I am looking forwards to the LRT opening in 2017!



Sixty foot LRV Mock-up in Kitchener

Nancy Hui



A map of the proposed LRT and aBRT routes in the Region of Waterloo.

Region of Waterloo

Initiatives Galore: POETS Door and More!



ALLYSON FRANCIS
PRESIDENT

Hi Waterloo! I hope you all enjoyed your long weekend. We're down to less than a month left of the term before we get into finals, but there is still plenty going on to take us through July! But first, some final updates from Joint Council for you all, regarding initiative updates that were presented by Leila, the A-Society president, and I.

The pair of us are currently working with the Engineering 7 Space Committee to develop the student space in the new building, which will include a quiet study area with cubicle-style seating as well as a group study area which will feature bigger tables for collaborative work. The group study space will also function as

a dining room during lunch hours, with tables and bar seating available alongside microwaves and sinks for students to eat the lunches they brought with them, or food they purchased from the new C&D, also going into E7.

Aside from that, we are also continuing to work on communication and branding strategies, which include implementing proper methods for document retention and record-keeping, effective use of all our mailing lists and communication outlets, continued LCD screen installation, and last but not least, the website upgrade. These initiatives are all progressing at various paces but are going well so far!

We're continuing to work on the implementation of the Board of Directors, and establishing their role within the society, as well as the relationship that Board will have with the rest of the Society Executive and staff. As well, the executive review committee has been

formed and will begin to meet in the Fall term. This is a larger initiative that will occupy our efforts until next Joint Council, in the Spring term of 2015.

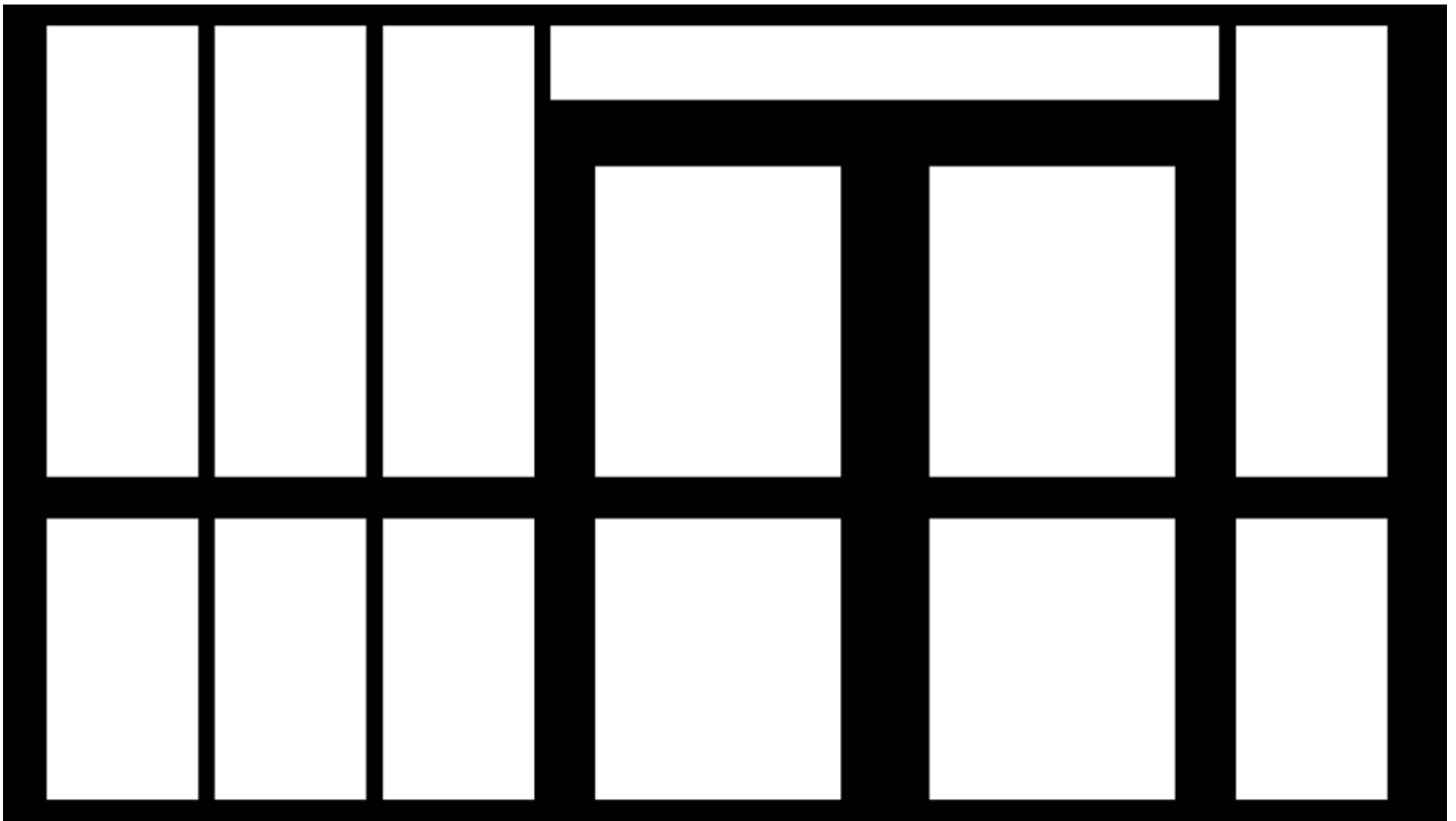
Something new that we are also looking to implement is a Diversity and Inclusivity policy for the Society. Currently, although many Engineering Societies have similar policies, the Waterloo Engineering Society does not have any documentation or procedures regarding members, volunteers, staff or elected representatives who detract from the attitude of inclusivity and diversity that the Society has been working to promote. This policy would ensure that all who are involved in the Society are bound by an agreement to create a safe and welcoming atmosphere for all members.

In other news, the Leadership Excellence Award for this term has been presented to Victoria Suen, who is a

fourth year Architecture student! We were very impressed with her contributions to the community, Waterloo Architecture, and the Faculty of Engineering. Congratulations Victoria! Applications will reopen in September, so if you are on stream in the Fall, look out for that!

And finally - the POETS door design contest is open until July 20! There is a Facebook event where designs can be submitted (at bit.ly/poetsdoor), or they can be emailed to executive@uwaterloo.ca. The templates and rules can be found on the Facebook page, or if you do not have access to them please email any of the executive and we can send them to you!

If you have any questions, or have anything else you'd like to hear about or ask me, please shoot me an email at president.b@engsoc.uwaterloo.ca, or come by the orifice anytime! Talk to you soon B-Soc!



Get creative and participate in the POETS Door Design Contest! Template (above) can be downloaded and submitted electronically at bit.ly/poetsdoor.

Upcoming Events Calendar							Check out up-to-the-day event postings on the EngSoc website at engsoc.uwaterloo.ca
Wednesday July 9	Thursday July 10	Friday July 11	Saturday July 12	Sunday July 13	Monday July 14	Tuesday July 15	
EngSoc Meeting #5 17:30 - 19:30 DWE 3522	EngPlay	Freezie Friday 11:30 - 13:00 POETS Semi Formal 21:00 - 24:00 TBD	Beach Day! 12:00 - 17:00		2015 Year Spirit Luau 17:30 - 20:00 POETS	FIRE SALE!! 11:30 - 13:30 Novelties Genius Bowl 19:00 - 22:00	
Wednesday July 16	Thursday July 17	Friday July 18	Saturday July 19	Sunday July 20	Monday July 21	Tuesday July 22	
WiE - Ice Cream Party 18:30 - 20:30	Frosh Mentoring: Bonfire Bonanza 18:30 - 21:00 CIF Bonfire Area	Freezie Friday 11:30 - 13:00 POETS Semi Formal 21:00 - 24:00 TBD	LAN Party 15:00 - 23:59		Course Critique Review Party 16:00 - 19:00		



Holla Dolla Billz, Y'all



MELISSA FERGUSON
VP FINANCE

Well hey there!

Mark your calendars, there will be a Fire Sale in Novelties on July 17th! The sale will be held in the CPH foyer from 11:30 to 1:30 and prices on some items will be heavily reduced. Below is the list of price reductions for the Fire Sale.

If you spend \$5 or more at the fire sale you can get some bonus swag! The bonus

items include:

- 2014 pubcrawl t-shirts
- 2014 bus push t-shirts
- Pictureframes

Please keep in mind that just like Novelties on a normal day, the Fire Sale will be cash only! So don't forget your cash money!

ECIF applications will be due on July 13th at Midnight. The application form can be found at engsoc.uwaterloo.ca/ecif.

Sponsorship applications will be due on July 18th at midnight. The form template can be found here: bit.ly/S14Sponsorship

Item	Original Price	Fire Sale Price
Licence Plate Covers	\$5	\$1
ERTW T-Shirts	\$15	\$5
How Many Days T-Shirts	\$15	\$5
Pride Flags	-	\$1
EngSoc Logo T-Shirts	\$15	\$5
Travel Mugs	\$15	\$5
Mouse Pads	\$5	\$1
Sunglasses	\$2	\$1
Flasks	\$35	\$30
Engineering Window Sticker	\$1	\$0.50

VP Winternal Update

Sweet July Events!



MATHIEU TREMBLAY
VP INTERNAL

Hello friends, we've got some sweet events coming up in the next couple of weeks for you to get excited about!

First off, EngPlay is happening Thursday, Friday, and Saturday night at 7:00 p.m. starting on July 10. The directors, cast, and crew have all been working very hard to put on a great show, so come out for a night at the theatre and see them perform three one-act plays, one of which was written by the directors specifically for this show!

Then on Saturday, July 12 is Beach Day! We're taking a bus from campus out to Grand Bend for a day at the beach, so get some swimming in, catch some rays and get your frisbee on! The bus will return in time to get fancied-up for the last showing of EngPlay that night, so that'll make for a kickass Saturday!

Next week is action-packed as well. Monday, July 14 is the 2015 year-spirit luau in POETS, where you can show some class-pride and watch Hawaiian-themed movies, eat/drink Hawaiian-themed food/drank, and escape to a tropic paradise for a few hours!

Tuesday night (July 15) is Genius Bowl, where from 7-10 p.m. you and your team can take part in a trivia competition with the chance of winning

cash prizes, getting your name engraved on a trophy, and lots and lots of candy! Teams are 6 people, and signups will be happening in the Orifice (CPH 1327) so be sure to signup before spaces fill up!

Wednesday night (July 16) is a Women In Engineering ice-cream party, where you can hang out and talk to WiE mentors while enjoying delicious ice cream.

Thursday (July 17) is a frosh mentoring bonfire bonanza, complete with marshmallows and campfire stories.

Friday (July 18) is semi-formal, which will take place at 9 p.m. in Turret Nightclub on Laurier campus, and this term we're running this in conjunction with MathSoc, which is going to be super fun! Tickets will be on sale in the Orifice and at lunch in the CPH foyer, get your ticket while they last!

Then we have a LAN party on Saturday (July 19) at 3 p.m., where we'll be playing a healthy mix of Team Fortress 2 (free to play!) and other Steam games (Civ V anyone?).

Then on Wednesday July 23 there will be a coffee house in POETS at 7:30 p.m., where you can come hang out with your friends and listen to your peers perform some songs, all while enjoying some nice refreshing beverages if you're of age (POETS will be licensed for this!) as well as snacks and coffee/tea.

Come out to some sweet events in the next couple weeks and enjoy yourself before exams start!

Engineering Competitions

Why you should get involved!



SARAH-ROSE LANCASTER
VP EXTERNAL

Pressure. Suspense and Relief. These are just some of the emotions a competitor will feel during the Waterloo Engineering Competition. Taking place this past weekend, thirty-six teams competed in the Junior Design, Senior Design and Consulting competitions to see who would represent Waterloo at the 2015 Ontario Engineering Competition

and the 2014 National Mining Competition.

Having competed in Junior Design at both the Waterloo and Ontario Engineering Competitions for two years, I can honestly say that Engineering Competitions have had an enormous influence on me as an Engineering student. Having to construct a working prototype to solve an engineering problem, such as delivering goods to the top of a mountain, has developed my creative problem solving skills immensely. Furthermore, learning to work together with a team in high-stress

situations, such as when your prototype fails thirty minutes before your submission is due, is an essential skill that is developed through participation in engineering competitions. Most of all, competing in engineering competitions is FUN! Getting to design and build a simple machine lets you exercise your ingenuity and seeing how every team's approach to the problem at hand varies is fascinating. If you get the chance to compete at either the Ontario Engineering Competition or the Canadian Engineering Competition you will also get to meet students from

across Canada, which is a blast!

Upcoming opportunities to get involved in the Waterloo Engineering Competition are numerous. The Fall 2014 Competition is looking for Directors to run its Junior, Senior and Consulting competitions. Running a competition itself is a very rewarding endeavor, as you get to CREATE the challenges the competitors will have to solve. If you are interested in being a director, please contact Heather Smith at vpexternal.a@engsoc.uwaterloo.ca. If you wish to compete in the competition, look out for sign-ups in the Fall!

FINAL EXAM PREP!



PERMEG KENTH
VP EDUCATION

Hey Everyone,

Hope you all had a fun and relaxing long weekend. Can't believe we are nearly done with the term and exams are just around the corner. Finals can be quite stressful and nerve-wracking. So, knowing how to properly prepare for the exams to avoid such situations is key. How exactly can you do this? How can you possibly do well in ALL your courses? There are some methods that will help you better prepare for finals.

1. Give yourself enough time to study – "Cramming" has become very popular amongst most students. It may seem like the short-term solution to last minute studying but it is not the right approach. It's always best to start well in advance, don't leave things to last minute. Write down the number of exams you have

and allocate study times to each course (remember to give yourself more time for difficult courses). Set out a study timetable and try to stick to it.

2. Organize your notes – Make sure you have all the notes in the right order. Confirm this with your classmates or professor. Be sure to ask the professor if any extra material is required for the exams such as conversion tables, cheat sheets etc.

3. Study in a group – Get together with friends for a study session. This is helpful at times when you are stuck with problems they might have answered. Just remain focused and encourage each other.

4. Practice old exams – Look at past versions of exams. These can be found

on the Engsoc Exam Bank. This will help you get a better understanding of the format used by the professor and the level of difficulty. Remember this

may vary between years and professors may change the way they set exams.

5. Visit your Professor or TA – If you are having difficulties with certain concepts go see the professor or TA for that course. Don't wait for the day before the exam. For all the first years; take advantage of the WEEF TA's (you will not have them after this term.)

6. Take regular breaks – You would think that studying for as many hours as possible is best but this can actually be counterproductive. Your brain can get tired or even "saturated", so taking

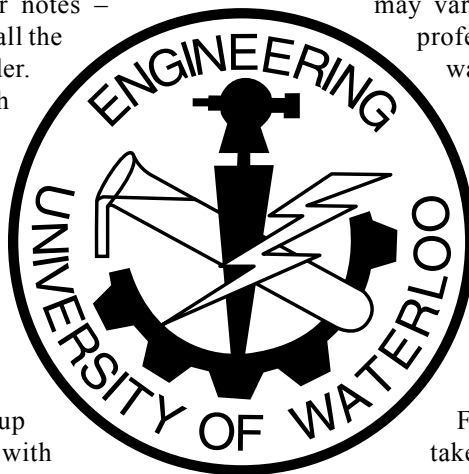
regular breaks to refresh your mind is really helpful. Everyone is different, so make a study routine that best fits you.

7. Be healthy – During exams students usually tend to eat junk food and get minimal amounts of sleep. Keeping your brain well fuelled and active during exams is essential. Avoid eating junk food. This makes you feel lazy and drowsy, go for healthier options when you can. Getting a good amount of sleep is necessary, you don't want to be tired when studying (make sure to include lots of sleep when making your schedule).

8. Drink plenty of water – I know you hear this all the time. But keeping yourself well hydrated keeps your brain active. Avoid energy drinks and lots of coffee!!

Most of you may think its too early to worry about exams, but a head start leaves you feeling more prepared and less stressful during exams.

If you have any questions or concerns please feel free to send me an email on vpeducation.b@engsoc.uwaterloo.ca.



Point Vs. Counterpoint

POINT

ALEX LEE

2B NANOTECHNOLOGY

Google has recently come under fire due to their compliance with the European Union's "right to be forgotten". In May, the Court of Justice of the European Union ruled against Google in a case concerning this right, saying that Google could be forced to remove search results regarding a person's name, if requested. Since Google began compliance on May 30 2014, they have received over 70 000 requests, with a thousand more coming in every day. Media organizations like the Guardian are calling the removal of their articles censorship, and that it is an assault on the right of freedom of the press. While they make a valid point, there are many good things that can be said for the right as well. The right to be forgotten should be enshrined as a fundamental human right.

They say history is written by the victors. Thus, our view of past events is seen through the eyes of the successful, as opposed to the downtrodden. Put another way, the right to be forgotten is not new. It has been utilized since humanity discovered language and writing. What is now changing after millennia is who has the right to exercise it. Obscurantism is the practice of hiding or obstructing access to information and knowledge. This has been practiced since the time of the Greek city states in antiquity. The right to be forgotten is essentially a modern updating of this old practice, which allows it to be used by everyone, as opposed to being restricted to use by those in power.

The right to be forgotten is important for people who have made decisions they regret in their life. Humanity is not perfect; we all make mistakes and decisions we are not proud of. We have all made stupid decisions in our lives. However, these decisions can sometimes have a disproportionate effect on our lives. Doing drugs once in your life does not make you a drug addict, but if prospective employers can dig it up, it may kill your chances at getting a job, even if you never did it again. Situations like this, where a single meaningless decision at some point in your past can have a huge impact on your future, are strong arguments in favour of making the right to be forgotten a fundamental human right, in the name of evening the playing field over small mistakes.

This right is even more important for those who have not made mistakes and have instead been wrongfully accused. There have been many instances where an innocent person was declared guilty of a crime he or she did not commit. Even if the innocent person was eventually cleared, he or she would have had to deal with years of the consequences of having a criminal record, as well as the severity of the crime he or she did not commit. It is not fair to submit innocents to the penal system due to flaws in the justice system. These unfairly convicted individuals would at least have some way to mitigate the effects, post-jail, under a clause specifying a right to be forgotten.

Detractors of the right say that it can be abused. The ideal behind the right to be forgotten is the second chance. However unscrupulous and shady people with no intention of reform could abuse the right to expunge records of their activity if they get caught, essentially allowing them to continue their activities unhindered. While this is a valid concern, the right to be forgotten can be superseded by other fundamental rights, and thus does not have to be extended to these unscrupulous individuals, as safety to the public would come first. Another thing that could be done would be to outline certain types of records that could not be erased, or to bar people in certain professions from using the service. This stops things such as politicians hiding their criminal records, or doctors hiding malpractice suits. Regardless of what is done, it is clear that there are many ways to implement the right to be forgotten without opening it up to abuse.

There has also been criticism regarding Google's handling of right to be forgotten requests. Google has been pretty cryptic about the reasoning behind removing certain articles from their searches, and have also been withholding who has requested them removed. However, these are minor things that will doubtless be ironed out quickly if the right to be forgotten becomes more widely accepted.

The right to be forgotten seems to be a controversial issue, but I think that upon closer inspection, the case for the right to be implemented is stronger than the case against it. Enshrining this as a fundamental human right would offer redemption to many people who are currently being crushed under the weight of their past mistakes.

Should people have the "Right to be Forgotten"?

MEAGAN CARDNO

2B NANOTECHNOLOGY

The European Union's "Right to be Forgotten" is quite an odd concept, especially in today's information-drive age, where an individual's past can be easily searched online. The right is based around the idea that humans should have the ability to live their life without constant reminder of events that happened in his or her past—that is, to say, that they should have the right to have parts of their personal history 'deleted' from record, should they fear constant harassment about particular occurrences later in life.

There is a certain suspicion that surrounds an individual's desire to use this right, as one might suspect that only those who have something to hide would seek to bury their past. Of course, in today's society even a single false accusation can be enough to haunt a person for a long time, be it during their search for employment or even with unwanted attention for the public. But having historical information 'deleted' is not quite the solution to such issues.

While simple logic would follow that the deletion of information from public data and records would result in the 'forgetting' that this right describes, reality is not so simple. Very few people warm up to the idea of censorship, especially when personal matters are concerned. If an individual attempted to have a past event 'forgotten', many people could respond to the censorship of the information with opposition, attempting to spread the sensitive information in spite of the erasure. While it is not difficult to sensor small amounts of existing information online, it would become quite an undertaking to deal with hundreds of articles appearing at once in an upset response to the censorship. In addition, it is practically impossible to prevent the spreading of rumours through word-of-mouth. If anything, publicly attempting to have your history 'forgotten' could cause more scandal than the history itself.

It is also much harder to combat rumours when all official documentation pertaining to the events are erased from memory. Having the event lawfully 'forgotten' would remove the ability to fight rumours with facts, leaving the matter only to one person's word against another.

A better alternative to the existing right to be forgotten would be a right to be

COUNTERPOINT

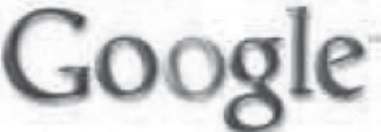
free of historic judgement. In the same way that all professional judgements (i.e court rulings and job appointments) are to be free of bias based on sex, race, appearance, or sexual orientation, they must also be free of bias based upon an individual's past. Only recent history (perhaps limited to the previous three to five years) should be considered relevant information for such decisions. Thus, instead of erasing the past, we merely prescribe a relevancy to facts that decreases with time. After all, it does not make sense to judge a person today based on their actions ten years ago.

There's a certain matter of maturity that would need to be expected with this, of course. But as a society, we should be expecting more from ourselves and from others. While all of us may wish to forget or erase some versions of our past selves — I know I certainly do — we must remember that hindsight is 20-20. Every painful memory that we'd rather forget serves as a lesson for our mistakes, and the unpleasantness of the memories is a crucial part of the learning. Without the threat of facing the same embarrassment or torment again, it's far too easy to repeat the same mistakes again— just as the saying goes, those who do not remember their history are doomed to repeat it.

But this also must extend into our perception of others. It is far too easy for us to judge others based on what we hear from others, and what we can see on the surface, but never do these provide enough information for a truly accurate conclusion. It might seem easy to listen to rumours of the past — hell, they might even be right. But we should learn to make our own judgements based on our own experiences, not from the criticism of others. If you are going to condemn a person, ensure that it's for your own reasons, and not because everyone else is doing it. People are capable of changing, for better or worse, and so should be measured based on the person they are now, not who they once were.

While the right to be forgotten has some understandable principles behind its conception, there are most certainly better alternatives to the erasing of history and censorship of public documents and individual speech. Rather than burying our past, it is better to accept it as what is was, and have the general consensus that its contents may not be relevant in the present day.

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Search: the web pages from Chuck's Beard

Web

Google won't search for **Chuck Norris** because it knows you don't find **Chuck Norris**, he finds you.

No standard web pages containing all your search terms were found.

Your search - **Chuck Norris** - did not match any documents.

wikimedia

In search of an "Honest University Ad"



CollegeHumor has a video entitled "Honest College Ad." I wish that UW had one. I know I'm not the only one. In mid-June I attended a FEDS research session addressing issues facing students. The major issue by our group was how UW did not do enough to accurately inform students about which program to pick. There was a real sense of bitterness about feeling misled.

What I didn't know about civil was that it was dirty, and that construction sites were unpleasant, and that the industry as a whole was rather risk-averse and difficult to innovate within. What the brochure told me was that I could specialize in Anything I Wanted - nevermind that transportation engineering isn't actually a full minor (like math), option (like water resources), or certificate (like structural), and that my work terms would be like riding unicorns on the yellow brick road of SUPA RADICAL CREATIVITY AND XTREME MEANINGFULNESS.

Honestly, if I had to do it all over, I wouldn't pick civil. I'd pick systems design or something else more versatile and cleaner. Despite early misgivings I stuck around hoping that it would get better. But it didn't. And now the sunk cost fallacy (plus having to admit to my parents that I'd picked wrongly) means that I can't go back and redo it.

I would have like to hear the testimony of mediocre students alongside the class stars. I would have liked to know about students who switched programs, and why. I would have liked to see the dark side of the co-op program: that for every student with an amazing dream job offering unlimited potential for creativity, there is one labouring as a cog in the corporate machine, with their main duties being photocopying. I would have liked to have known the hardest thing about each program, the worst things, but then why they stayed in it - what made it all worth it.

I realize that UW has to compete with other universities for the best students around the world. Brutally honest advertising doesn't lead to mountains of Admissions Information Forms. But this comes at the cost of bitter students, bad fits in programs, and lifelong regrets.

In a perfect world, all universities would advertise honestly, allowing prospective students to make better decisions about which university and program is actually the best fit for them. But, that will never happen, so prospective students are stuck deciphering over glossy pictures of the most attractive (and newest) buildings on campus (that civils will probably never get to use, by the way!), staged co-op photo ops with clean equipment and neat lab setups (never actually happens), and nary a criticism from the photoshop-enhanced mouths of the profiled students (definitely false).

And realistically, UW will never sanction an official "honest engineering program profiles." I kind of doubt that FEDS, bless their hearts, will prioritize the setup and management of a website full of the opinions of students who didn't make the cut to be featured in the official UW promotional material. If they want to know the real deal about life on campus, incoming students will continue to be forced to rely on word-of-mouth, sketchy forums, and the cesshole that is OMGUW. Perhaps, in that case, ignorance is bliss.



University of Waterloo (Viewbook)

Universities like to attract students with images of happy people and pretty buildings.

WPIRG PRESENTS

CINEMA POLITICA

SUMMER 2014

PIRACY, PRIVACY, AND THE FIGHT FOR ONLINE FREEDOM

MAY 28 JUNE 25 JULY 30

WE ARE LEGION
THE STORY OF THE HACKTIVISTS

TPB AFK
THE PIRATE BAY - AWAY FROM KEYBOARD

Terms and Conditions May Apply

WE ARE LEGION takes us inside the complex culture and history of Anonymous. The film traces the collective's breathtaking evolution from merry pranksters to a full-blown, global movement, one armed with new weapons of civil disobedience for an online world.
Wed. May 28, 7:00pm

When Pirate Bay co-founders are found guilty, the hacker prodigy Gottfrid, the internet activist Peter and the network nerd Fredrik are confronted with the reality of life offline - away from keyboard. But deep down in dark data centres, clandestine computers quietly continue to duplicate files.
Wed. June 25, 7:00pm

With fascinating examples, comical gags and terrifying facts, filmmaker Cullen Hoback investigates what governments and corporations are doing with your "personal" information. This disquieting exposé demonstrates how every one of us has incrementally opted into a real-time surveillance state, click by click.
Wed. July 30, 7:00pm

Princess Twin Cinema - 46 King St N, Waterloo
Admission is Free - All Films at 7pm
For more info: kalin@wpirg.org
www.cinemapolitica.org/waterloo

CINEMA POLITICA
SCREENING TRUTH TO POWER

BP Statistical Review of World Energy In a Nutshell



This June, BP released their 63rd Statistical Review of World Energy. The review breaks down the most common sources energy used everywhere in the world by country, addressing production, consumption and pricing.

The energy sources addressed in this year's review are oil, natural gas, coal, nuclear energy, hydroelectricity and renewable energy. I could fill up this whole newspaper discussing and debating the details of the review. Though this is tempting, I will keep this (relatively) short and sweet by giving you the highlights of the review for each energy source.

Oil

While oil is still one of the go-to sources of energy all around the globe, interestingly world oil production increased by about 560,000 b/d (barrels per day), less than half of the growth of global consumption (1.4 million b/d). This indicates that production did not keep up with consumption this year. The United States reported the largest growth in oil production at 1.1 million b/d. As expected with increased production, U.S. imports decreased this year by 1.4 million b/d. These numbers suggest that the U.S. is becoming less and less dependent on imports to meet their consumption needs; a warning sign for Canada that it will need to diversify its energy market trading partners. Further to that point China (surprise, surprise) had the world's largest amount of oil imported at about 7 million b/d.

Natural Gas

Natural gas is becoming a popular energy source in North America, particularly in the United States where hydraulic fracturing (or fracking) and horizontal drilling have become staples in natural gas extraction from porous rock formations. Like oil, world natural

gas consumption grew by 1.4% whereas production increased by only 1.1%. The United States remains the world's leading natural gas producer, accounting for 20.6% of total world natural gas production. As a comparison, Canada accounts for only 4.6%. Natural gas is an interesting resource, as it does burn cleaner than conventional oil-based energy and coal thereby making it a viable replacement. Natural gas consumption in North America rose by 2.7% from last year; again most of this coming from the United States. It seems logical to expect this number to continue rising, as natural gas exploration continues in the United States. Canada has been trying to follow suit, with explorations underway in Western Canada as well as New Brunswick and Newfoundland.

Coal

Unfortunately for the environment, coal is still the fastest-growing resource in terms of global consumption. Worldwide, coal consumption grew by 3% this past year. Though this is below the historical average of 3.9%, the amount of coal being burned is still a concern. Asia and Oceania (Asia-Pacific region) accounted for 70.5% of world consumption, 71% of which can be attributed to China alone. Canada accounts for only 0.2% of coal consumption. A move towards more sustainable energy will require Asian countries, China in particular, to move away from coal, a consistently cheap and stable resource for them. Not much more to say on this one.

Nuclear

World nuclear energy production grew by 0.9% in 2013, the first net increase since 2010. Following the nuclear accident in Fukushima, Japan, fewer reactors were in operation over the last several years. However safety reviews for these reactors have since been scaled down, and more reactors were operating in 2013, thereby resulting in a net production increase. Canada, the United States and China reported the largest increases in consumption at 4.1%, 33.4% and 4.4% of the global share respectively.

Hydroelectricity

Hydroelectric production grew by 2.9% from last year, considered to be below-average growth. Nevertheless, hydro remains the world's most prominent non-fossil energy source. Most of the growth came from China and India. With all of the great lakes and fresh water reserves, Canada is also heavily reliant on hydroelectricity, accounting for 10.4% of total global consumption. Though hydroelectricity is certainly a cleaner energy source than any of its fossil counterparts, the reality is there are only so many rivers we can dam up. The production of hydro also severely disturbs the affected ecosystems. Other renewable resources are also being explored that can perhaps offer the same benefit with less of a trade-off on the land-use side of things.

Other Renewables

In terms of electricity generation, wind and solar both experienced significant growth from 2012. Renewable power consumption grew by 16.3%, accounting for 5.3% of the world's total electricity. Europe leads the way in the wind

department, particularly in Denmark and Spain, where wind accounts for 32.5% and 15% of those countries' total electricity consumption respectively. Solar energy production grew by a whopping 33% in 2013 and is expected to continue to grow steadily as technology evolves.

The other major renewable contributors are biofuels (ethanol and biodiesel). The United States and Brazil are the world's top producers, accounting for 43.5% and 24.2% of global biofuels production. This comes as no surprise given the abundance of cane in Brazil and new standards in the U.S. Globally, ethanol production increased by 6.1% from 2012, while biodiesel increased by 6.2%. By contrast, Canada accounts for 1.5% of global biofuel production. Canada certainly has potential to increase its share of global biofuel production, given the wide variety of biofuel feedstocks readily available for harvest such as corn, wheat, canola and soybeans to name a few. The main issue holding back biofuel production worldwide is the food vs. fuel debate... but perhaps we better save that one for another issue.



BP Statistical Review of World Energy, June 2014

BP's review of world energy analyses the consumption and production of different types of fuels across the globe.

The Arab World, Four Years Later



Plus ça change, plus c'est la même chose. In English, this translates to "The more things change, the more they stay the same." This saying is attributed to Jean-Baptiste Alphonse Karr, a French Victorian era writer and critic. He was born during the reign of Napoleon and lived in an age of many regime changes, from empire to monarchy to republic, then back to empire and then republic again. Yet his most famous quote is still very relevant today in many places of the world. Egypt is a recent example of Karr's quote in action.

The Arab Spring bubbled up seemingly out of nowhere starting in late 2010, as civilians across North Africa and the Middle East took to the streets and demanded change. Though there were certainly underlying causes behind the movement, such as decades of mismanagement and poor treatment under the many dictatorships in the area, the actual movement itself spread rapidly through that part of the world. Egypt was one of the shining examples of the change

that the Arab Spring was supposed to bring. Although it was not achieved completely through peaceful means, the protest started out nonviolent and was able to achieve its aim of political change without descending into outright civil war. After 30-year President of Egypt Hosni Mubarak stepped down following eighteen days of protest, Egyptians were on the streets celebrating, the future in their hands.

And yet, after that initial high point three years ago, things have only gone downhill. Mubarak's democratically elected successor, Mohammed Morsi, almost immediately gave himself unlimited powers, ostensibly to "protect" Egypt from the remnants of the Mubarak-era power structure. Part of these powers was the ability to legislate without judicial review or congressional approval. Hmm, this is starting to sound kind of familiar. I wonder if there's some handbook or manual somewhere that all aspiring dictators read before... becoming dictators.

He then attempted to push through a new constitution which would have turned Egypt into an Islamist state. The people were unhappy about this and protested again. While it is good that the Egyptians defended their freedoms,

protest and unconstitutional regime change should be the last resort, and the fact that the Egyptian public resorted to protests and riots twice in two years served as a first warning sign that democracy was not alive and healthy in Egypt. Things took a turn for the worse when Morsi was overthrown in a coup d'état by the military. Strike number two. Dictatorships always start one of two ways: revolution or military coup d'état, and this instance was clearly not the former. After this event, Egypt did not hold another election until the year after. Essentially, Egypt spent a year under a government they did not elect. Plus ça change, plus c'est la même chose.

While Egypt is now under a democratically elected president, it's Abdel Fattah El-Sisi, who resigned from his position as the Commander-in-Chief of Egypt's armed forces to run for president, which he won in a landslide... let's go through that sentence again, slowly. El-Sisi was the former Commander-in-Chief, meaning he's technically been in power for the last year already. He also won the election race with a landslide. I don't know about you, but that basically screams election fraud to me. It's possible that Egyptians were so sick of the Morsi that they voted

overwhelmingly for his usurper, but I find that hard to believe.

The jury's out on the state of democracy in Egypt, but the future isn't looking as bright as it did three years ago. That same story is repeating itself across the entire Arab world. Tunisia's opposition leader, Chokri Belaid, was assassinated in 2013. Libya was dragged down in a bloody civil war. Syria still is in the middle of a civil war. Countries like Saudi Arabia are still held in the iron grip of royal families wearing the archaic trappings of feudalism. The Arab Spring was born out of intentions of peace and democracy, but has instead resulted in more bloodshed in an already unstable region. Democracy is clearly not an easy task, and sowing its seeds does not happen overnight.

There is still hope however. Egypt's current president, El-Sisi, had been a supporter of democracy and pluralism in his war college days; perhaps he still is. Libya's elections after the civil war had gone surprisingly smoothly and peacefully, and could perhaps serve as a model for other states in the region. The Arab world is in a transition state right now, going through growing pains. It will take years, maybe even decades, of hard work, but at the end of the day democracy may prevail in the Middle East.

Google: Made with Code



NANCY HUI
4A CIVIL

“Things you love are made with code.”

Google invested \$50 million dollars in a “Made With Code” program to encourage girls to pursue computer science as a career. This is the culmination of three years of work with partners including Chelsea Clinton, Mindy Kaling, Girl Scouts USA, and the National Center for Woman and Information. The Made With Code website also offers resources and projects for children to learn how to code, discuss projects and lessons, and regional events. Google believes that it is important to encourage young girls to try coding, even if the person encouraging them doesn’t have a technical knowledge base.

I really, really admire Google’s initiative in trying to close the gender gap in the tech industry, and their heart is in the right place, but something feels amiss with their approach. For one, the primary colour in the Made With Code website is pink. Their examples include things like 3-D printing bracelets, fashion, and dance.

I am a woman, and I am an engineering student, but I feel extremely uncomfortable being identified as a woman in engineering. Whenever I am identified as a woman in engineering it is never good - I get invited to workshops, which is good, but I am made more cognizant of how I am a minority and therefore get special treatment and workshops and swag and stuff. I’d rather get swag based on my merits as a person - e.g. “A+++ work report”, “10/10 would hire again” - rather than my gender. Being referred to as a woman in engineering makes me remember that I will never be just a plain ol’ engineer. There is no “men in engineering” program. I am a strong, independent engineering student who don’t need no extra adjective.

This is not, by the way, a rant against the efforts of Women in Engineering

here at UW. I appreciate that their work is valuable and useful in connecting women between programs to discuss issues unique to female engineers today (the other day, my friend said “Women in engineering have it easier, they have special scholarships for them” and I was all “I haven’t seen a cent of that”). However, the phrase “women in engineering” makes my skin crawl. Really, I wish it was “Gender Equality in Engineering” or something but WiE has probably already paid for all their swag and branding, so it’s too late.

An aside: what makes this different from the Toronto Catholic District School Board requiring a “Gay-Straight Alliance” to change its name to “Open Doors,” or the UW Chinese Student Association changing its name to the UW Multicultural Club? Well, a Gay-Straight Alliance explicitly recognizes the role of straight people in social change, whereas “Open Doors” is overly euphemistic. Meanwhile, the UW Chinese Student Association does host activities and gatherings for things that primarily Chinese people like, like Chinese karaoke and Chinese food. In contrast, Women in Engineering hosts talks and events that men in engineering would definitely benefit from. While both the UWCSA and WiE explicitly include in their invitations that non-Chinese people and non-women are encouraged to attend, WiE should take a step further to the name of their organization.

Anyway, luckily, for the most part, my gender isn’t an issue, with a few glaring exceptions. Employers refer to me and other female co-ops as “girls”, usually benignly, but one wonders if they refer to male co-ops as “boys”. Another time, I was subjected to a minor sermon by a kindly, middle-aged lab technician about how women and men should reproduce and start families, and that homosexuals were therefore unnatural. And being a lowly co-op serving directly under the lab tech, I shamefully admit that I could do nothing but agree.

Google’s Made With Code is preaching to the choir. Educators and mentors



madewithcode.com

Girls doing things with code. You can tell they’re girls because all wearing pink and their apps are purple.

who seek these resources are doing as much as they can to get girls interested in computer science. It is educators who don’t that are the problem. Well-meaning as they may be, not all high school and elementary teachers see the importance of presenting balanced examples of men and women in different career roles, including engineering, or a variety of applications for CS, ranging from robots to life sciences to textile manufacturing.

Google should try implementing a top-down approach instead of a bottom-up approach: focus on those who can directly influence students on a regular basis, instead of trying to reach out to millions of students. One memorable teacher makes infinitely more difference than a weekend conference or a workshop.

Furthermore, what about the general ‘dudely’ attitude of CS? Tech conferences are rife with reports of sexual harassment, sexist jokes, or booth babes. While one appreciates female eye candy, one wonders why no attempt is made to appeal to individuals whose preferences extend in the opposite direction. Future male CS professionals may also benefit from exposure to more traditionally fem-

inine applications of code. Why should women be the only ones trying to enact change in an industry? Why should we have to dress less femininely, or “lean in” like demented pandas, or strive to act more aggressively and use more assertive body language - i.e. emulate men? Women are not the main cause of discrimination in science and technology.

And whatever the approach being chosen, Google should avoid explicitly referring to its young, female audience as young and female. The end result of their educational programs should be empowerment and knowledge. Being singled out for extra educational programs for being female reinforces an impressionable young person’s potential weakness and abnormality. A more gender-neutral approach, but inclusive of a wider range of applications for code to appeal to more students, would be better.

All in all, I am happy that Google feels that the dearth of women in CS is an issue worth at least \$50 million, but I dislike that Google treats potential women in CS as a special interest group to be coddled with pink websites and 3-D printed jewellery.

GM Mos’ to Combat Malaria



SUNG EUN KIM
MASC., ELECTRICAL AND
COMPUTER

Daybreakers is a science-fiction vampire movie from 2009 directed by Michael and Peter Spierig. In a futuristic world, all human civilization turned into vampires and the world was run after sunset in darkness. The remaining humans who are active during daytime are so extinct making the food supply at a level no longer sustainable for the vampire population. As vampires deprived of adequate blood supply evolve into bat-like monsters with no conscience or memory, it became an everyday problem for the vampire world to find an alternate solution - else it meant extinction. Being a science-fiction movie, of course there is a genius scientist with his microscope working on this type of problem.

While every single remaining human is getting hunted down, the movie suggests a clever way to start a turnaround. (Spoiler Warning!) There is a way to transform a vampire back into a human. In addition to that, this human (who was once a vampire) carries a virus in blood to transform vampire into human.

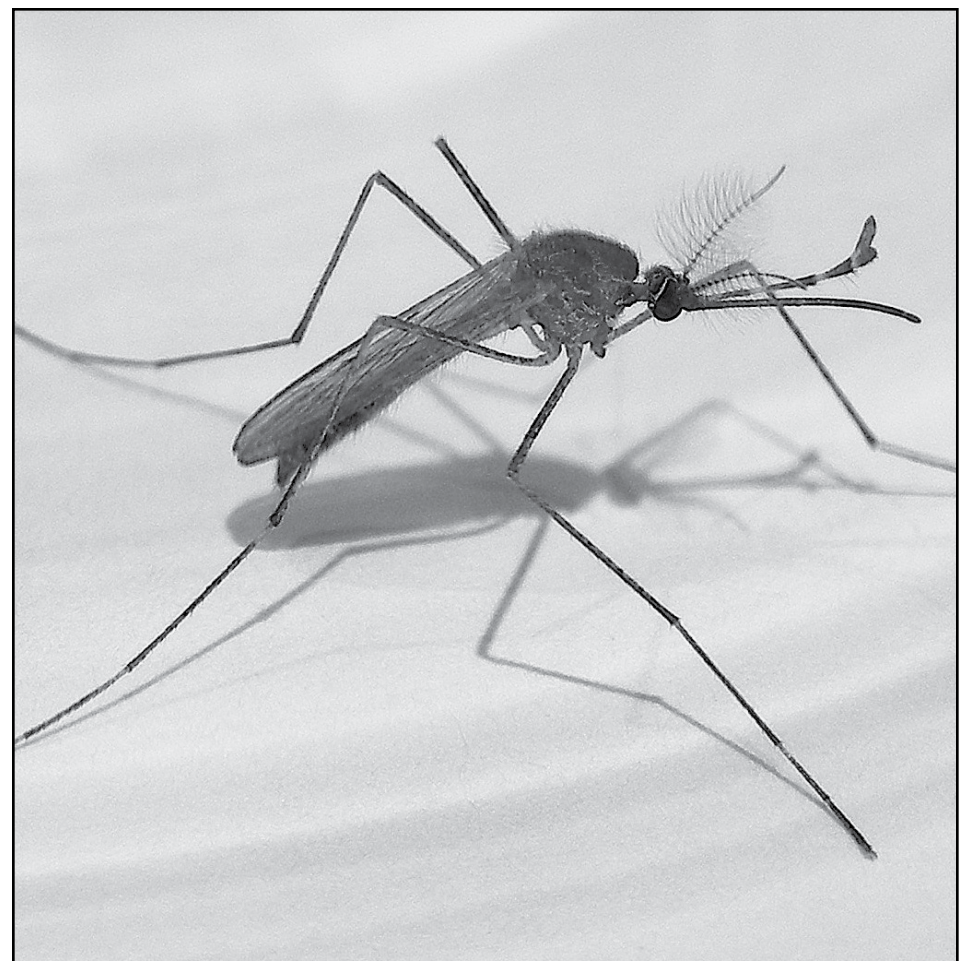
This means that, starting with one hu-

man, vampires that attack will get infected and transform back into human and will be sacrificed to transform other vampires into humans. In the end, the winning population would be human.

Enough about movie spoilers. At Imperial College in London, scientists have successfully done a similar thing to create the first batch of mosquitoes (our little vampires) that will produce 95% male offspring, throwing away the evolutionary theory of naturally occurring 50-50 sex ratio.

According to the journal Nature Communications, this gene modification is to crash the Anopheles Gambiae mosquitoes population, who are the main carriers of malaria parasite. The researchers eliminated the DNA of the X chromosome in a sperm, so that no sperm can carry the female chromosome by inserting a DNA cutting enzyme called I-Ppol. With so few female offspring, simple math allows us to see that after few generations the malaria-carrying mosquito population will completely be wiped.

According to World Health Organization, it is estimated that 600,000 people die each year from malaria. If the laboratory result gets replicated in the wild, this will save 600,000 of human population by means of a perfectly self-sustainable and cheap method.



Enrique Dans

Malaria-carrying mosquito populations may be wiped out in only a few generations with the new genetic modification.

How to Dress Well – *What Is This Heart?*



ALEX TOTH
4A CHEMICAL

ALBUM OF THE WEEK

Tom Krell, who makes music under the name How to Dress Well, has had a strange career arc since he began releasing music in 2010. His debut album, *Love Remains*, was heavily influenced by 80s pop and R&B acts like Michael Jackson and Ready for the World, but was layered with so much fuzz and echo that it sounded like he was trying to record with his equipment wrapped in blankets. The album sounds ethereal, unstable, and hushed. But in spite of its uniqueness, it was one of the first albums to put R&B back into the minds of music critics. Less than two years after *Love Remains*, artists like Frank Ocean, Miguel, the Weeknd, and Autre Ne Veut had all released critically acclaimed albums with strong ties to R&B. But instead of mining the sub-genre he helped create for his sophomore release, Krell released *Total Loss*, a brittle, glacial album of synthetic singer-songwriter tracks that I believe improved on *Love Remains* in every way. And while it still had some of the hallmarks of an R&B album, most notably Krell's fragile falsetto, you could tell he had started moving away from the sound.

Which brings us to *What Is This Heart?*, How to Dress Well's third album which was released last week. Although he sings in a fuller voice that's higher in the mix, this album has almost completely expunged all forms of traditional R&B. Instead, it blends soft rock, shimmering electro, and even folk with confessional and intimate lyrics to create a masterfully cohesive whole. Krell actually released a mixtape of songs which influenced him during the recording of *What Is*

This Heart? and they ranged from the pop-folk of Tracy Chapman to the AutoTune warble of rapper Future to the early 00s emo of Taking Back Sunday. And surprisingly, you can see where all of these influences fit within the space of the album. The emo influence, accordingly, comes up in the lyrics, with Krell singing frankly about relationships, and most prominently, the dissatisfaction that can haunt you even even if nothing is wrong. From "Repeat Pleasure," an early single from the album and song-of-the-year candidate: "But once you got it you want something else/Even if you're holding out for something unchanging." Thematically, this discussion is much closer to the ones bands like Taking Back Sunday and the Get Up Kids were having when emo had its moment than to the themes present in current R&B. This is an overgeneralization, obviously, but I think it's a point that Krell is trying to stress. Take the ultra-personal lyrics of "Words I Don't Remember," which builds from a single synth chord that sounds like it could have been recorded underwater to a head replete with high-hats, handclaps, and an understated choir: "So what is trust but knowing when to let you have your silence baby / To let you have your peaceful private corners of your mind." This line could fit perfectly on a Bright Eyes song, or a Bon Iver song, or most fittingly, a Tracy Chapman song. But instead it's here, held up on a bed of queasy electro, signifying Krell's need to move past one single genre.

Not the entire album is gloomy, however, with the second half of the album finding Krell lightening his lyrics. The song titles alone give some indication: "Childhood Faith In Love" and "Very Best Friend" stick closely to their titles' themes, with the latter using a dance-y drum pulse and synth squiggle to emphasize Krell's upbeat singing about friendship and devotion.



Weird World Record Co.

***What Is This Heart?* has an ethereal sound heavily influenced by R & B.**

Elsewhere on the album, the music shifts subtly from theme to theme, all while maintaining a sense of cohesion through Krell's voice and the low-end and negative space used in the production. Opener "2 Years On (Shame Dream)" uses only a sparsely plucked acoustic guitar to accompany Krell's quavering tale about his brothers, both of whom are afflicted with Asperger's. The massive bass of "Face Again" could almost pass as early dubstep complete with a pseudo-"drop" 50 seconds into the song. "Pour Cyril" uses a spare yet cinematic string arrangement to craft possibly the most cathartic song on the album.

With "What Is This Heart?", How to Dress Well has crafted the most emotionally expansive and grandiose

album of the year without any sort of lush orchestration or over-the-top vocal theatrics. Instead, he achieved this by casting his gaze past R&B and to any genre which caught his attention and expertly melding them into one effortlessly creative whole. *What Is This Heart?* isn't demanding or aggressive, choosing instead to let the music seep into your life, but it is incredibly engrossing. There is no certain time that someone should listen to this album, as it has the unique ability to form itself into something relatable and enjoyable regardless of the situation. With *What Is This Heart?* Tom Krell has made a thrilling, personal look into his head that anyone should be able to thoroughly enjoy.

Hey, Whatever Happened to...?



MEAGAN CARDNO
2B NANOTECHNOLOGY

GOT CONSPIRACY THEORIES

In last week's column, we discussed the characters in *Game of Thrones* who were described as dead but believed to be otherwise. In this week's column, we shall discuss something somewhat on the opposite end—rather, the suspected fates of some folks who haven't been heard from in a while, or whose fates have been left a mystery at the conclusion of *A Dance of Dragons*, which, coincidentally, this article is going to contain spoilers for. So be warned: if you have not read up to *A Dance with Dragons* and don't want to be spoiled for both the show and books.... you have my permission to stop reading.

We begin with north of the Wall, to look at the fate of the Reed siblings, Jojen and Meera. Throughout Bran Stark's journey north to find the three-eyed raven, Jojen oft faced danger with his personal mantra: "Today is not the day I die". This, of course, references the future-seeing greendreams he is 'blessed' with. However, even after finally reaching the Children of the Forest and the three-eyed raven, Jojen's solemn demeanour does not improve in the slightest—in fact, he becomes even more depressed, something that his sister Meera notices with much bitterness. Bran and Meera discuss the

correlation of his greendreams and the depression, lending to the evidence that Jojen knows his death is nigh.

To top it all off, in Bran's last *A Dance with Dragons* chapter, he is unable to find either of the Reed siblings—a very ominous sign, as the series repeatedly correlates magic and sacrifice (see: Dany's dragons and Melisandre's powers). Many readers have begun to suspect that Jojen and/or Meera have been sacrificed on behalf of Bran in an attempt to help 'awaken' his powers (if they even work that way). The biggest foreshadowing that supports the theory comes from Jojen, who responds to Bran's fears of being killed by the Children of the Forest with an ominous warning: "[Bran] is not the one who needs to be afraid." Whether or not Jojen foresaw Meera's death as well is unclear, but considering how protective she was over her sickly brother, it is more than likely she has shared whatever fate he met.

But enough about dead children. Let's discuss someone who (probably) hasn't kicked the bucket yet: Brynden Tully, uncle to Catelyn and Edmure. After fleeing the drawn-out siege of Riverrun, the Blackfish becomes quite the fish out of water. For the latter half of *A Dance with Dragons*, his whereabouts and intentions are unknown, and as one of the last remaining supporters of the late King in the North, renowned knight and strategist, and the last member of House Tully not in captivity, he could become a very crucial piece in the coming drama.

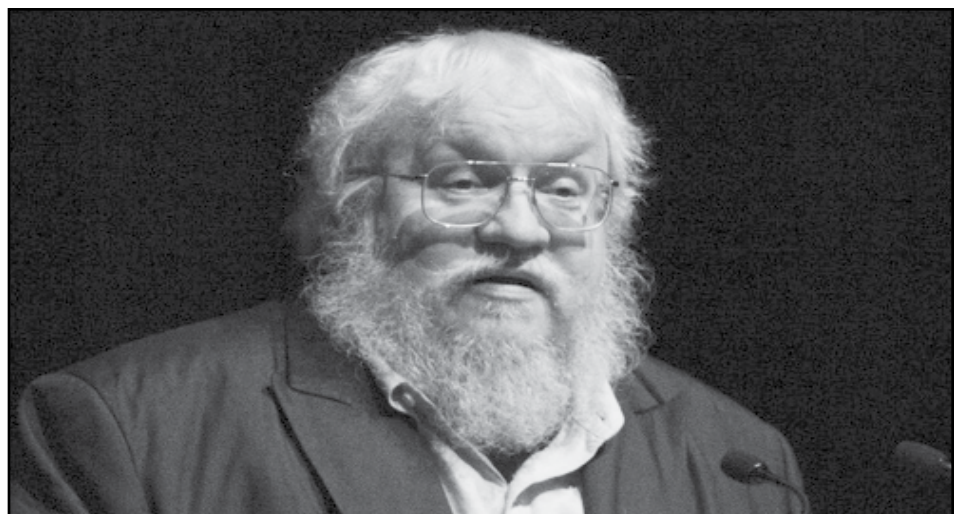
I personally see three possible places for the Blackfish to turn: the North, the Vale, or staying put in the Riverlands. The first option seems only plausible at best—while Brynden did support the Starks throughout the War of the Five Kings, his first loyalty would be to his own people, not the northerners. While the Boltons' possession of Winterfell churns the stomach of many a Stark supporter, Brynden also does not have the men that would be required to usurp them from the seat.

The Vale seems a much more likely option; the Vale still holds soldiers that could be rallied to reclaim the Riverlands from the Lannisters, perhaps in memory of the late Lysa Arryn. It would also be a fascinating development for Brynden

to stumble upon Petyr Baelish's plot concerning Sansa—no doubt he would recognize the girl's Tully appearance and give Littlefinger's plans some major complications.

My own personal prediction, though, is for Brynden Tully to remain close to home to continue battle, battling with guerrilla warfare and secretly gathering men to his side, all the while attempting to bleed the Lannisters from the Riverlands one ambush at a time, Robin Hood-style. I'd then wager big money on a plot cross with the Brotherhood Without Banners, and thus the inevitable meeting with Lady Stoneheart—which would, no doubt, be a very, very interesting scene to see.

Next week is a doozy of a topic. Be sure to stay tuned!



Johan A

Author George R. R. Martin has left the fate of many characters hanging.

Things I Learned about the Pride Parade



NANCY HUI
4A CIVIL

TAKE FIVE

Last Sunday, I attended the Pride Parade in Toronto for the first time. I expected scandals! protesters! and mucho leather! But the most shocking thing I experienced was getting watergunned in the face, which was totally necessary because it was really hot on Sunday.

These are five movies that remind me of the Pride Parade.

Calendar Girls (2003)

Members of a local Women's Institute in Knapely, England, raise money for a local hospital by posing nude for a charity calendar.

Calendar Girls is not the most exciting film ever, but I liked watching celebrated a cast of British actors (headlined by Helen Mirren and Julie Walters) say mean things to each other and hug it out after, because they're so bloody excellent at it.

The way that their eventual success was handled - through crass sensationalism of the elderly women's boobs rather than support for leukemia patients and their families - was very apt. Similarly, when I went to the Pride Parade, I expected more nudity, but really, most of the participants were families, corporate schmoes, and community figureheads. I'd say that 99% of the parade was no more risque or less family-friendly than Caribana. And I'm not exactly certain what the point of the modern Pride Parade is, but it's probably solidarity and freedom of expression, rather than genital-waving. Yet press and Facebook images still focus on the tiny minority of scantily-clad performers, when the average parade marcher is a 38-year-old in a free t-shirt and medium-coverage shorts.

Spaceballs (1987)

Planet Spaceball has run out of oxygen, leading its President (Mel Brooks) to concoct a scheme to steal the air from the planet Druidia by forcing Princess Vespa (Daphne Zuniga) to marry Prince Valium (Jim Bullock). But Princess Vespa escapes, and her father (Dick Van Patten) contracts the mercenary Lone Star (Bill Pullman) to rescue her.

How high is your tolerance for silly

puns and slapstick? That is directly correlated to how much you enjoy this movie. I thought Spaceballs was okay. Watch it if you want to know how the heroes escape a certain Pizza the Hutt.

The reason that this movie is in this list is because it is full of ads for itself. When George Lucas gave his blessing for Mel Brooks to direct Spaceballs, he did it under the condition that Spaceballs would not profit off any lines of merchandising, like the movie it parodied - Star Wars. As a result, Mel Brooks flooded Spaceballs with fictional references to Spaceballs merchandise: Spaceballs: The Lunchbox, Spaceballs: The Colouring Book, Spaceballs: The Flamethrower, and so on. Similarly, the Pride Parade is full of floats sponsored by TD, and OPSEU, and Home Depot, and probably every single ethnic community association in the GTA. I guess it's nice for Pride to be considered a legitimate family-friendly celebration and for corporations to pander to LGBT people like everyone else.

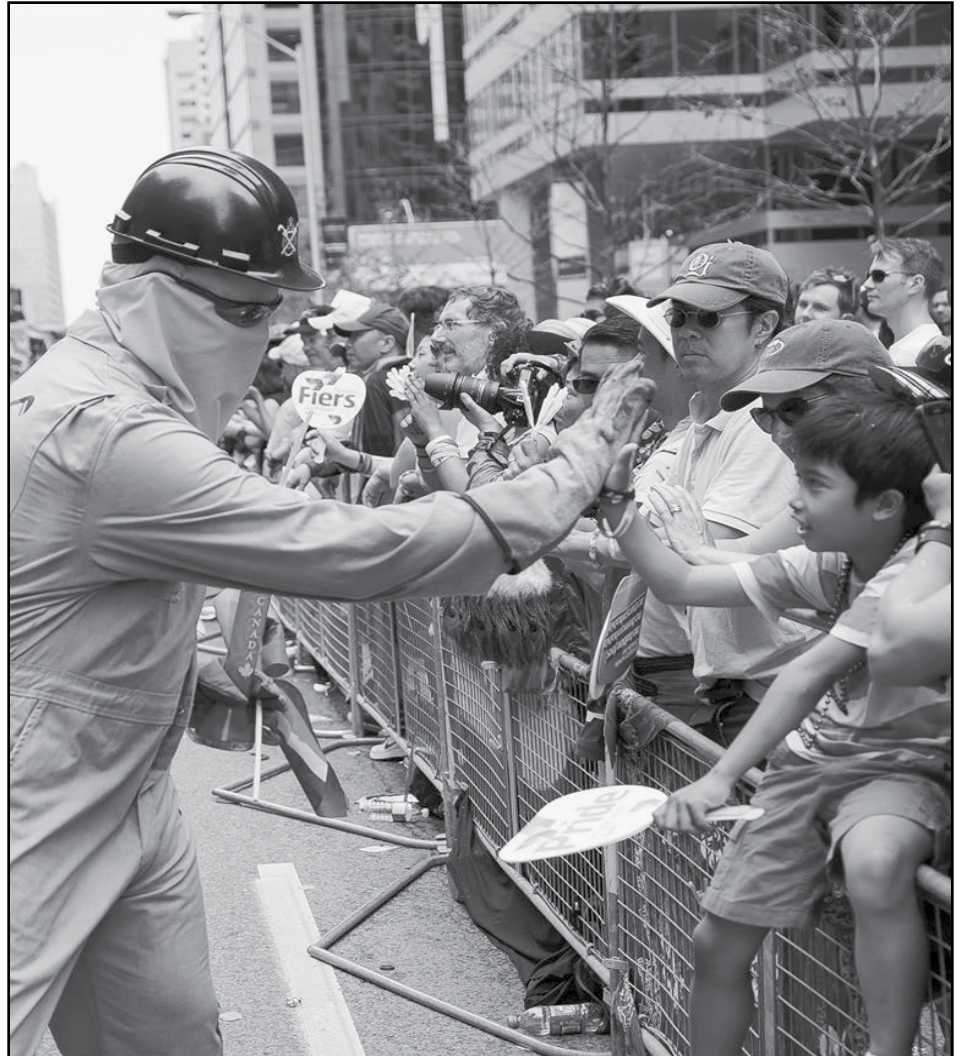
Milk (2008)

Harvey Milk (Sean Penn), a businessman, turns 40 and is swept into politics to improve the lives of gay people in San Francisco.

For a movie about a legendary politician and activist, Milk doesn't have much direction or plot. It might be because Sean Penn delivers an excellent performance as a warm, shrewd, idealistic man, rather than a hero. While it makes his character more three-dimensional, without a plot or character to drive the movie in a discernible direction, one begins losing the motivation to watch it Milk.

As good as Penn's performance is, however, I just don't like Penn's character in the movie. If he's such an excellent politician, what does he see in dating the immature dude (Diego Luna) who hangs himself in the closet to get his attention? Why couldn't he stay with James Franco's character? Why does he flip flop on issues? Why would he have the gall to talk politics at a christening? Maybe I don't understand Milk's strategy because 1970s San Francisco is so foreign to me that I can't even fathom a country where teachers might get fired for being gay or supporting gay teachers.

Milk was included in this list because it represents the politics that weren't present in the Pride Parade: there were



Jeff Luo

The Pride Parade has become a family-friendly event with corporate sponsors and various allies included in the march.

only a few marchers with banners to "Keep Pride Political", and a handful of sad and sweaty protesters on the curb. Pride treats LGBT issues at arm's length in favour of glitter-sprayed DJs. However the alternative is one in Russia, where marchers get lynched, or a few decades past, where political correctness didn't stop anyone from openly condemning homosexuality.

C.R.A.Z.Y. (2005)

Zac (Marc-Andre Grondin) is the fourth of five children. His father, Gervais (Michel Cote) is terrified that Zac might be gay. Zac would like to be normal and not have asthma. Make sure to get subtitles.

Like Milk, C.R.A.Z.Y. meanders through a man's life. Unlike Milk, C.R.A.Z.Y. opts for tableaux and visuals over dutiful biographical storytelling, and for that, it is better. I understood how the characters felt at every point by looking

at their body language, which is good, because my French is not so good. The subtitles, though, offer unique insight to and satire of life in 1970s Quebec - including gentle jabs against midnight mass, audiophiles, and Tupperware. This film also has some of the best and most realistic portrayals of adolescence I've ever seen, down to the flatulent teenager, asocial bookworm, and jerk. If this movie was filmed by a mainstream Hollywood studio it would probably be unbearably melodramatic and cringeworthy. Luckily, it was filmed in Canada, and I couldn't take my eyes away.

Right. I included this movie because Pride Parade seems to be very family friendly nowadays, to the point of having loads and loads of kids swarming around: in strollers behind the floats, in folding chairs at the front of the crowd, on a parents' shoulders.

Ben-Hur (1959)

Judah Ben-Hur (Charlton Heston) is a prince and merchant in Jerusalem. He gets on the wrong side of his friend, a Roman Tribune (Stephen Boyd), who sends his family to prison and condemns him to the galleys. Ben-Hur swears vengeance.

This movie is extremely long and it takes place partially in a desert, which is why it reminds me of the Toronto Pride Parade. Indeed, the length is Ben Hur's downfall. It could have used some editing to build better suspense. And Charlton Heston's is definitely not a contender for "Greatest Actor Ever." However, its technical achievements still stand - particularly the chariot race at the climax - but it drags on and on like the that completely unnecessary barrel chase in The Hobbit: The Desolation of Smaug. It's too bad. I wanted to like this movie. I wanted to enjoy the classic themes of vengeance and redemption.

Maybe the upcoming remake will trim some of the fat from this movie, though I doubt the Toronto Pride Parade is going to shorten itself. I wanted to stick around to cheer for the UW Engineering contingent, but after two hours I just couldn't stand on my little square of asphalt any longer. Sorry, guys.

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Biomedical Engineering: A Rundown



SUNG EUN KIM
MASC., ELECTRICAL AND
COMPUTER

University of Waterloo added Biomedical Engineering as the 14th undergraduate Engineering program with its first admitted class of 45 students starting this 2014 Fall term. It is a direct-entry program just as any other Waterloo's Engineering undergraduate program with a designated load of courses (5~6 per term) and co-op (6 work terms) schedule. It is also a sign of extended effort from the establishment of the Center for Bioengineering and Biotechnology at UW in 2012.

Waterloo's Biomedical Engineering program is yet to undergo the accreditation from the Canadian Engineering Accreditation Board (CEAB) in order for its graduates to qualify to be licensed as Professional Engineers in Canada. However, you can relax - Waterloo Engineering has a good record of gaining accreditation of its recently opened programs such Software, Mechatronics, Management and Nanotechnology Engineering.

Goal: A Highly Interdisciplinary Program

Waterloo's Biomedical engineering is truly an ambitious program. It is to train the students as 'generalists' who will be able to communicate and work with many disciplines including biochemistry, anatomy, molecular biology, materials, instrumentations, mechanical engineering to just name a few. In that sense, it makes much more sense when you find out that their curriculum is housed in the Department of Systems Design Engineering.

Graduates of Biomedical engineering will have the following expectations:

Modeling and designing complex biomedical systems

Interpreting data from biomedical experiments and works of professionals in the medical field.

Communicating closely with the biomedical community to design new technologies towards the advancement of biology and medicine.

In biomedical science, professionals of a wide range form are teamed and the advances of their research heavily rely on their subject-matter contributions in different fields. Some possible professionals are engineers (chemical, mechanical, electrical), biologists, kinesiologists, pharmacists and medical doctors.

In light of this, Biomedical engineering draws instructors from many other engineering departments (Chemical, Electrical and Computer, Mechanical and Mechatronics), the Biology Department in the Faculty of Science, as well as Computer Science, Kinesiology, Pharmacy and Optometry & Vision Science and the Centre for Theoretical Neuroscience.

Curriculum

Followed by the core curriculum consisted of mandatory courses in each academic term, students can modify their academic course load to graduate as either a 'generalist' or 'expertise' in one of the following three main theme areas of concentrations.

1) Biomedical Signals

Studying medical imaging, biosignals, neuroscience and diagnostics from clinical measurements in the health industry. Examples include EEG, EKG, X-Ray and MRI.

2) Biomechanics

Topic examples: biofluid mechanics, tissue mechanics, musculoskeletal biomechanics, sports mechanics and rehabilitation

3) Biomedical Devices

Topic examples: implants, prosthesis, bio-mechatronics, design for the elderly and therapeutics.

Also, two areas of concentration that students may pursue are under development. Those are Neuroscience Concentration and Sports Engineering Concentration. These are a package of topics with specific interest.

Some Thoughts on Choosing a Specialized Undergraduate Program

There are some traditional engineering programs commonly with the longest history in many engineering schools such as Civil, Mechanical and Electrical. With the advancement of technology, many interdisciplinary approaches are introduced in solving problems and this gives rise to new careers.

As a collaborative effort between the educational institutions and industry, new careers are provoked as new undergraduate programs to train the future engineers the required skills and provide the necessary foundation. In such context, Mechatronics engineering is an example of our school's recently opened programs. Mechatronics engineering teaches the design of mechanical system - which nowadays is in close junction with electronic computer control - thus making an intertwined curriculum between Mechanical engineering and E&CE very essential.

It is convincing that choosing an interdisciplinary program that is altered from the traditional programs would be a better plan for the future. However, due to such close proximity between the new and its 'parent' engineering programs, it is also questionable if it is fully justifiable to pursue a brand-new program while the traditional program will effectively provide all the necessary background. In fact, it is often that those traditional programs are more conventionally acknowledged.

Most high school students are among the age to explore career options and yet to make a major decision. Therefore, it is important to learn about what these specialized programs can offer in different aspects.

The range of opportunities that Biomedical engineering can offer students to explore the in-depth knowledge from the parental branch of engineering is limited due to the selection of courses focusing on system-level applications regarding design concepts to medicine and biology. Depending on where one's

interest leads to and the unknown future job market of Biomedical field, graduates face difficulty customizing his/her career path towards other disciplines in the future.

One might consider this program as a dual preparation for medical school and also to become an engineer. However, as much as Waterloo engineering programs are renowned to be very challenging, one should carefully self-examine his/her ultimate goal and capability.

Despite all these possible worries, there are aspects at which students will unmistakably benefit from choosing Biomedical engineering. Usually, new technologies in advanced level in engineering are the products of research work from academic and migrate to business - before it creates a new job market. In other words, pioneers in these fields usually come trained from academia by the work of research. Biomedical engineering is also a career field that one can specialize in by means of pursuing a graduate level program. However, specializing in Biomedical engineering within an Undergraduate program puts one ahead of the game by few years either in academia or industry.

At the beginning stage when the new field is just introduced as a promising future career domain, choosing either the brand-new program that is slightly altered and specialized or the traditional program that has a broader scope is not a life-changing decision. Once the new program takes the path of expanding its own branches, the parent programs will then lose its relevance.

Biomedical engineering was not firstly established by Waterloo engineering. Many other engineering schools in Canada and other countries already have a long history of Biomedical engineering program, which is an indication of promising career field. Currently, our school does not offer graduate level biomedical engineering degree. However, it is hopeful that many undergraduates will benefit from graduating from Biomedical engineering at UW and it will mature into a larger program.

Pride Parade: Being an Ally

Continued from Front Page

In engineering we tend not to think about emotions much. Professors don't discuss feelings in class, after all, that is not the point of calculus or physics. As a result engineering students confronting emotional things like their sexuality often feel very alone. The same things that make the cohort system awesome can also make it very terrifying, you will be with these people for five years of your life, you want them to like you! There are people here who can never go to their home countries because of their sexuality. As an ally I am here to lend an ear and a helping hand to anyone who is struggling with these issues. That is why the presence of Waterloo Engineering with all our official tool bearing glory, was important at the pride parade. Engineering isn't some dark oppressive thing where calculations and simulations slowly kill our compassion. There will always be friends among your classmates ready to support you as you embrace what makes you different. I would like to encourage whoever you are reading this article who feels as I do to take a stance by in some way expressing to your class that you are okay with someone being LGBT. Wear a pin or simply tell a friend to tell more friends that you are (or are not) okay with them whether they are

straight, lesbian, gay, trans or bisexual. Having a friend to confide in can mean the world at these times.

Now, in conclusion I would like to propose to you a completely different world, potentially the world of the future: one where population control is paramount so all couples are same-sex and all children come into the world by specially chosen donors. Now, in this world you, a hotblooded male, have gotten a girl pregnant. (*gasp*). Imagine that conversation with your parental unit. "Mom, mommy, I have something to tell you...I got Suzy pregnant. We've been dating for the past three years, we signed the papers for a civil union three days ago. I didn't know how to tell you guys. After all you were trying so hard to set me up, first with Tom, then Jimmy, then John. But it just isn't who I am. Men excite me just as much as a flower might. I find them pleasing, but nothing like Suzy." Your moms look at you in horror and you wonder just how long it will take for things to get back to normal now that you aren't like them anymore. That is what equality is trying to overcome. The person you are is not defined by the gender of person you are romantically attracted to.

Please be an Ally, not an opponent.

If you or someone you know are

struggling with your sexuality or are simply in need of emotional support counselling services are available FOR FREE in Needles Hall room 2080 (519-888-4567 x 32655). If you are in a crisis call the Mobile Crisis Team (519-744-1813), the University of Waterloo Police (519-888-4911). More resources are available through the Counselling Services web page (uwaterloo.ca/

counselling-services) There are also three engineering-specific counselors. Set up an appointment by contacting the Engineering Counselling Office CPH 1320, (519) 888-4761 (extension 84761 on-campus) The GLOW center in the SLC is also an excellent resource and a great way to meet people who are going through the same thing.

Be Proud Waterloo!



Jeff Luo

The Tool made a special appearance at Toronto Pride.

World Cup Final Picks



**ELIZABETH
SALSBERG**
2B NANOTECHNOLOGY

THE BENCHWARMER REPORT

It's been a fantastic world cup so far, full of drama and exciting soccer. But the best is yet to come. Through the group stage and the first two rounds of the playoff bracket, four prominent soccer nations are left standing: Hometown Brazil and bitter archrival Argentina, along with European powerhouses Germany and the Netherlands. This is ultimately a battle between South American and European soccer.

Brazil will face Germany in the first semi-final on July 8th while Argentina takes on the Netherlands in the second match on July 9th. Both of these games will be absolute nail-biters. The winners

will move on to the final on July 13th while the losers will play for third place on the 12th.

With these teams in the mix, it is very difficult to predict who will make it to the final. Let's start by taking a look at the Argentina-Netherlands matchup. The Netherlands faced surprise-of-the-tournament Costa Rica in their quarterfinal. Though they dominated possession and carried the play, they were unable to score in regulation and in extra time to send the game into a penalty shootout. Without their late keeper substitution of shootout specialist Tim Krul, the game could have gone either way. They will need to make the most of their chances in regulation in order to beat Argentina, a significantly more experienced and better team.

Like the Netherlands, Argentina has surprisingly been having a more difficult time scoring goals than we would ever

have expected. They edged out Belgium 1-0 in their quarterfinal, and won their round-of-16 match against Switzerland by the same score. With phenoms Lionel Messi and Angel di Maria among others, Argentina better smarten up if they're going to beat the Netherlands in regulation or in extra time.

As for the Brazil-Germany game, it seems like it would be better if this were the final instead of the semi-final. It's such a shame that one of these two will be eliminated, particularly given the relatively sloppy play of Argentina and the Netherlands of late. Nevertheless, such is the nature of world cup soccer.

Germany took out France in their quarterfinal 1-0. France nearly tied it up on several occasions, but just could not pull the trigger. The Germans could probably have won this one by a wider margin if it weren't for the phenomenal play of French keeper and captain Hugo

Lloris. Make no mistake about it, they will come out hungry this Tuesday having already taken a trip to the third-place match four years ago.

Hometown favourites Brazil will undoubtedly be feeling the pressure to win. Germany is the toughest opposition they will have faced thus far at this tournament, so this will be a true test of how good this team really is. After a nerve-wracking penalty shootout win in their round-of-16 matchup against Chile, they looked substantially better against fellow South American soccer country Columbia. It should be noted that fan-favourite striker Neymar is out for the rest of the World Cup after suffering a fractured vertebra in the 86th minute against Columbia. Brazil will be fired up to win this one, not only for the fans but for their superstar—but at the end of the day it will come down to whether or not they can do it without him.

LeBron James Dictates Existence of "The Big Three"



**ELIZABETH
SALSBERG**
2B NANOTECHNOLOGY

With the NBA offseason underway and two days into free agency, the number one question is will the era of the "Big Three," centered around LeBron come to an end? There are tons of rumours circulating, but before we get into any of those, let's pretend put ourselves in LeBron's shoes: 1) You're the best basketball player in the world; any team with a bit of cap space that thinks they have a shot at signing you will put down everything they have for you; 2) You want to win championships, and four or five by the end of your career would be sufficient; 3) You want to be paid like the best player in basketball.

It is these criteria that LeBron is looking to satisfy with his next move. To refresh your memory, last time the King was a free agent, he left his hometown team, the Cleveland Cavaliers, to join Dwayne Wade, Chris Bosh and the Miami Heat in South Beach. Commonly known as "The Big Three" (we like to call them the three amigos for originality), the Heat went on to win back-to-back championships in 2012 and 2013 championships, having been to the NBA finals four times in the past four years.

There is furious debate surrounding the three amigos this time around: Will the trio stay together in Miami? To be frank, here's the deal: Dwayne Wade experienced injuries this year and had only a so-so season. With Wade and LeBron on the team, Bosh is... well... not what he was in Toronto. One can imagine that he was in Miami because the other two amigos were there. Also, those

are three monster contracts for the Heat, so it's hard to imagine that they'll be able to live up to James' request of being paid like the best player in basketball. Examining these facts, Miami might not be the best place for the King.

That being said, Wade, James and Bosh all opted out of their contracts to become free agents this summer. Some rumours suggest that they were moving in concert to make it easier for the Heat to re-sign all three of them plus add a strong supporting cast or maybe even a fourth amigo—New York Knicks superstar Carmelo Anthony is also a free agent this year. If this were the case, all three (or four) amigos would need to take a pay cut. This would be a very strong team though, certainly one capable of reaching the NBA finals, particularly if they did add a fourth amigo. Despite a wayward season and the fact that Wade will be winding down his career over the next several years, Wade is still one of the best point guards in the NBA and a good teammate for LeBron James. As for the biggest jerk of all basketball (You guessed it - Bosh!), he has been along for the ride with the other two amigos more than anything else but would be considered very valuable on a team that did not have the other two amigos (cough, cough).

Ultimately, the future of the three amigos depends on whether the King is more serious about winning championships than he is about laughing his way to the bank with some ridiculous monster max-contract. Over the years, he has made it clear that winning is more of a priority (just ask Cleveland), so it seems likely that he would re-sign in Miami, at least for a short-term deal, and then maybe move again if they can't pull together a few more championships.



Keith Allison

LeBron James' free agency could put an end to the Heat's explosive trio.



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Swan Haven



KRISTINA LEE
3A ENVIRONMENTAL

I saw a swan the other day which reminded me of the day I saw over 1500 swans on Marsh Lake, Yukon. I didn't think that many birds would make their way north, never mind the big, beautiful birds like swans. There are lots of eagles and moose, and apparently swans!

Swans are migratory birds that come up to the Yukon in the early spring to breed. As this is an annual occurrence, there is a little place just southeast of Whitehorse called Swan Haven. Although it sounds like a nice, comfy place for swans to come and do the dirty, it's actually an information center open to the public. At Swan haven visitors are welcome to take a walk along the edge of Marsh Lake to get a closer look at the swans, take a look through the many binoculars sitting around, or my personal

favourite, dress up like a swan! The most magical part about Swan Haven is hearing he swans. Although they're across the lake from Swan Haven, their trumpeting can be heard from all around.

Another fact I learned about swans while I was in the Yukon was that they fly in V-formation, much like their less lovable mate, the Canadian Goose. I didn't even think to look up while I was walking to work until I heard a trumpet noise above me. I looked up and what do you know, about 9 swans were flying above me. I don't mind having swans in town. For one, they have a pleasant noise, and two, they don't stay nestled on my way to work.

Before I even knew that swans migrated up to the Yukon I started seeing large, white, wide cut-outs of swans all around town. Apparently, the swans are a big deal. I understand why, if 2000+ birds came by my home I'd probably wave my arms at everyone I walked by telling them about it!



Kristina Lee

At Swan Haven you can learn about the thousands of swans that fly to the Yukon every year.

Take Breaks!



BRIAN CHAN
2B NANOTECHNOLOGY

ENGLIFE IMPROVEMENT

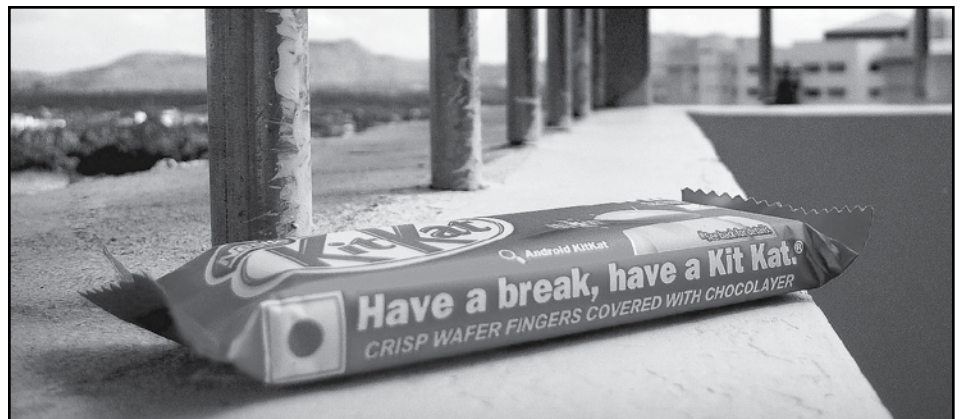
Studying and working in engineering life is very common. We all know that but studying and working are not the only things we should be doing while we are on our study terms. Taking breaks should be a common occurrence that should happen. In reality, we do not have enough hours in a day to complete all assignments and study for all those subjects but still, we need breaks. Whether it is a ten minute reprieve watching several YouTube videos, an hour or so outside, or at the gym getting some physical exercise, you need it. It helps you in so many ways, not just physically and mentally.

First, the most important thing that will happen if you take some breaks is that you will become more productive. It's true: imagine you are working for hours on end with no breaks, then you start to become sleepy, your mind wanders and then you fall asleep on those books. When you wake up you realize, "oh crap, I just wasted a good hour or two asleep", and then you are driven even harder to get the studying and assignments done for the

next morning. It's something we don't realize but in reality it is really helpful. If you could get it down to a half hour nap, one's productivity would be even more amazing.

Another thing is that by taking breaks it will improve your physical condition even further. By working too hard, there is a higher risk of coronary heart disease and heart attacks. Since such a high risk awaits you when you work too hard, there is a higher probability that one will be less productive in the long run, because if a heart attack does happen it will equate to countless days in the hospital with doctor's orders to do nothing strenuous and just rest. It may be a great reprieve if it happens during the exam period but who wants to be hospitalized because one is not taking their breaks?

As you can see, breaks may seem to be unproductive but in reality are quite the opposite. I would hope that after you read this article it will justify your extra naps and couple hours spent on YouTube every day because without these breaks we would be in reality less productive and could possibly end up in a hospital bed. So take breaks, be healthy and get more work done. A balance of everything is important and that includes working and taking a break from the stressful things that come with the engineering life.



Surya Teja

Taking breaks (KitKat optional) will improve your productivity overall.

Blue Under the Collar



LEAH KRISTUFEK
3N CHEMICAL

Welcome to a world where mullets are cool and women don't do 'men's' work. I know what you must be thinking, but no, I haven't taken a time machine back to the 80's. I found a factory job!

This summer has been interesting. Despite endless cover letters and tailored resumes I failed to find an actual co-op placement so after nearly a month of post exam job searching I shifted my parameters of finding a job to finding a job. Any job, the kind of thing where you exchange your physical time and labour for money. In a small Ontario town like mine, jobs are hard to come by. Factories are closing left, right and center and old folk's homes are looking for much more permanent employees. Tim Horton's of course was an option, but inevitably I decided that the cost of free donuts on my body would without a doubt outweigh any monetary gain.

Eventually I applied for a job at a factory as a labourer. I started four days later, no interview required. Being a blue collar worker is a new experience for me. Work has always been synonymous with reading and thinking. Summer jobs in high school involved me leading tours as a historical interpreter, then filling my down hours with research and occasionally

some sweeping. Co-op jobs have always had me mainly behind a desk. Now all my employer asks is that I put my brain in sleep mode, keep an eye on product quality and move things from point A (the end of the machinery producing the product) to point B (the pallet which is the beginning of its shipping journey).

Blue collar workers are the lifeblood of our country. They are the ones who drive the machinery to build roads, wield the hammers to build houses, tend to the factories that are turning out all those material things we need for our day to day lives, like cars and medication. A blue collar worker is someone who makes a living performing manual labour. The name 'blue collar' stems from the affinity towards blue as a colour for work clothes. Navy blue continues to be the predominant colour for work pants as it doesn't show stains very easily. Back in the formative industrial revolution days, a blue collar worker was one of many. The largely unskilled masses usually came from farms to cities in search of better lives. (This causes a decreased respect for subsistence farming which used to be an accepted livelihood.) Relative to the endless supply of labourers it was the white collared workers, educated people like engineers, lawyers and scientists who were in short supply. Your family needed money just to help you make it through elementary school, much less further education. As a result these educated types were highly prized, paid well and they could afford a

nice white shirt despite the fact that white shows dirt right away.

Now factories have largely eliminated people in favour of machinery and education has become much more affordable, shifting the pay scales. It used to be that a higher education guaranteed a higher salary which is no longer the case. Blue collar workers have become much more highly trained, and skilled trades are becoming increasingly valued within society. However it is still an educated person's world. For my coworkers, many of whom have been performing the same tasks day in and day out for the last several decades, education was a thankless chore. They had other priorities. Perhaps they just experience life differently.

Like many others in my area, the factory (let's call it factory X) where I'm working is closing soon. In this case the doors are officially being shut for the last time at some point in 2015 but there are whispers of substantial layoffs come September. For many of my fellow workers this means contemplation of future jobs working at the grocery store, or maybe a Tim Hortons. After 20 some odd years they are being let go. Released into a world where a simple high school diploma gets one nowhere.

In the mean time I have been exposed to a micro culture that I never expected. Everyone is very nice. They talk and joke and tease constantly. However it all feels kind of dated (and I don't just mean the mullets, what hairdressers give people mullets these days anyways?) Most people

come in with a High School diploma, after which they rise in the company receiving additional training based on merit. However, the women never seem to get beyond the typical 'girl' job of packing and inspecting quality for the product. It is the men who fix the machines and set the production line up when new orders are being processed. The women simply aren't being trained in these jobs. At this point, I am still very new and so I cannot pass judgement on what goes on in factories. I have a very tiny view of a very large part of our economy.

I am finding that there is something to be said for the work that doesn't ask you to think too much. Although as a female engineering student I find myself resenting this gender gap, it makes me appreciate how far we have come as a society. My purpose in life is no longer to marry and have children. I can vote, I can work to support myself, I can have an opinion and dress how I want to. In many ways, men have been increasingly marginalized from this culture that gives so much support to the young educated woman. In the factory the men look out for the 'girls'. They have expertise and get to argue loudly about it. The factory allows them to be their own self made person like a job in the service industry never would. However, with factories closing, much of the training from one job won't transfer over to another one. Not only are we losing jobs but we're losing a way of life, and for many they are also losing their pride.

Why We Should Appease CECA and How We Can Keep CECA Happy



JON SWIFT
1B [REDACTED]

A SPECTACULAR PROPOSAL

[DISCLAIMER: NOTHING IN THIS ARTICLE HAS ANY SUBSTANCE AND SHOULD BE TAKING WITH POUNDS OF GRAINS OF SALT. THIS ARTICLE DOES NOT REFLECT THE OPINIONS OF THE IRON WARRIOR NEWSPAPER OR THAT OF A REAL PERSON.]

Many students in the co-op program at the University of Waterloo have been voicing their complaints about the co-op system and the job posting website, JobMine. Even in the engineering department, students are finding the co-op system to heavily favour the employers. However, I believed that the employers are not getting enough out of this deal, even though CECA is just trying to make the employers happy. This is why I propose that students should understand where

the CECA is coming from. We should appease the employers and CECA to keep the CECA happy because they give us jobs and help pay for out tuition. Really, we should be worshipping the employers and CECA like gods.

Webster's dictionary defines appeasement as something. I don't know what Webster defines it. You can look it up in a dictionary. What I do know is that we should make employers and the CECA as happy as possible. Without employers, students would have no jobs and there would be no co-op program if there were no jobs. This means that we should allow employers to push the boundaries as to what is allowed from student labour: painting fences, lifting construction materials, cleaning windows. You know, slave labour. Not saying that students who are being paid a reasonable amount of money to do physical work is slave labour, but employers who need young, strapping, able bodied employees can always find someone kind of willing to work for minimum pay. Any with so many strapping

young men and women who are also nearly broke, they would be willing to do almost anything for money. I am not saying that CECA pimps out students but I just wrote the words "CECA pimps out students" in that order. Don't take my words out of context, readers. You can also find people willing to do boring repetitive tasks for cheap too that most people wouldn't want to do. So by appeasing the employers, the CECA is looking out for the students like how Neville Chamberlain looked out for Czechoslovakia by allowing the annexation of the Czech border areas. Why should the CECA bother themselves with a quarrel in a far-away country between people of who we know nothing of?

So students, how can you do your part to make the employers and CECA happy? Take the blame for evvvrrryyyttthhhhiinnngggg. That everything was elongated like that to emphasize that everything means everything imaginable. Did you get ranked for a job for unsatisfying menial work, for terrible pay, in a country far far away?

Go for it because, if you don't the CECA will punish you for it! The employers understand that you are not that interested in the work and are willing to hire someone else? Punish the student anyways! Who cares if everything would have worked out well in the end? Remember that students need a healthy fear of the CECA. Make sure you do everything right or else CECA will explode and ban you from JobMine. This borderline abusive relationship between the CECA and the students is just so the students know who is in charge and can be kept in line. They bring in the money and if we don't do as they say, they will cut us off. We can't have that. CECA are good people and they keep us employed. CECA makes sure we get practical work experience and networking and interview skills but cross the line and the CECA will slam the Ban Hammer on your ass. Fear CECA, Love CECA, CECA is love, CECA is life. Remember "You are here forever" for six work terms. (I think, I do not remember the exact number, there are a lot of things to remember in life.)

How to Talk to An Absentee Employer



CHING O'MALLEY
GRADE 12 ADMITTED
INTO ECE FALL 2014

HOW TO TALK TO

Wow, JobMine Round 1 is over already? Woopy do da day, I hope everyone gets employed but at the same time at good mentally fulfilling jobs, full of challenges and work. These are all wishes with good intentions because the worst kind of job you can get other than in toxic environments is in a toxic environment where there is nothing to do and you have an absentee employer. What do I mean by an absentee employer or supervisor? I mean someone who is never there, comes in late in the morning, leaves early in the day and takes two to three hour lunch breaks. Wow, employers like that must be great, it isn't. You have to figure out how to kill 8 hours a day with only an hour lunch break and surrounded by others in their cubicles all also trying to kill 8 hours that day. So, how do you communicate with this absentee supervisor who is never there for you and gives no

suggestions for improvement? Who knows, maybe this page of print holds the answer.

So now that we have established that the supervisor shows up late and goes on extended lunch breaks, how do you ask him for work? You just keep on asking, and become so keen and so annoying that they give you a really mundane task. If every time you get up to ask your supervisor for work and they are in a tele-conference or conferencing through the telephone, then you should leave them alone but try and send an email asking for work. Remember with an absentee supervisor, you need to try to keep your line of communication open even if the boss won't respond. Of course you can ask everyone else in the office for work eventually making the entire office stink of your keenness and give up. Resign yourself to your cubicle and sit in defeat as you wait out the minutes of your life - oops, I meant work day.


One more upbeat suggestion would be to always leave a note, on your desk, saying you went to the bathroom. Take this opportunity to wander around the facilities and explore the premise. If anyone asks just tell them you are the new intern and got

lost. The goal of this exploration mission is to find the nicest, most unoccupied and well maintained bathroom you can. With this knowledge, you can go and take a nap, this means you will be able to nap in peace every morning right before work for an even more refreshed work day. These are pretty much the worst suggestions I am giving you right now, actually co-op student, do your best. In fact, do everything in this article the opposite of what I am tell you to do.

Now always ask for work, and when you are assigned a task, do it with vigor and an open mind. From the most mundane to the most complicated, there is no task too small or too big. At least that is the attitude with which you should attack the task you were just assigned, and hope you are assigned to help with a project. That means you are going to have something to do all the time. Always find something related to keep you busy: for example start writing a work term report terms before they are due so that you don't have to later, or, with so many professional engineers around you with practical experience, asking questions, which would make you look very keen to

learn and interested in the field. Boo yeah networking and leaving a good impression with possible future interviewers. That is doing work right there. Then depending on the work that is given, take note of it and learn from it. Use that stuff to pad out you resume, you organized files? Administrative and organization skills in a professional engineering workplace. You sit and do nothing at your desk all day but no one notices? Strong work ethic and ability work alone. Remember that everything has an upside to it.


In summary, don't be a dick. Be rearing to work even when your supervisor is not there, and be responsible. Ask the other people around you for work, they probably have something they have been meaning to do but been putting off because it's so stupid that even a monkey could do it. That is when you become that monkey and do the really easy task. You are there to work not there to reddit and play 2048 all day. Have some sort of related side project. The work experience will make you stand out from the rest of the people when you graduate. So don't be so negative about your employers and your co-op term.



Sandford Fleming Foundation

Professionalism.
Leadership.
Communication.

There's more to an engineering education than engineering.



The SFF Memorial Leadership Award Nominations

In recognition of the late Professors Saip Alpay and Wm. C. Nichol, and Sam Ceccerallo, Robert Elligsen, later former students of the Faculty of Engineering

The Leadership Award is granted to an intermediate-level undergraduate student in the Faculty of Engineering who has demonstrated outstanding contributions to the Faculty in the promotion of extra-curricular activities, including, but not limited to: Intramural Athletics, promotion of Engineering Society and Sandford Fleming Foundation events, competitions, etc., and for the support of associations, both on and off campus.

Nominations for the Memorial Leadership Award can originate from student groups, faculty members, or other individuals. A Letter of Nomination and Letters of Support from colleagues, faculty, and others familiar with the nominee's accomplishments are extremely important and form the major basis upon which the Executive Committee of the Sandford Fleming Foundation will form its decision. Nominations must be submitted to the Foundation by August 31, 2014 and/or before the last day of the student's 3A term.

The Memorial Leadership Award consists of a Certificate plus a citation, and an honorarium of \$1,000.

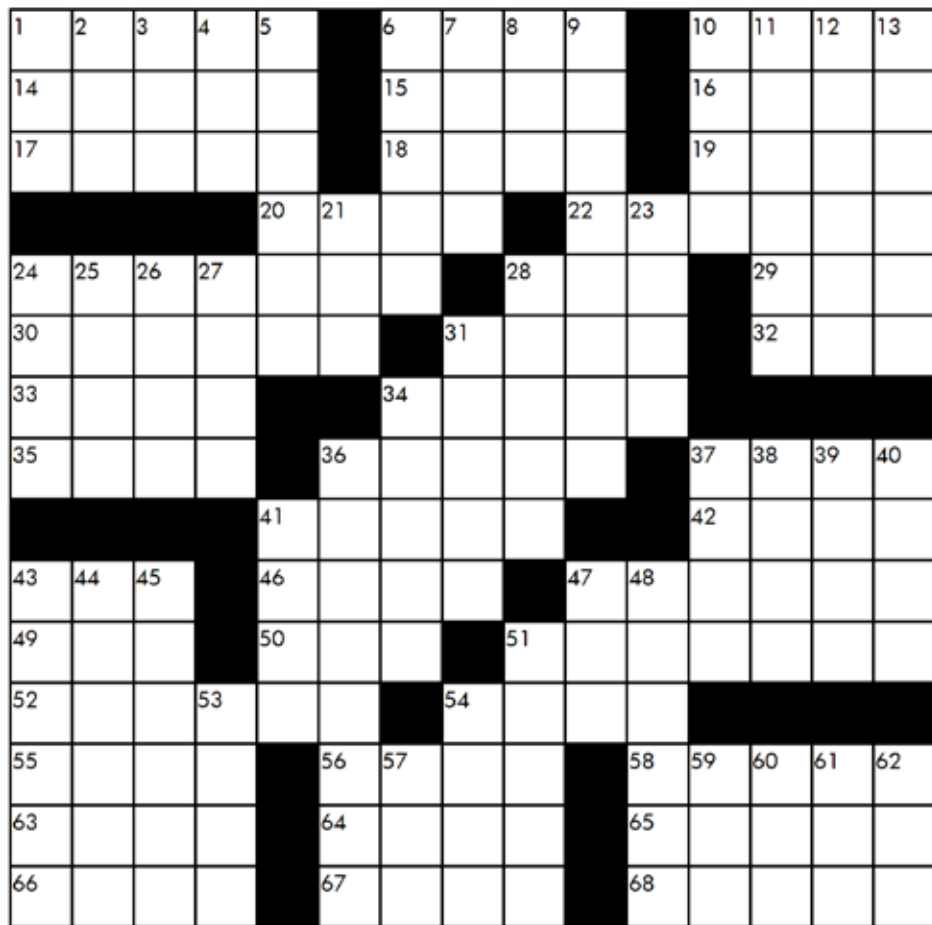
Nominations Must be Submitted to SFF Office Manager by August 31, 2014

E2-3336, Extension 84008, sff@engmail.uwaterloo.ca
www.eng.uwaterloo.ca/~sff

The Iron Crossword

The Group of Seven

NANCY HUI
4A CIVIL



ACROSS

- 1 Like some palates or chins?
- 6 Berg
- 10 Building blocks of poetry
- 14 The one with large ears
- 15 Harvest
- 16 Former dominion of the Parthian Empire
- 17 Postage or passport
- 18 Against
- 19 Eat fancily
- 20 Bird with curved bill
- 22 An austere country
- 24 The one who is shy
- 28 Not an amateur
- 29 Tassled cap
- 30 Mass effect travel system: Mass ____
- 31 There are seven of these too
- 32 Archaically queer
- 33 An alternative type of exam given by profs who think the material is too easy
- 34 The one with a Pharell song named after him

DOWN

- 1 They followed cassettes and vinyl
- 2 Auction unit
- 3 A piece of legislation that allows one to pierce the corporate veil under certain circumstances
- 4 Numerical technique for solving differential equations (abbrv.)
- 5 Characterize
- 6 Fragile
- 7 It helps you focus
- 8 A component of muesli
- 9 Opening quotation
- 10 Assistant
- 11 Boxers' alternatives
- 12 What flakes do to plans
- 13 The one with persistent nasal irritation
- 21 Transit vehicle
- 23 Flushed like cheeks
- 24 Mario and Luigi
- 25 Chocolate bar full of air
- 26 6 Spades or 7NT
- 27 FemShep voice actor
- 28 Cheery
- 31 KCl or MgO
- 34 Despised
- 36 Nakedness
- 37 Artemis's nemesis
- 38 Bamako is its capital
- 39 #1 anvil maker
- 40 Dull finish?
- 41 Indonesian province
- 43 The one with ruffled feathers
- 44 The Sleeping Beauty
- 45 A Hunger Games province
- 47 Tampon alternative
- 48 The one with narcolepsy
- 51 Tendon
- 53 Roughly carved
- 54 From zero to ____
- 57 The one with a Ph.D.
- 59 A lawyer's noose
- 60 Overactor
- 61 E.g. Thomas "Neo" Anderson
- 62 The seventh one is said to have supernatural powers cross?

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Sudoku

NINA FENG
3A ENVIRONMENTAL

Easy

	5			8			2
	6		9		4		
2	9		4	7	3		
9					6	5	
1			2				3
	4	7					9
		6	1	8		9	7
		9		4		6	
8			7				3

Medium

9			2				
		6			1	7	
2				4		5	
	9	1		2	7		6
5		2		1		7	4
	7		4	6		2	1
	8		7				3
	5	9			4		
				8			7

Hard

5			6			7	
				3	2		6
	8		1			5	
6	4		3		8		2
	2			4			3
3			7		1		4
	6				9		2
9			2	1			
	5				3		7

Issue 5 Deadline:
Friday, July 18 at 6:00 p.m.
Send your submissions to:
iwarrior@uwaterloo.ca

THE IRON INQUISITION
Jessica Keung, 2B Civil

"How YOU doin'?"



"Yes."
Joseph Truong, 1B Computer



"I'm doing alright."
Dan Shaw, 3A Mechanical



"That's a strange question."
Eric Bruce, 3A Mechanical



"I'm doing good."
Kobihan Karunakaran, 2B Civil



"Alright, I guess..."
Ariana Bakhtar, 2B Civil



"Alright..."
Anonymous, 3A Environmental